

# Syllabus for LIN 538

## Statistics for Linguists – Fall 2020

TTh 15:00-16:20, SBS N310

Draft as of January 25, 2022

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**Course Website:** <http://jeffreyheinz.net/classes/22S/>

**What is this course?** Like many areas of mathematics, statistics and probability have found widespread use in many scientific disciplines today, including linguistics. This course covers aspects of statistics and probability as they can be applied to the study of language and cognition. While there is a primary focus on regression analyses for use in experimental and corpus linguistics, we are also interested in understanding generative probabilistic models more generally. Depending on class interest, we may have a unit on language modelling (probabilities over sets of strings/predicting the next symbol in a sequence). Wherever possible, we will try to incorporate datasets from your research and from mine.

**Required readings.** The following sources will be used. All readings will be provided as needed.

- Bodo Winter. *Statistics for Linguists: An Introduction Using R*. Routledge, 2019.
- Michael Franke. An introduction to data analysis. <https://michael-franke.github.io/intro-data-analysis/index.html>, 2021. Last rendered at: 2021-10-12 16:42:42.
- Morgan Sonderegger. Regression modeling for linguistic data, Jan 2022. URL <http://osf.io/pnumg>.
- Noah D Goodman, Joshua B. Tenenbaum, and The ProbMods Contributors. Probabilistic Models of Cognition. <http://probmods.org>, 2016. Accessed: 2022-1-23.

**Grading policy.** The final course grade depends on the following work.

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2/3	Assignments	There will be 10-12 assignments.
2/9	Research Paper	Conduct a research project and write a research report
1/9	Presentation	Present on state of research project in week 13 or 14

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**Assignments.** These assignments will involve some combination of thinking, writing, problem-solving, R scripting, and so on. One of the assignments will be a project proposal.

**Research Paper.** A research paper is due by noon on Monday December 14. Ideally, the research problem will utilize methods studied in the class.

**Presentation.** In week 13 or 14, students will make a presentation no longer than 20 minutes on the current state of their research. What is the question/problem? What is the analysis/solution? How does this analysis/solution compare with others?

**Participation.** Attendance and participation in class is required.

**Office Hours.** Office Hours will be on Tuesdays and Thursdays from 12:30-2pm and by appointment.

## University Policies and Services

**Student Accessibility Support Center Statement** If you have a physical, psychological, medical, or learning disability that may impact your course work, please contact the Student Accessibility Support Center, Stony Brook Union Suite 107, (631) 632-6748, or at [sasc@stonybrook.edu](mailto:sasc@stonybrook.edu). They will determine with you what accommodations are necessary and appropriate. All information and documentation is confidential.

Students who require assistance during emergency evacuation are encouraged to discuss their needs with their professors and the Student Accessibility Support Center. For procedures and information go to the following website: <https://ehs.stonybrook.edu/programs/fire-safety/emergency-evacuation/evacuation-guide-disabilities> and search Fire Safety and Evacuation and Disabilities.

**Academic Integrity Statement** Each student must pursue his or her academic goals honestly and be personally accountable for all submitted work. Representing another person's work as your own is always wrong. Faculty is required to report any suspected instances of academic dishonesty to the Academic Judiciary. Faculty in the Health Sciences Center (School of Health Technology & Management, Nursing, Social Welfare, Dental Medicine) and School of Medicine are required to follow their school-specific procedures. For more comprehensive information on academic integrity, including categories of academic dishonesty please refer to the academic judiciary website at [http://www.stonybrook.edu/commcms/academic\\_integrity/index.html](http://www.stonybrook.edu/commcms/academic_integrity/index.html)

**Critical Incident Management** Stony Brook University expects students to respect the rights, privileges, and property of other people. Faculty are required to report to the Office of Student Conduct and Community Standards any disruptive behavior that interrupts their ability to teach, compromises the safety of the learning environment, or inhibits students' ability to learn. Until/unless the latest COVID guidance is explicitly amended by SBU, during Spring 2022 "disruptive behavior" will include refusal to wear a mask during classes.