

STAT 30100: Elementary Statistical Methods I

Spring 2019

Instructors:

Sharmi Bhattacharjee (bhattsha@iupui.edu)
Debolina Chatterjee (dchatter@iupui.edu)
Ziting Tang (zitang@iupui.edu)
Meghan Tooman (mtooman@iupui.edu)

Official Course Description: 3 credits. Introduction to statistical methods with applications to diverse fields. Emphasis on understanding and interpreting statistical techniques. Data analysis for one and several variables, sampling and experimental design, basic probability, confidence intervals, significance tests of means and proportions, correlation and regression. Software is used throughout.

Course Coordinator: Meghan Tooman

Prerequisite: MATH 11000 or 11100 (with a minimum grade of C-) or equivalent

STAT 30100 Spring 2019				
Office Hours and Instructor Availability				
	Monday	Tuesday	Wednesday	Thursday
8:30-9:00am		S. Bhattacharjee IT162		S. Bhattacharjee IT162
9:00-10:00am	M. Tooman (Online Zoom) / LD 249		M. Tooman (Online Zoom)/ LD 249	
10:30-11:55am		S. Bhattacharjee UCB02D		S. Bhattacharjee UCB02D
3:15-4:15pm	D. Chatterjee LD 255		D. Chatterjee LD 255	
4:15-5:15pm		Ziting Tang LD 255		Ziting Tang LD 255

MAC STAT

- An additional resource for help.
- Your instructor should be your first resource.
- Location: University Library on the second floor
- Always keep in mind that your classroom instruction will be the metric by which you are graded.

You can go to ANY office hours of ANY instructor.

Textbook:

Triola, 2015.

Essentials of Statistics, 6th ed. Pearson.

- The e-text is available to you as a part of the registration for this course through My Math Labs and Mastering.
- You have access to the e-text and the My Math Labs and Mastering through the Canvas course site.
- You DO NOT need to pay for access to MSL nor the textbook. It is included in your registration to the course.

No access code needed!

About the Course

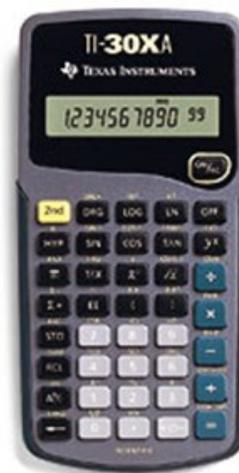
The purpose of this course is to give you a working knowledge of the ideas and tools of statistical practice. The topics in the course can be divided into three main parts:

- **Data analysis:** methods for exploring, organizing, and describing data.
- **Data production:** methods for producing useful data.
- **Statistical inference:** drawing broader conclusions from the data, while taking into account that variation makes those conclusions uncertain.

STAT 30100 STUDENT LEARNING OUTCOMES

After taking this course students will be able to :

1. Choose appropriate graphs, descriptive statistics, and inferential statistical modeling methods to describe and analyze a dataset by matching the appropriate methods to the variables included in a dataset.
2. Estimate the value of population parameters by calculating confidence intervals.
3. Answer questions posed in hypotheses using inferential statistics by performing hypothesis testing.
4. Use professional statistical software and technology to apply the inferential techniques learned in class to analyze a real world dataset and interpret the output.
5. Appraise and evaluate the use of statistics in reporting outcomes by finding an example of an article which describes an observational study or experiment and discussing it with their peers.



The only technology permitted on in-class assignments and closed-book assignments is the TI 30Xa calculator (pictured above).

CELL PHONES NOT PERMITTED for use in class as a calculator.

Canvas:

Contains

- All class materials
- Grades
- Access to My Math Labs and Mastering
- Announcements

Note: Make sure you turn on **notifications** for this class in Canvas. Your instructor will send out important information through the announcements and you are responsible for that information.

- Tables
- Handouts for class
- Real World Assignments and Projects

Weekly information, assignments, notes, etc. are all found under **MODULES**.

Success in This Class Requires:

1.) Participation:

You must attend class and participate actively while you are there.

