STAT 1301/2300 Statistical Packages

(Fall 2025)

- Instructor: Junshu Bao
  - Email: jub69@pitt.edu
  - Office Hour: Thursday 5-6 PM or by appointment
  - Zoom Link for OH: https://pitt.zoom.us/j/7550746319
- TA: TBD
- Meeting time: M/W 12:00 - 1:15 PM
- Meeting location: 5201 Wesley W. Posvar Hall

Course Description and Learning Objectives

This course is an introductory course on three statistical packages, R, Python, and SAS. Upon completing this course students will be able to

- use statistical software to handle data
- choose correct methods of data analysis
- perform data analysis
- interpret results correctly and effectively

Course Logistics

Prerequisites STAT 1221 or any course which mostly emphasize regression and includes an elementary statistical package such as R. No advanced programming experiences required.

Required Textbook

- Peter Dalgaard, Introductory Statistics with R, Second Edition, Springer, New York, NY (ISBN: 978-0387790534). The e-book of this book is available through Pitt Library.
- Geoff Der and Brian S. Everitt, A Handbook of Statistical Analyses using SAS, Third Edition, Chapman and Hall/CRC, London, UK, (ISBN: 978-1584887843). The e-book of this book is available through Pitt Library.

Computing: We will use the statistical software packages SAS, R, and Python.

- **R** is a free, open-source software package/programming language for statistical computing, and is available on the PCs at all campus computing labs. R can be downloaded for free at http://www.r-project.org/.

- **Python** is a free, open-source programming language. The cross-platform Anaconda distribution is recommended to install. To download Anaconda, check the following link: https://www.anaconda.com/download
- **SAS** is available on the PCs at all campus computing labs, such as Cathedral, Posvar, Forbes Quad and Benedum. If in addition you would like to have SAS on your PC, Pitt's Software Download Service offers SAS for free. SAS can only be installed on Windows or Unix environments (No Mac OS). If you use MacBook, I recommend you to use Pitt's virtual lab.

Course Management System: Canvas Assignments are submitted and graded electronically through Canvas. Many links and material will be made progressively available on Canvas:

- Lecture notes
- Homework assignments and tests
- Data sets

Grading components

- Homework 40%
  - Homework assignments may be done in collaboration with other students. However, the final product must be written by you, in your own words. This applies to Python/R/SAS code too - share ideas but write your own code.
  - Homework submitted within 24 hours of the deadline can be accepted with a 20% penalty. After 24 hours, homework won't be accepted.
  - I expect that you will start soon after receiving the assignment. The assignments are definitely not designed to be one-night jobs. You must show your work for full credit.
- Exams:
  - Exam I (about R) 20%
  - Exam II (about Python) 20%
  - Exam III (about SAS) 20%

Course Grades:

Grade	Percentage
A+	[99%,100%]
A	[93%,99%)
A-	[90%,93%)
B+	[87%,90%)
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Online Resources

On Statistical Procedures:

- Handbook of Biological Statistics by John H. McDonald

On SAS:

- The little SAS book: a primer, 4th edition by Delwiche, Lora D; Slaughter, Susan J 2008 (eBook available at Pitt library)
- SAS Customer Support
- UCLA idre SAS help page
- SAS/STAT User's Guide

On R and Python Please check my webpage.

University Policies:

Academic Integrity Students in this course will be expected to comply with the University of Pittsburgh's Policy on Academic Integrity. Any student suspected of violating this obligation for any reason during the semester will be required to participate in the procedural process, initiated at the instructor level, as outlined in the University Guidelines on Academic Integrity. This may include, but is not limited to, the confiscation of the examination of any individual suspected of violating University Policy. Furthermore, no student may bring any unauthorized materials to an exam, including dictionaries and programmable calculators.
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I ask that everyone in the class strive to help ensure that other members of this class can learn in a supportive and respectful environment. If there are instances of the aforementioned issues, please contact the Title IX Coordinator, by calling 412-648-7860, or e-mailing titleixcoordinator@pitt.edu. Reports can also be filed online: https://www.diversity.pitt.edu/make-report/report-form. You may also choose to report this to a faculty/staff member; they are required to communicate this to the University's Office of Diversity and Inclusion. If you wish to maintain complete confidentiality, you may also contact the University Counseling Center (412-648-7930).

Disability Services If you have a disability for which you are or may be requesting an accommodation, you are encouraged to contact both your instructor and Disability Resources and Services (DRS), 140 William Pitt Union, (412) 648- 7890, drsrecep@pitt.edu, (412) 228-5347 for P3 ASL users, as early as possible in the term. DRS will verify your disability and determine reasonable accommodations for this course.