

ESM 262 Computing for Environmental Science

Naomi Tague

January, 2025



Growing skills

Course description

ESM 262 is an introduction to computing for environmental applications. The course provides practical training in software design best practices.

Topics include programming language concepts; modular program design; data structures and flow control, version control, testing, documentation and reproducibility.

The course features **R** for programming, **Git** for version control, **Markdown** for workflow, and **GitHub** for collaboration and publishing, but many concepts would be applicable in other software design tools.

Class will include a mix of lectures and hands-on examples, using students' own computers. There will be weekly assignments designed to help learn skills through practice.

Learning objectives

- 3 *BIG* concepts in programming are *modularity*, *data structure*, *looping*. This course is designed to help student gains skills related to all three of these concepts.
- Students will also learn and practice some coding/programming best practices (that will doing data science easier)
 - documentation
 - testing
 - partner coding/collaboration
- Student will learn *R* skills that are helpful for a wide variety of data science applications

Where and when

****T/TH 8:00 AM - 9:15 AM (Bren Hall 1510)**

Teaching team

Instructor: Naomi Tague

- **Office hours:** By appointment
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- to learn more about me see my website (<https://tagueteamlab.org>) (tagueteamlab.org)

Teaching assistant: Ojas Sarup

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