

**The University of Iowa  
The College of Liberal Arts and Sciences  
Spring, 2023**

**Title of Course:** ACTS:6200-0001 Predictive Analytics  
DATA:6200-0001

**Course meeting time and place:** MWF – 8:30am - 9:20am; 216 PH

**Department of Statistics and Actuarial Science :** <http://stat.uiowa.edu>

**Course ICON site:** To access the course site, log into [Iowa Courses Online \(ICON\)](https://icon.uiowa.edu/index.shtml) <https://icon.uiowa.edu/index.shtml> using your Hawk ID and password.

### **Course Home**

The College of Liberal Arts and Sciences (CLAS) is the home of this course, and CLAS governs the add and drop deadlines, the “second-grade only” option (SGO), academic misconduct policies, and other undergraduate policies and procedures. Graduate students, however, must adhere to the [academic deadlines set by the Graduate College](#).

### **Instructor**

Nariankadu **Shyamalkumar**

Office location: 233 SH

Student drop-in hours: MWF 11:30am – 12:30 pm. Students are invited to drop by during these hours to discuss questions about the course material or concerns. I am also available by appointment if you are unable to attend my drop-in hours.

Phone: 319-335-1980

E-mail: [shyamal-kumar@uiowa.edu](mailto:shyamal-kumar@uiowa.edu)

DEO: Dr. Kung-Sik Chan, 241 SH, 335-0712, [kung-sik-chan@uiowa.edu](mailto:kung-sik-chan@uiowa.edu)

### **Grader**

Zhenhan Fang – [zhenhan-fang@uiowa.edu](mailto:zhenhan-fang@uiowa.edu)

### **Description of Course and Learning Objectives**

This course on predictive analytics seeks to introduce you to linear mixed models, generalized linear mixed models, and generalized additive models and cover some applications of these models using associated R packages. But since a heterogeneous group of students takes this course, we will begin with linear models and generalized linear models so that we can all better appreciate what prowess the other models bring into your tool chest. This course's underlying philosophy mimics the text's preface: "*...I think that practical work tends to progress much more smoothly if it is based on solid understanding of how the models and methods used actually work.*"

### **Textbook/Materials**

The required textbook for this course is the following:

- *Generalized Additive Models, An Introduction with R*, 2nd ed.
- ISBN: 13-978-1-4987-2833-1
- Simon Wood
- Chapman and Hall / CRC Texts in Statistical Science
- 2017

### **Academic Honesty and Misconduct**

All students in CLAS courses are expected to abide by the [CLAS Code of Academic Honesty](#). Undergraduate academic misconduct must be reported by instructors to CLAS according to [these procedures](#). Graduate academic misconduct must be reported to the Graduate College according to Section F of the [Graduate College Manual](#).

### **Student Complaints**

Students with a complaint about a grade or a related matter should first discuss the situation with the instructor and/or the course supervisor (if applicable), and finally with the Director or Chair of the school, department, or program offering the course.

Undergraduate students should contact [CLAS Undergraduate Programs](#) for support when the matter is not resolved at the previous level. Graduate students should contact the CLAS [Associate Dean for Graduate Education and Outreach and Engagement](#) when additional support is needed.

### **Drop Deadline for this Course**

You may drop an individual course before the deadline; after this deadline you will need collegiate approval. You can look up the [drop deadline for this course](#) here. When you drop a course, a “W” will appear on your transcript. The mark of “W” is a neutral mark that does not affect your GPA. Directions for adding or dropping a course and other registration changes can be found on the [Registrar's website](#). Undergraduate students can find policies on dropping and withdrawing [here](#). Graduate students should adhere to the [academic deadlines](#) and policies set by the Graduate College.

### **Grading System and the Use of +/-**

Undergraduate and graduate students will be treated as two separate groups when it comes to assigning final grades, and + and - grades will be used.

### **Course Grades**

Final course grades will be assessed based on your performance in the following activities:

#### **Quizzes – 28%**

Roughly on alternate Monday's there will be a short quiz in class on the topics covered in the previous two weeks. They are meant to encourage being up to date and master key concepts, either theoretical or computational in nature.

**Homework – 52%**

Assignments will be given to you by Friday of every week there is an assignment. They must be electronically returned by the beginning of Friday's class of the following week on ICON.

**Final Project – 20%**

Details of the final applied project work will be discussed in class in due course. It will be due by 5pm of Friday, 12<sup>th</sup> of May.

**College of Liberal Arts and Sciences (CLAS) Course Policies****Attendance and Absences**

University regulations require that students be allowed to make up examinations which have been missed due to illness or other unavoidable circumstances. Students with mandatory religious obligations or UI authorized activities must discuss their absences with me as soon as possible. Religious obligations must be communicated within the first three weeks of classes.

**Exam Policies****Communication: UI Email**

Students are responsible for all official correspondences sent to their UI email address (uiowa.edu) and must use this address for any communication with instructors or staff in the UI community.

**Other Expectations of Student Performance**

Students have the right to a distraction-free learning environment. Students are expected to help each other learn and to contribute overall to the learning environment of the course. Arriving prepared for class is part of this expectation.

**Where to Get Help**

Tutor Iowa: <https://tutor.uiowa.edu/>

**University Policies**

**Accommodations for Students with Disabilities**

**Basic Needs and Support for Students**

**Classroom Expectations**

**Exam Make-up Owing to Absence**

**Free Speech and Expression**

**Mental Health**

**Military Service Obligations**

**Non-discrimination**

**Religious Holy Days**

**Sexual Harassment/Misconduct and Supportive Measures**

**Sharing of Class Recordings**