

Course Disclaimer

you will not enjoy this class.

Topics

of Sherlock Holmes, the

NLTK

B-

80.0

scientific method, and

statistical inference

read and understand code.

The course consists of two main tracks: Learning Python and using

Python to analyze data. The first 5-6 weeks will teach you everything

you need to know to start writing your own software and to be able to

The class will involve a lot of reading and lab (programming assignments) work. If you are one who does not like to get information

from reading and experience from doing,

Data Science Pipeline

Data Science Topics

analyzing.

Dependency Parsing

Entity Detection

pandas

matplotlib

spaCy

Grading

C+

77.0

C

73.0

C-

70.0

D&F

let's not go here

The projects are fun and not too intensive.

They allow you to program without borders to

Most of the code you write in this class will be auto graded (i.e. tested for correctness). The results of

those tests will determine your grade. For the most part, if you pass all the tests, you will do very well.

PAST DUE

For every 24 hours that an assignment

submitting the previous lesson, even if you are past the point of no return, you still have to submit each assignment.

Sick Policy

situations.

Perfect for anyone struggling with

Office hours and location will be

concepts or needs additional help over

Let's face it, for an online class there's a lot of ways to not

actually do the work but still receive credit. It's up to you to

decide if you want to waste your time and money and be

completely unprepared for future classes, interviews, and your career. Yes it's easy to "google" for an answer (especially

in programming classes), but do yourself a favor and struggle.

SHARING:

Your work in this class must be your own.

Your work must be entirely completed by your own brain and

hands. This means that all of the code that you submit that is

You must never send your solution to a friend, even just for

part of your solution must be created and typed by you.

https://studentcode.illinois.edu/

do not leave a login session active on an unattended

enter your passwords in a way that cannot be seen by others

If you use a public computer or lab computer to do your work.

After you log out, you MUST delete all cookies for any websites

Never request that the browser store your login information.

you used. If you don't know how to do this, google for the

• never e-mail or share your work to a friend -- even if they

process or don't use a public computer.

only need "help on just one small part".

Office hours and location will be

posted on Piazza.

HELP!

what Piazza can offer.

posted on Piazza.

If you are sick, a visit confirmation letter from McKinley Health Center (or other health centers) does NOT excuse you from work. You must get an

Students. Even if you have your own doctor sign a note, that note must be validated from the Dean

absence letter from the Office of Dean of

of Students. The LGITW points cover most

is past due, 5% will be deducted.

Since each lesson depends on

answer data science questions using Python.

Projects (25%)

Lessons (40%)

You will learn about the data science pipeline including data management (acquiring, cleaning, reshaping,

organizing, persisting), data modeling and

The class will explore topics in statistical inference, text processing and common Python modules (libraries) including

natural language processing, statistics, mathematics and data visualizations.

Program without borders to answer data

Word Vectors

Language Models

Tools

Jupyter

NumPy

Data Science Projects

science questions using Python.

spaCy

SUCCESS! If you never programmed before you should not feel intimidated but rather excited that you can learn programming within the context of actually doing something useful (and fun). There's also a 'are you ready' quiz you can take to confirm your readiness. Paralle Tracks **Python Bootcamp** You will first learn programming constructs and learn to write software using the Python programming language. Python & Programming Topics

You will learn about algorithm development, coding practices, data formats, reading and writing data resources, using regular expressions, various Python topics. **Python Practice** You will get daily practice with simple programming exercises. **Core Skill Development** Programming constructs Algorithmic Development Inference: the story Data types (different views)

Data encoding, formats,

Data Visualization

parsing

GRADE

earn at

least

LGITW

Quizzes

Triage

Lessons

40

Regrading

93.0+

A-

90.0

B+

87.0

В

83.0

Grade Components LGITW (5%) This is a FREE 5%. You need to do nothing. It covers all situations when life gets in the way. No need to email the staff asking for mercy for late assignments due to colds, flu, or the dog. Participation (10%) Since this class is on-line, you earn participation points by being active on the Participation 10 25 Projects

resources (time) to work out individual grading issues because the instructions were not followed. The staff reserves the right to offer no regrading of work because the instructions were not followed. Although this sounds harsh, it usually only affects less than 1% of the students. Yes, someone will attempt to submit (or not submit) a homework or do a lesson without reading the directions. Since this class is taught online AND uses all online content, it's imperative that you start each lesson **early** and give yourself some extra time in case the Internet "goes down". SUCCESS!

