

## EDS 411B: MEDS Capstone

### Course Syllabus (Spring 2023)

**Instructor:** Ruth Oliver

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**Office Hours:** [Sign up for appointments](#), or email me!

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**EDS 411B Description:** The goal of EDS 411B is to facilitate student learning, work and progress on their MEDS Capstone project through lessons, activities, supervised and unsupervised project work, and peer review and feedback. Additionally, EDS 411B provides opportunities for professional and career development (e.g. presentation skills, writing and editing, client relations, team science, panel discussions, and conflict resolution).

Throughout the course, students will build on skills they have learned in prior MEDS courses to implement them in a real-world data science project, including:

- **Prepare professional documentation for a data science project** through the Technical Documentation
- **Practice project management and reproducible workflows** using tools and strategies learned in MEDS courses, establishing clear expectations for group roles and participation, and with frequent updates within and across groups
- **Continue to build real-world skills for data science projects** through continued collaborative work in git, data analyses and statistics, data visualization and communication, and more
- **Implement professional skills for data science careers** including code and documentation peer review, team and client relations, scheduling and organizing tools & strategies, and conflict resolution & communication

A major goal of 411B is to facilitate and support student work on their Technical Documentation and Public Presentations. See Capstone Guidelines for more information.

Each group's *Technical Documentation* must include the following components (50 pages maximum):

- A. Title Page
- B. Signature Page
- C. Abstract (not to exceed 200 words)
- D. Executive Summary (not to exceed 4 pages)
- E. Table of Contents
- F. Problem Statement
- G. Specific Objectives
- H. Summary of Solution Design
- I. Products and Deliverables
- J. Summary of Testing
- K. User Documentation
- L. Archive Access
- M. References

*Note: EDS 411B meets for 4 hr/wk. The expected total project contribution of each group is 30 - 40 hours / wk (~10 - 12 hr / group member). Most work done on MEDS Capstone projects will be outside of EDS 411B. This course exists to provide opportunities for co-learning and sharing between groups, and designated time for learning & practicing skills that are important across all projects. Additional work & progress on Capstone projects should be expected based on weekly discussions with the faculty advisor and/or clients.*

**Project management:** Each week, individual students will submit a checklist of tasks they will contribute to that week (e.g. as a checklist in a GitHub issue), and provide updates on tasks they worked on the previous week (e.g. by responding to a GitHub issue they submitted the previous week). The exercise of creating a clearly defined and carefully scoped task list for the week is a valuable practice for project management, staying on track based on the project timeline, and to ensure that all team members have a clear understanding of what is being worked on, when.

**Course prerequisites (official):** None

**Required textbook / reader:** None (readings will be assigned and posted)

**Bring to class:** All students should bring all materials and devices needed for work on their capstone project to class every day. Students should also bring a notebook and pens/pencils to each session.

**Course materials:** Materials are accessed through the course website.

**Course communication:** Course communication will be through Slack workspace and website.

**Assignments:** EDS 411 is a practicum-style course that prioritizes work and progress on MEDS Capstone projects, combined with short lectures, guest visits, and activities to reinforce data science, project management, and professional skills throughout. Course requirements will be related to Capstone milestones, and will be assessed based on frequent in-class presentations, and group and individual self-assessments throughout the quarter.

**Assessment and grading:**

Grades will be based on three components:

1. Course participation and project contributions (70%)
2. Biweekly group presentations / updates (20%)
3. Individual weekly task checklist & response (10%)

**Access and accommodations:** Please submit requests for accommodations often and early. It is never too late to apply for DSP accommodations. If you have any kind of disability, whether apparent or non-apparent, learning, emotional, physical, or cognitive you may be eligible to use formal accessibility services on campus. To arrange class-related accommodations, [please contact DSP](#). DSP will initiate communication about accommodations with faculty. By making a plan through DSP, appropriate accommodations can be implemented without disclosing your specific condition or diagnosis to course instructors.

**Code of Conduct:** All course participants (instructor, guests, students) are expected to adhere to the Bren School and UCSB Codes of Conduct.