STAT 30100: Elementary Statistical Methods I

Fall 2018

Instructor: Meghan Tooman

Contact Me: mtooman@iupui.edu
(All e-mail communication must use your University e-mail account.

Office: LD 249

Course Coordinator: Meghan Tooman

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.*

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

STAT 30100 Fall 2018
Office Hours and Instructor Availability

	Monday	Tuesday	Wednesday	Thursday	Friday
8:30-9:00am					
9:00-10:00am	M. Tooman (Online Zoom)		M. Tooman (Online Zoom)		
10:30-11:45am					HELP SESSION
12(noon)-1pm	M. Tooman LD 249	S. Bhattacharjee 12:30-2:30 UCB 02D	M. Tooman LD 249	S. Bhattacharjee 12:30-2:30 UCB 02D	
1:00-2:30pm					
3:00-4:00pm	D. Chatterjee 3:00-4:00pm LD 255	T. Cheung 3:00-4:00 pm LD 255	D. Chatterjee 3:00-6:00pm MAC STAT	T. Cheung 3:00-4:00 pm LD 255	
4:00-4:30 pm		Z. Tang 3:30-4:30pm LD 255		Z. Tang 3:30-4:30pm LD 255	

You can go to any office hours of any instructor.

MAC STAT

- An additional resource for help.
- Your instructor should be your first resource for help.
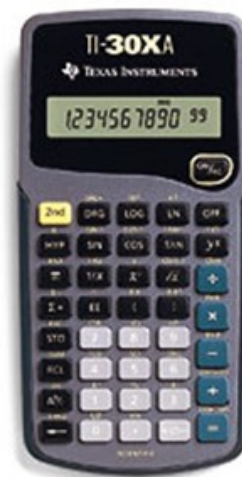- Location: University Library on the second floor.

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

- Announcments

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 Project

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

Success in This Class Requires:

1.) Keep Organized and Manage your Time:
You must watch the videos, read the e-book, and take notes each week. This is super important to your success.

2.) Self-motivation:
You are responsible for all of the material in the text and anything covered in the Cyber Mentoring Sessions.

3.) Timeliness:
Make sure you stay on top of all assignments and due dates.

This course has specific assignments due weekly.

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 (UITS) 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

Workbooks/ Attendance to Cyber Mentoring	110 pts
Real-World Problems (10 points each + 5 pts)	55 pts
1 Media Project	45 pts
Best 8 of 9 Quizzes Online (10 points each)	80 pts
Study Plan (Mastery Points)	140 pts
Midterm Exam (200 points)	200 pts
One Comprehensive Final Exam	200 pts

Total Points Possible
830 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%
A = 93-96%
A- = 90 -92%
B+ = 87-89%
B = 83-86%
B- = 80-82%

C+ = 77-79%
C = 73-76%
C- = 70-72%
D+ = 67-69%
D =63-66%
D- =60 -62%
F = Below 60

Cyber Mentoring and Workbooks

This online course requires 10 live Cyber Mentoring meetings using **Zoom**.

- **Workbooks:** There is a workbook assignment associated with each Zoom meeting. **You should complete this and submit it to Canvas before the first Cyber Mentoring session for the week.**

- **Cyber Mentoring Sessions:** The Cyber Mentor will go through that week's workbook explaining the problems and answers completely. You will have a chance to ask questions throughout.

- **Attendance:** The Cyber Mentor will take attendance during the meetings weekly.

- **Grading:** You will receive **5 points** for completion and submission of the workbook before the due date (again, this is just for your attempt and not correctness). You will receive the final **5 points** when you attend the Cyber Mentoring Session.

- **Zoom**: There is a link in Canvas to the meeting room. You should sign up and access Zoom during the first week to ensure that there aren't any issues for the first graded workbook.

Study Plan:

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. Once you have achieved a level of Mastery your quiz will open and you can try it.

Quizzes:

Due on Fridays

Worth 10 points each

Lowest 2 will be dropped

Taken in My Math Labs and Mastering given 1 hour.

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 each it with send you back to your Study Plan to practice before you try it again.

There will be a midterm exam and one comprehensive final exam during the semester. Both ON CAMPUS.

- 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

The media project requires 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 **Midterm Exam** is scheduled for **Saturday, October 27, 2018 from 10:30am-12:30pm**
The **Final Exam** is scheduled for **Saturday, December 8, 2018 from 10:30am-12:30pm**
Location TBA...look out for a Canvas announcement later in the semester!

Remember, we are here to help! If at any time during the semester you are confused, please seek out any of the instructors and we will work with your for your success!

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.