Piazza: Staff (and other students) is available to answer questions on Piazza. Use this first. Office Hours: If your question isn't being addressed or you need additional help, TAs hold physical (and virtual) office hours so you can talk and interact with a human. Piazza will be the main source for getting help. We will not use email for answering piazza content questions -- it does not scale. Please do **NOT** email instructors or TA's on questions about content.

and logistical concerns. The instructor

will participate in both office hours

and Piazza for helping students with content. If you need immediate attenti<mark>on</mark> you ca<mark>n email</mark> the TAs.

Social Integrity

accountable for treating each other with respect. There's zero

tolerance for any inappropriate content. If you have a concern

In this class we will be using several on-line tools for

communication and collaboration. We hold everyone

about a student, instructor or TA, you can contact the course coordinator. If you post any ill-will or bad attitudes, we will mute your presence and your grade will consequently suffer. Before you post, ask yourself, "Would I speak like this to grandma?" **POLICING:** If you are aware of someone not abiding to these rules, you can anonymously email the course staff and bring the issue to our attention. **WORK YOUR BRAIN** It's common in job interviews to answer a coding question. You will be well prepared if you always have solved the problems yourself.

Your task is to develop a brain that can solve problems. It will be painful at **COLLABORATION** We encourage you to discuss

to succeed: Start it **Early** Think it **Alone** Let it **Soak** Read it **Again** Your perseverance will be rewarded

assignments with your classmates.

Think to the answer yourself.

SUCCESS!

class forum. Viewing, posting, answering, and contributing in polls earn you points. Quizzes (20%) There will be 4 quizzes that capture your learning of the readings (yes you have to read them), videos, and the main concepts of the lessons. This class is very large and the staff does not have enough Late Policy Unless we experience a massively long outage at one of the

cloud providers, no extensions are granted due to access problems. The staff may extend the deadline for other reasons but not because of an outage with your network provider. Have a backup plan (coffee shops, bookstores, etc). Getting Help

BEFORE you post to piazza, make sure you read the directions. If someone else has posted **Email:** The instructor is available via email but ONLY for administrative

something similar, add to the same request. SUCCESS! Programming requires constant attention and practice. Students who start working on the week's tasks early will acquire the necessary skills to become proficient. Each week the class will cover a set of topics that builds upon previous lessons. You will quickly fall behind if you put off tasks until the day before an assignment is due. Course Integrity Academic Integrity

> You can always consult documentation and do outside research, but don't try to find the answer. Cheating is taken very seriously and all cases of cheating will be brought to the University (using the FAIR system), your department, and your college. You should understand how academic integrity applies to Computer Science courses (see https://cs.illinois.edu/academics/honor-code). Note that the recommended sanctions for cheating on a programming assignment includes a loss of all points for the assignment and that the final course grade is lowered by one whole letter grade. Do not share solutions to course work through any means, Share help and advice.

Staff & Information

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course assistant and is now a teaching assistant.

explanations on Piazza and in office hours.

Abby

Roy

liberal interpretation of the general.

early weeks, the easier the rest of the class will be.

critically that's critical.

build or use a shared solution.

