

# STA 3032 – Engineering Statistics (Fall 2019)

Class Time: MWF 11:45AM-12:35PM (Period 5)

Room: WEIM 1064 ([Weimer Hall](#))

Class Number: 21246

Section Number: 7661

## Instructor:

Michael Kim

- Office hours: TR 11:45am-12:35pm (Period 5)
- Room: FLO 117A ([Griffin-Floyd Hall](#))
- E-mail: [michaelkkim@ufl.edu](mailto:michaelkkim@ufl.edu)

## Teaching Assistants:

TA's	Office hours	Room	E-mail
Wei (Will) Hsieh	MF 10am-11am	FLO 115B	<a href="mailto:hsiehwei@ufl.edu">hsiehwei@ufl.edu</a>
Arek Kesiz-Anousi		FLO 209	<a href="mailto:arek.kesizabnous@ufl.edu">arek.kesizabnous@ufl.edu</a>

## E-mails:

- E-mails should be sent primarily for **course policies**. We ask you to please refer to this syllabus and the course website to try to find the answers for yourself on course policies.
- Questions regarding the **material covered** should be asked during class, at the instructor's office hours, or the TA's office hours. It is often difficult to answer questions regarding statistics material through e-mail, as pictures and/or formulas may be required.

## Attendance:

- While not required, it is highly recommended to succeed in the class. If you miss class for any reason it is your responsibility to get notes and information from another student.
- Please refrain from eating and excessive talking while in attendance.
- Please turn off your smartphones/cellphones (not vibrate).
- No electronic devices (laptops, tablets, smartphones, cellphones) should be used in class. Tablets and laptops (with touch screen) with smart pens may be considered as exceptions if you take notes on them.

**Course Website:** [e-Learning \(Canvas\)](#)

## Required Materials:

1. William Navidi, *Statistics for Engineers and Scientists*, McGraw-Hill, 4<sup>th</sup> ed. Use of e-Learning platform *Connect* is required. Available through UF's All Access program for \$80.00, this includes an electronic version of the text.
2. **Calculator** that has some basic statistical functions: mean and standard deviation. Many inexpensive calculators have these functions. A graphing calculator is allowed.

**Course Description:** This course stresses the “big picture” of statistics: It relates standard data summaries, such as the mean and standard deviation, to inferential methods for drawing conclusions from the data, via probability. Many common statistical methods are included, as well as others that have proved useful in engineering applications. Main topics include descriptive statistics, probability basics, discrete and continuous random variables, the sampling distribution of the mean (Central Limit Theorem), estimation, hypothesis testing, and linear regression.

**Prerequisite(s):** MAC 2311 – Analytic Geometry and Calculus I

**Credit Hours:** 3

**Main Course Objectives (short list):**

1. Be able to produce and interpret appropriate graphs and descriptive statistics for one variable (either categorical or quantitative).
2. Know and be able to apply the basic probability rules, the concepts of expected values and variance for discrete and continuous variables, and the binomial, Poisson, and normal distributions.
3. Know and be able to apply the Central Limit Theorem, which is crucial for inference.
4. Know the meaning of confidence intervals and hypothesis tests.
5. Be able to carry out and interpret one-sample analyses for making inference about population means and proportions.
6. Be able to carry out correlation and regression analyses, for two quantitative variables, and to correctly interpret such analyses.

**Letter Grade Distribution:**

A (4.00): 93% - 100%	A- (3.67): 90% - 92.99%	
B+ (3.33): 87% - 89.99%	B (3.00): 80% - 86.99%	B- (2.67): 77% - 79.99%
C+ (2.33): 74% - 76.99%	C (2.00): 64% - 73.99%	
D (1.00): 50% - 63.99%	E (0.00): < 50%	

Grades will be changed only when an error has been made; negotiation is not appropriate. There is no appeal process. Grades will be posted on [Canvas](#). The current UF grading policies for assigning grade points is available [here](#).

**Grading:**

Assessment	Percent of Total	Tentative Date(s)	When/Where
Exam 1	25%	Fri, Sep 20	In-class
Exam 2	25%	Fri, Oct 25	In-class
Exam 3	25%	Wed, Dec 4	In-class
Connect & LearnSmart HW	25%	Canvas	Canvas

**Exams:**

- The 50-minute multiple choice exam will contain 20 or 25 questions. You will bubble in your answers on a scantron. The scantron will be provided by the instructor before the exam starts.
- It will be closed notes and books. Each student is allowed to bring one 8.5x11 sheet of notes to each exam (front & back allowed).
- It is your responsibility to bring a calculator, pencil, and Gator 1 ID to each exam. Graphing calculators are permitted.
- A grade of zero is the minimum punishment of any type of dishonesty on an exam.
- There are no retakes on exams for any reasons.

