Course Syllabus for SIADS 501: Being a Data Scientist

Course Overview and Prerequisites

This course introduces students to the process of data science, covering problem formulation, data acquisition, modeling and analysis, and presentation and integration into action. Students will be tasked with understanding what data scientists do, and reflecting on what special knowledge and skills, perspectives, and ethical commitments they want to bring to problems as data scientists. Students will also be exposed, through interviews with practicing data scientists, to real problems they may also have to work around or avoid, so it lightly foreshadows the rest of the program and students' future in data science.

There are no course prerequisites.

Instructor and Course Assistants

Instructor: Paul Resnick - presnick@umich.edu
Deputy Instructor: Melissa Chalmers - mechalms@umich.edu
Graduate Student Instructors: Dan Delmonaco - delmonac@umich.edu; Gabriel Grill - ggrill@umich.edu

Communication Expectations

Contacting instructor and course assistants: Direct message via Slack
Email response time: N/A (please communicate via Slack)
Slack response time: within 24 hours
Office hours: see **Course Schedule** below

Required Textbook

None

Technology Requirements unique to this course

None

Accessibility

Screen reader configuration for Jupyter Notebook Content

Learning Outcomes

1. Competency - Explain the four project stages as a framework for data science problems and solutions, including the goals and desired outcomes of each stage.
2. Literacy - Describe the expertise, perspectives, and ethical commitments that data scientists may bring to each of the four stages.
3. Literacy - Articulate a set of maxims that apply to each of the four stages and to data science projects as a whole.
4. Competency - Create and maintain an environmental monitoring system for staying up to date on new developments in data science.

Course Schedule

This session **begins on Monday, August 31, 2020** and **ends on Sunday, September 27, 2020.**

Weekly assignments will be due on Sundays at 11:59 pm (time zone = Ann Arbor, Eastern Time Zone, GMT-5).

Schedule of Weekly Office Hours via Zoom (time zone = Ann Arbor, Michigan):

- **Thursdays (5:30-6:30pm) ([zoom link](#))**
- **Sundays (3-4PM) ([zoom link](#))**

Begins Thursday, September 3

Access via Live Events from the course menu

Grading

Course Assignments	Percentage of Final Grade
Reading Response	10%
Initial Draft of Plan Components: Application in Domain of Interest; Plan for Knowledge Acquisition (4 submissions); Maxims, Questions, and Ethical Commitments (4 submissions); Personal Project Idea; Sources for Data Science News	9%
Peer Feedback (3 submissions)	6%
Informational Interview: Planning	2%
Informational Interview: Reflection	8%
Final Plan for Being a Data Scientist:	65%
	100%

NOTE: All assignments are required to earn credit for this course.

Letter Grades, Course Grades, and Late Submission Policy

Refer to the [MADS Assignment Submission and Grading Policies](#) section of the UMSI Student Handbook (access to Student Orientation course required).

Our policy on grades for late submissions is a little simpler: 15% penalty per day.

Academic Integrity / Code of Conduct

Refer to the [Academic and Professional Integrity](#) section of the UMSI Student Handbook (access to Student Orientation course required).

Accommodations

Refer to the [Accommodations for Students with Disabilities](#) section of the UMSI Student Handbook (access to the Student Orientation course required).

Use the [Student Intake Form](#) to begin the process of working with the University's Office of Services for Students with Disabilities.

Help Desk(s): How to get help

Degree program questions or general help - umsimadshelp@umich.edu

Coursera's Technical Support (24/7) - https://learner.coursera.help/

Library Access

Refer to the U-M Library's information sheet on accessing library resources from off-campus. For more information regarding library support services, please refer to the U-M Library Resources section of the UMSI Student Handbook (access to the Student Orientation course required).

Student Mental Health

Refer to the University's Resources for Stress and Mental Health website for a listing of resources for students.

Student Services

Refer to the Introduction to UMSI Student Life section of the UMSI Student Handbook (access to the Student Orientation course required).

Readings

Note: You need a free O'Reilly learning platform account to access many of the readings. Create an account using your <uniqname>@umich.edu email address by visiting: https://www.oreilly.com/library/view/temporary-access/

From the dropdown, select "Not listed? Click here." Then enter your <uniqname>@umich.edu email address. O'Reilly will send you an account activation email. Click the embedded red button to activate your account. You now have free access to hundreds of titles. Start reading.