Abby

Het

Emmanuel

Stephen

Share ideas but not solutions or code. them to "look at it". We consider the act of sending a solution to a friend the same as copying a solution (e.g. sending a text message with a screenshot of your code is sending your solution). Posting of working/partial solutions to Piazza is NOT allowed. Under NO condition can you share the content of any exams or quizzes. This class has been designed for you Additionally, you are responsible for protecting your work. To avoid having your work copied without your knowledge: • it is strictly against student code to share passwords or login using another students id/password https://cam.illinois.edu/policies/fo-36/ https://cam.illinois.edu/policies/fo-07/

computer.

general website: https://uicourses.web.illinois.edu/info490mh/ (website for semester given on Piazza)

Student Highlight

Abby was part of the INFO inaugural class.Despite not having a lot of programming

knowledge with other students. Abby became part of the course staff for two semesters.

Stephen's help on Piazza set the high bar for offering well explained guidance to

questions. As part of the Spring 2020 staff he continued to excel at offering thorough

Staff Alumni

Ammar

Het

Daniela

John

experience, Abby quickly mastered the material and was extremely gracious with sharing her

Het was an ideal student. He had no Python experience, got to the assignments quickly, asked clarifying questions and persevered until his code passed all the tests. Then he quickly shared his experience, expertise and help with fellow students. He joined as a Emmanuel not only got his work done on time, but he frequented office hours to help out the staff any time there were too many students to work with. Emmanuel joined the staff in Spring of 2020 and provided excellent feedback to the students.

Nate Emmanuel Stephen Versions: 1.4 01.15.2021 updated for Spring 2021 1.5 01.26.2021 typos

Siva

You are in charge of making sure you keep in touch with the course schedule. Unless you can get a signed medical clearance from your department, the quiz dates are valid for the specific time announced. You cannot take a quiz, once the due date has past. But don't stress: every quiz is open for at least 3 days. • Each Assignment must be turned in (i.e. uploaded or submitted) for grading **no later than 3 weeks** after it has been assigned. Each 24 hours the assignment is late (after the intial due date) 5% will be deducted. All assignments must be turned in by week 16. No exceptions. Part of the class is being in

This is the unfortunate section that needs to be written to address those who tried to squeeze in a

• No Late Quizzes. The quizzes are announced on Piazza, the class Moodle, and the course website.

INFO 490 (some policies, secrets, and fine points)

a community that is on the same schedule. • No Incompletes. You must get your department (dean of students, academic advisor) approval to take an incomplete. • No Extra Credit can be earned on a late assignment. If the assignment is turned AFTER its initial deadline, no extra credit can be earned on the assignment. • This is a graduate level course. We expect you to be able to manage your time wisely AND be able to understand that if you want to get an 'A' it depends on getting the work done on time. The class is completely designed around mastery based learning. You must plan for enough time to get the weekly lessons done. You will learn so much more if you work daily on the class rather than a couple of days a week.

• Programming (learning to) can be hard. Although this class is designed for the person without any programming experience, the class moves quickly. It helps to do a little each day, visit office hours, and ask questions. You will do fine! But be willing to put in the hours. The more time you put in the

comfortable with logic (e.g. the meaning of 'and', 'or', 'not') and algebra (dealing with symbols and

refresher course. It's not that you NEED algebra or specific math skills; it's the ability to think

• Can you get through this class? YES! Anyone can learn to program but you do need to be

abstract concepts). If you struggled in high school algebra, you might want to take a college

The 'soft' skills of persistence, paying attention to details, the ability to think through a problem

yourself, loving to learn (curiosity) will take you farther than anything else. • READ THE Forking MANUAL (RTFM). Each lesson contains all the information you need to solve every problem given. We expect and want you to ask clarifying questions. But if you're asking a question that's addressed in the lesson itself, it signals to the staff that you are not putting in your share of the effort. Please read each lesson thoroughly before attempting to solve the problems and exercises. • **Do NOT cheat.** Each semester we turn in the students who decided to share solutions, code, or quiz questions (or USE a non self-authored solution). It's small (about 2.37%), but enough to ensure everyone else that we do enforce solo thinking. Please for the love of your brain, do each lesson and

project by yourself. As said before, we encourage discussion of ideas and clarifications, but don't