**Exam 1:**

- Exam review on Wednesday, September 18<sup>th</sup>.
- Will cover material done from Day 1 to September 16.
- The sources for the test questions are the Learn Smart assignments for Chs. 1 & 2; Connect HWs 1 & 2; and lecture notes up to p.86 (**tentative**)

**Exam 2:**

- Exam review on Wednesday, October 23<sup>rd</sup>.
- Will cover material done from September 23 to October 21.
- The sources for the test questions are the Learn Smart assignments for Chs. 2 (Section 2.4 & 2.5), 3, & 4; Connect HWs 3, 4, 5, & 6; and the lecture notes from p.87-181 (**tentative**)

**Exam 3:**

- Exam review on Monday, December 2<sup>nd</sup>.
- Will cover material done from October 28 to November 29.
- The sources for the test questions are the Learn Smart assignments Chs. 5,6, & 7; Connect HWs 7, 8, 9, & 10; and the lecture notes from p.182-? (**tentative**)
  - Topics covered will be Inference, Correlation, and Regression (p.182-277) if we can get through everything (corresponds textbook sections: 5.1, 5.2, 5.3, 5.4, 5.6, 5.7, 6.1, 6.2, 6.3, 6.4, 6.5, 6.7, 6.8, 7.1, 7.2)

**Note about LearnSmart questions:**

Since the LearnSmart questions vary according to individual student responses, I will upload compiled reference lists of the LearnSmart questions (with answers at the end) under the *Exam Stuff* folder on Canvas before the respective exams.

**Make-Ups:**

- Planned make-ups need to be scheduled within at least one week prior to the official exam date. Each case will be reviewed individually. Valid and detailed documentation is a prerequisite for scheduling a make-up under such extenuating circumstances. Being on vacation or booking a trip prior to the completion of the semester is not a valid reason.
- In case of an unforeseen illness or emergency, the instructor must be notified by midnight on the day of the exam and must receive either a medical excuse or a valid and detailed documentation.
- The make-up exam may be in a different format, and the class curve to an official exam (if it exists) may not be given for the make-up exam. Furthermore, students must personally come see the instructor to see what questions they missed on the make-up exams (if they wish to do so), as they will not be returned and answer-keys will not be posted.
- The final exam period for this class (listed on [one.uf.edu](http://one.uf.edu)) is Tuesday, December 10<sup>th</sup> @ 12:30pm-2:30pm in-class. This will be reserve for make-up tests if needed so.

**Homework**

- There will be regular homework done online through Connect. There are two types of Connect assignments: reading comprehension (LearnSmart module in Connect), and problem-solving.
  - There are seven reading assignments, one for each of Chapters 1 to 7 in the text. It would be best to have begun each of these before the corresponding topic is introduced in class. You receive full credit for a LearnSmart reading assignment if you complete it by the due date; these are worth 10 points each.
  - The problem-solving assignments are taken from exercises in the textbook. There are ten of these; they are worth a total of 210 points.
- Both types of online homework are graded automatically as you do them; the LearnSmart assignments are interactive and individualized.
- No extensions to due date and time for homework. No late homework will be accepted.

**Dropping and Withdraw:**

For late course drops and course withdrawals, please visit [here](#).

**Incomplete:**

An Incomplete grade may be assigned at the discretion of the instructor as an interim grade for a course in which the student has completed a major portion of the course with a passing grade, been unable to complete course requirements before the end of the term because of extenuating circumstances (such as an accident, or extended hospitalization), and obtained agreement from the instructor and arranged for resolution of the Incomplete grade in the next term. Instructors are not required to assign Incomplete grades and having a failing grade in the course is not a valid reason for requesting an Incomplete. For complete details please visit [CLAS incomplete grade policies and forms](#).

**Privacy Policies:**

Student records are confidential. Only information designated “UF directory information” may be released without your written consent. UF views each student as the primary contact for all communication. If your parents contact me about your grade, attendance, or other information that is not “UF directory information”, they will be directed to contact you. More information can be found [here](#).

**Students with Disabilities:**

Students with disabilities requesting accommodations should first register with the [Disability Resources Program](#) 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.

**Academic Honesty:**

Students are held accountable to the [UF Honor Code](#).