

## Syllabus

STA4712, Spring 2023

Introduction to Survival Analysis

Department of Statistics, University of Florida

### Course information.

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<i>Lectures.</i>	Tuesday 10:40AM - 12:35PM, Thursday 10:40AM - 11:30PM Griffin Floyd 100		
<i>Instructor.</i>	Aaron J. Molstad	<i>Teaching assistant</i>	TBA
<i>Office.</i>	202 Griffin Floyd	<i>Office.</i>	TBA
<i>Email.</i>	amolstad@ufl.edu	<i>Email.</i>	TBA
<i>Office hours.</i>	TBA	<i>Office hours.</i>	TBA

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**Course objective.** This course focuses on analyzing “time to event” data, where the event can be response to treatment, relapse of disease, or death. Often we wish to quantify the relationship between the time to event and prognostic factors such as mode of therapy, age of patient, and severity of disease. This course will cover inference for a single population, methods for comparison of two or more populations, and methods for doing regression analysis. Procedures will include the Kaplan-Meier estimator, the log-rank test, and Cox proportional hazards regression. All these procedures handle the common case of censored data, where the information on some individuals is incomplete in the sense that the event had not yet occurred at the termination date of the study. Some basic theoretical material will be covered in order to show how methods of mathematical statistics are adapted to handle censoring. Computation on the computer is crucial for implementing survival analysis methods. Computations will be carried out in the R statistical programming language.

**Course webpage.** Course materials (e.g., homework assignments and due dates) will be posted to [ajmolstad.github.io/S23\\_STA4712](https://ajmolstad.github.io/S23_STA4712). A link to this page will be available on the course eLearning site, where students’ grades will be posted. Please check this site regularly for updates and announcements. Course documents and important information – including homework exercises, homework solutions, sample exams, and special announcements – will be posted here.

**Office hours.** Both the instructor’s and teaching assistant’s office hours will at a time and location to be announced during the first week of class.

**Textbooks.** There is no required course textbook, though the following two textbooks will serve as useful references.

- *Survival Analysis: Techniques for Censored and Truncated Data* (2nd edition) by John P. Klein and Melvin L. Moeschberger

- *Applied Survival Analysis Using R* by Dirk F. Moore

**Assessment.** Course grades will be based on six homework assignments and two take-home exams. Of the two exams, your higher exam score will count for 32.5% of course grade and the lower exam score will count for 27.5%.

Homework assignments will be submitted and graded electronically through the course eLearning site. Homework will be at 5:00pm on days that they are due. **Late homework will not be accepted.**

- *Tentative exam due dates.*
  1. Thursday, March 2nd – Thursday, March 9th
  2. Tuesday, April 25th – Thursday, May 2nd
- *Tentative homework due dates.*
  1. Thursday, January 26th
  2. Thursday, February 9th
  3. Thursday, February 23rd
  4. Thursday, March 24th
  5. Thursday, April 7th
  6. Thursday, April 20th

**Grading scales.** Letter grades will be assigned based on the following cutoffs:

Grade	Percentile
A	100% - 93%
A-	93% - 90%
B+	90% - 87%
B	87% - 83%
B-	83% - 80%
⋮	⋮
D-	63% - 60%
F	60% -

The instructor may adjust cutoffs downward (i.e., lower the percentile needed to achieve a certain letter grade) when assigning final course grades.

**Working with classmates:** While students are encouraged to work through homework exercises with one another, it is required that students write up their solutions independently. A failure to do so would constitute a violation of the student honor code and will be treated as such: see <https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/>. No collaboration of any kind is allowed on exams, with no exception.

**Student honor code:** Materials which may be referenced during exams will be explicitly mentioned before the exam and on the cover of the exam sheet. See the homework section for expectations about homework assignments. Please refer to the UF student honor code (linked above) for more.

**Missed exam.** Missed exams will receive a grade of zero, except in the cases of emergency. If an exam will be missed for a non-emergency reason, the student must notify the instructor *at least two weeks prior* to the exam date and provide proper documentation. Refer to <https://catalog.ufl.edu/UGRD/academic-regulations/attendance-policies/> for specifics on course attendance policy and missed exam policy.

**Incomplete policy.** The grade of "Incomplete" can be assigned at the discretion of the instructor when, due to extraordinary circumstances, e.g., hospitalization, a student is prevented from completing the work of the course on time. In particular, an "Incomplete" will be given if the student presents evidence from a certified professional that the student is unable to complete the course. In addition, the student must have a passing grade at the time of the incomplete request in order to receive the "Incomplete". An "Incomplete" requires a written agreement between instructor and student found here <https://clas.ufl.edu/files/2019/02/CLASIncompleteGradeContract.pdf>.