2.) Self-motivation:

You are responsible for all of the material in the text and anything covered in class even if you are absent.

3.) Timeliness:

Make sure you stay on top of all assignments and due dates.

**Expectations for graded work are based on classroom specifications. Your best guides for grading expectations are the examples we work in class!

Technology Support:

If you have any questions about or issues with any of the technology used in this class please contact the University Information Technology Services (UITSS) support team. At IUPUI you can contact the support team in the following ways:

- Call 317-247-4357
- E-mail ithelp@iu.edu
- LiveChat at <http://ithelplive.iu.edu>
- Walk in at ICTC 129

Student Support Services:

The Division of Student Affairs houses the Dean of Students office and the Student Advocate office. Visit <http://studentaffairs.iupui.edu/about/resources.shtml> for information.

Accessibility and Accommodations

Students needing accommodations because of a disability should register with Adaptive Educational Services (AES) and fill in the appropriate forms issued by AES so accommodations can be provided. The AES office is located in Taylor Hall, UC100, you can call 317 274-3241. Visit <http://aes.iupui.edu> for more information. The Adaptive Technology and Accessibility Center (ATAC) at IUPUI serves students with and without disabilities by providing access to specialized adaptive technologies. For more information please see <http://www.indiana.edu/~iuadapts/>.

Campus-Wide Policies Governing the Conduct of Courses at IUPUI: These can be found at http://registrar.iupui.edu/course_policies.html, with links to specific policies in the general areas of attendance, academic policy, conduct and related policies.

Grading Scale

Class Attendance / Worksheets/ Participation	50 pts
Real-World Problems (10 points each + RW0= 5 pts)	55 pts
1 Media Project / 1 Polling Project (45 points) each	90 pts
Best 8 of 10 Quizzes Online (10 points each)	80 pts
Study Plan (50 Midterm, 50 Final)	100 pts
Three In-Class Exams (100 points each)	300 pts
One Comprehensive Final Exam	200 pts
Total Points Possible	875 pts

Final Grades will be based on the total points accumulated as described above.

Final grades will be based on the following

A+ = 97-100%	C+ = 77-79%
A = 93-96%	C = 73-76%
A- = 90 -92%	C- = 70-72%
B+ = 87-89%	D+ = 67-69%
B = 83-86%	D = 63-66%
B- = 80-82%	D- = 60 -62%
	F = Below 60

Class Attendance and Participation

Subject to the discretion of your instructor, may include grading based on any of the following:

- **Class Attendance:** Your instructor may take attendance on any day of class via role call or sign-in sheet.
- **In-Class Worksheets:** May be collected for a grade or for completion.
- **Group Assignments:** When you work with a group of students on an activity and then present your results to the class, you may be graded for either correctness or completion.
- **Participation:** This can include paying attention to lecture, and actively participating in class by asking questions, answering questions, staying OFF your cell phones, and staying AWAKE.

Note: Your instructor has the discretion to dock points from participation if your activities are deemed unsatisfactory during class.

Study Plan:

(30 min/day or 2 hours/week)

Start this on Mondays!

You should be working on this throughout the week, practicing the concepts learned in class.

You obtain Mastery Points through the Quiz Me function (3 questions on Quiz Me).

Worth 100 points of your final grade

Connected to your weekly Quiz.

Note: If you do poorly on your quiz indicating you have not mastered the concept, MP will be taken away on your Study Plan.

Quizzes :

(1 hour)

Due on Fridays

Worth 10 points each

Lowest 2 will be dropped

Taken in My Stat Labs.

Connected to your Study Plan: if you get a 100% on your quiz, then you will obtain more Mastery Points on the Study Plan for those topics.

3 attempts allowed after you have achieved a certain level of MP for that week. You get one attempt at the quiz without working in your Study plan.

Exams:

There will be 3 in-class exams and one comprehensive final exam during the semester.

