

ESM 262 Computing for Environmental Science

Naomi Tague

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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

** MW 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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