**Students with Disabilities.** Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, [www.dso.ufl.edu/drc/](http://www.dso.ufl.edu/drc/)) by providing appropriate documentation. Once registered, students will receive an accommodation letter which must be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester.

**Online course evaluation process.** Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at <https://gatorevals.aa.ufl.edu/students/>. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <https://ufl.bluera.com/ufl/>. Summaries of course evaluation results are available to students at <https://gatorevals.aa.ufl.edu/public-results/>.

**Academic dishonesty.** UF students are bound by The Honor Pledge which states, "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment." The Conduct Code specifies a number of behaviors that are in violation of this code and the possible sanctions. The Conduct Code can be found here:

<https://sccr.dso.ufl.edu/process/student-conduct-code/>. If you have any questions or concerns, please consult with the instructor or TAs in this class.

**Virtual class consent.** Our class sessions may be audio-visually recorded for students in the class to refer back and for enrolled students who are unable to attend live. Students who participate with their camera engaged or utilize a profile image are agreeing to have their video or image recorded. If you are unwilling to consent to have your profile or video image recorded, be sure to keep your camera off and do not use a profile image. Likewise, students who un-mute during class and participate verbally are agreeing to have their voices recorded.

If you are not willing to consent to have your voice recorded during class, you will need to keep your mute button activated and communicate exclusively using the “chat” feature, which allows students to type questions and comments live. The chat will not be recorded or shared.

**In class recording.** Students are allowed to record video or audio of class lectures. However, the purposes for which these recordings may be used are strictly controlled. The only allowable purposes are (1) for personal educational use, (2) in connection with a complaint to the university, or (3) as evidence in, or in preparation for, a criminal or civil proceeding. All other purposes are prohibited. Specifically, students may not publish recorded lectures without the written consent of the instructor.

A “class lecture” is an educational presentation intended to inform or teach enrolled students about a particular subject, including any instructor-led discussions that form part of the presentation, and delivered by any instructor hired or appointed by the University, or by a guest instructor, as part of a University of Florida course. A class lecture does not include lab sessions, student presentations, clinical presentations such as patient history, academic exercises involving solely student participation, assessments (quizzes, tests, exams), field trips, private conversations between students in the class or between a student and the faculty or lecturer during a class session.

Publication without permission of the instructor is prohibited. To “publish” means to share, transmit, circulate, distribute, or provide access to a recording, regardless of format or medium, to another person (or persons), including but not limited to another student within the same class section. Additionally, a recording, or transcript of a recording, is considered published if it is posted on or uploaded to, in whole or in part, any media platform, including but not limited to social media, book, magazine, newspaper, leaflet, or third party note/tutoring services. A student who publishes a recording without written consent may be subject to a civil cause of action instituted by a person injured by the publication and/or discipline under UF Regulation 4.040 Student.

### **Health and wellness resources.**

- U Matter, We Care: If you or someone you know is in distress, please contact [umat-ter@ufl.edu](mailto:umat-ter@ufl.edu), 352-392-1575, or visit U Matter, We Care website to refer or report a concern and a team member will reach out to the student in distress.

- Counseling and Wellness Center: Visit the Counseling and Wellness Center website or call 352-392-1575 for information on crisis services as well as non-crisis services.
- Student Health Care Center: Call 352-392-1161 for 24/7 information to help you find the care you need, or visit the Student Health Care Center website.
- University Police Department: Visit UF Police Department website or call 352-392-1111 (or 9-1-1 for emergencies).
- UF Health Shands Emergency Room / Trauma Center: For immediate medical care call 352-733-0111 or go to the emergency room at 1515 SW Archer Road, Gainesville, FL 32608; Visit the UF Health Emergency Room and Trauma Center website.

### **Academic resources.**

- E-learning technical support: Contact the UF Computing Help Desk at 352-392-4357 or via e-mail at helpdesk@ufl.edu.
- Career Connections Center: Reitz Union Suite 1300, 352-392-1601. Career assistance and counseling services.
- Library Support: Various ways to receive assistance with respect to using the libraries or finding resources.
- Teaching Center: Broward Hall, 352-392-2010 or to make an appointment 352- 392-6420. General study skills and tutoring.
- Writing Studio: 2215 Turlington Hall, 352-846-1138. Help brainstorming, formatting, and writing papers.
- Student Complaints On-Campus: Visit the Student Honor Code and Student Conduct Code webpage for more information.
- On-Line Students Complaints: View the Distance Learning Student Complaint Process.