- The exam dates are attached to the schedule.
- All exams are closed book and closed notes.
- You are permitted one handwritten help sheet on all exams.
- 8 1/2 x 11" sheet of paper, name at the top, turned in with each exam.
- Make-up exams are only allowed in **verifiable emergency situations**; then only with **prior arrangement** with the instructor.
- All make-up exams must be taken before the graded exam is returned to the class.

Statistics Application and Literacy: Real World Problems

You will work on a data analysis project throughout the semester, applying the concepts learned in class to a real dataset.

There are 5 individual "Real World" problems that are assigned after a learning concept has been covered in class that require you to use SPSS software through IU Anyware and a dataset.

You will complete the data analysis in SPSS then upload the completed problem to Canvas.

Media Project / Polling Project

The media and polling projects require students to find examples of statistics in the media and interpret it. You must also read and discuss your peer's projects, all to be done within a Canvas Discussion.

Note: You may discuss these assignments with your peers, but all submissions must reflect your *individual effort*. The minimum penalty for plagiarism is a grade of 0 assigned to all parties involved. Penalties increase with subsequent occurrences.

Academic Responsibilities & Misconduct

Academic misconduct is defined as any activity that tends to undermine the academic integrity of the institution. The university may discipline a student for academic misconduct. Academic misconduct may involve human, hard-copy, or electronic resources. The faculty member must report all cases of academic misconduct to the dean of students, or appropriate official. Academic misconduct includes, but is not limited to, the following:

Cheating

considered to be an attempt to use or provide unauthorized assistance, materials, information, or study aids in any form and in any academic exercise or environment.

Plagiarism

defined as presenting someone else's work, including the work of other students, as one's own. A student must give credit to the originality of others and acknowledge indebtedness whenever:

A student must not adopt or reproduce ideas, opinions, theories, formulas, graphics, or pictures of another person without acknowledgment, directly quote another person's actual words, whether oral or written; use another person's ideas, opinions, or theories; paraphrase the words, ideas, opinions, or theories of others, whether oral or written; borrow facts, statistics, or illustrative material; or offer materials assembled or collected by others in the form of projects or collections without acknowledgment.

There are serious consequences for academic misconduct. An instructor may choose to not accept an assignment, lower the grade or give the grade of F for the assignment.

The **Final Exam** is scheduled for **Saturday, April 27, 2018 from 10:30am-12:30pm**

Location TBA...look out for a Canvas announcement later in the semester!

Administrative Withdrawal:

A basic requirement of this course is that you will participate in **all** class meetings and conscientiously complete all required course activities and assignments.

Keep in touch with me if you are unable to attend, participate, or complete an assignment on time.

If you miss more than half of the required activities within the first 25% of the course without contacting me, you may be administratively withdrawn from this course. Example: *Our course meets twice per week; thus if you miss more than four classes in the first four weeks, you may be withdrawn.*

Administrative withdrawal may have academic, financial, and financial aid implications. Administrative withdrawal will take place after the full refund period, and if you are administratively withdrawn from the course you will not be eligible for a tuition refund. If you have questions about the administrative withdrawal policy at any point during the semester, please contact me.

We are here to help!

If at any time in this course, you are confused or feeling behind, please come to office hours and we will work to get you back on track.

This course builds on itself, so don't wait until the end of the semester to get help. There are many resources available and we are here for **your success**.

There is a **HELP SESSION** on Fridays that is open to **ALL** students. This will be in an interactive tech classroom so you can work in **MSL** and on **SPSS** real world projects.

Student Misconduct:

All students must adhere to the regulations put forth in the *IUPUI Code of Student Rights, Responsibilities, and Conduct* concerning academic or personal misconduct. The Code can be found at <http://www.iupui.edu/code>.

Academic Integrity:

Cheating on assignments, quizzes, exams, or other academic work is a violation of University Policy. Any behavior that is construed as cheating or academic dishonesty will not be tolerated in this course.

This includes, but is not limited to,

- Plagiarism
- Cheating during exams
- Acquisition of tests or other academic materials
- Aiding or abetting others in committing the violation

Classroom protocol will be guided by the Student Code of Conduct.