

Course overview

FISH 550 – Applied Time Series Analysis

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Introductions

Who are we?

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What School/Dept/Program are you from?

What are you looking to get out this class?

Course format

Flipped lecture format

- Videos posted of the material on the [Lecture tab](#). **Watch before class**
- In class time will be devoted to working through hands-on exercises, R coding examples and discussing the content.

Labs

- Group projects with teams assigned semi-randomly each week
- You will be given a dataset(s) and will come up with a group analysis to do based on the week's material
- Collaborative! Please use the discussion thread on GitHub to ask questions and share solutions with your classmates.

Communications

We encourage lots of questions during class

Use the GitHub [Discussion board](#)

Feel free to email any of the instructors outside of class

We will respond within 24 hours

Grading

Six group lab write-ups (30% of total)

- Assigned Thurs at the end of computer lab
- Due by 11:59 PM on the Tues 12 days later
- Based on material from lectures & computer labs
- Group write-up in RMarkdown or Quarto. A template will be provided.

Grading

Research project & paper (40% of total) Must involve some form of time series model(s)

Two anonymous peer-reviews (20% of total) One review each for 2 of your colleague's papers

Due Dates

- Project proposal due Fri April 21 11:59pm PDT
- Project methods due Fri May 12 11:59pm PDT
- Final paper due Fri June 2nd 11:59pm PDT
- Presentations May 30 and June 1 during class time and lab time
- Peer review due Fri June 9th 11:59pm PDT

Grading

Participation (10%)

- We expect you to show up and interact
- Please contact one of the instructors if you have any conflicts

chatGPT and Copilot

- You are welcome to use these and they can be powerful coding assistants
- GitHub Copilot is free for students but you need to use VSCode not RStudio
- chatGPT is free if you use on the OpenAI platform
- To use in RStudio, you need to use the API and that cost \$
- See the [class website page](#) for more info

Expectations for final project

- Research paper or thesis chapter that could result in a peer-reviewed publication
- Focus on applied time series analysis (univariate or multivariate)
- Short format similar to “Report” in *Ecology* or “Rapid Communication” in *CJFAS*
 - Max of 20 pages, inclusive of refs, tables, figs, etc
 - 12-pt font, double-spaced throughout

Don't have time series data?

Lots of datasets on the class webpage: [DATASETS](#)

Or talk with the instructors (or your advisor)

Tech preliminaries

- You will need a GitHub account and accept the invite to join [ATSA-Spring-2025](#)
- Our class repo: [fish550-2025](#) with [issues](#) and [discussions](#)
- We will use RStudio as our IDE.
- Interacting with GitHub:
 - Option 1: Download GitHub Desktop. Very easy to use platform.
 - Option 2: Connect RStudio to GitHub.
 - Option 3: Working directly on GitHub.
 - We will help you with these steps on Thursday and will post videos.

Course topics