MATH 231 - BASIC STATISTICS
Fall 2020 Syllabus, Section 003, Class Number 3867

Times and Location

MW 12pm-1:50pm (8/24 to 12/14)

Instructor Information

Edward Fernandez
efernandez@towson.edu
Email: efernandez@towson.edu
Office Hours: 11:00am-12:00pm Mon/Wed

MATH 231 Dates of Major Exams

Exam 1: Friday, October 2, 2-4pm

Exam 2: Friday, November 13, 2-4pm

Final Exam: Saturday, December 12, 10:15am-12:15pm

PUT THESE DATES ON YOUR CALENDAR NOW.

MATH 231 Required Materials

Through Direct Access you will immediately have access to your online course materials for a free period through 11:59pm on August 30, 2020, the University's drop/add deadline. After the free access period, your bursar account will be charged $42.99. If you decide you do not want to purchase the materials through Direct Access, you will have the ability to "opt out" of the Direct Access Program through a link in Blackboard. As long as you opt out by 11:59pm on August 30, your bursar account will not be charged.

If you are repeating MATH 231, and previously purchased access to the Lock materials on WileyPLUS, you can request that Wiley extend that access - for free - by clicking on this link: https://www.wileyplus.com/wp-access/. You must also "opt out" of the Direct Access program by 11:59pm on August 30, through a link in Blackboard, or you will be billed for the materials by the TU Bookstore.

- Statistics: Unlocking the Power of Data, 2nd edition, by Robin H. Lock et al. (Wiley, 2017), including access to the associated WileyPLUS online platform. There are five authors all named Lock, and thus the text is sometimes referred to as "Lock5." If having a physical book is important to you, you may purchase or rent a new or used copy of the Lock text. [Note: Even if you purchase a physical copy of the text, you will still need to purchase access to the WileyPLUS online platform. This online access will be purchased via the Direct Access program, and billed directly to your TU student account (unless to you elect to opt out, which I strongly recommend against). Direct Access is managed by the TU Bookstore, so please contact them if you have any questions.

- Webcam: Even though the Coronavirus pandemic means we can't have normal face-to-face class, we would like to build community within our class as much as possible. I want you to see my face, and each other's. It's helpful when I'm attempting to hold a discussion if I can "read" your faces. For this reason, the expectation is that during our online live class meetings – for which we will be using Zoom – you have your webcam turned on. You are welcome to use a virtual background, as long as it's not distracting.

- Smartphone with a working camera: Your smartphone will be used in two ways:
  - As a means of scanning your written work, so it can be uploaded to Blackboard
  - For exams, you will join a Zoom session from your smartphone, with the camera pointed at your work space, allowing me to proctor you taking the exam. See note on Exams and Quizzes below.

    If for any reason, you believe you should be exempt from the webcam and/or smartphone expectations, please reach out to me ASAP.

- Calculator: A calculator is recommended, but not required for this class. It does not need to be a graphing calculator, but it should have square root and parentheses. Use of online calculators is not permitted on exams (although you are permitted to use the calculator utility provided within Microsoft Windows).
- **Spiral bound course packet, purchased at the TU Bookstore**

Course Description

A non-calculus based introduction to statistics with emphasis on applications. Topics include categorical and quantitative data collection through sampling and experimental design, data description and displays, confidence intervals and hypothesis tests for one- and two-samples, and matched-pairs design; normal and t-distributions; correlation and simple linear regression. Emphasis on interpretations of results throughout. Substantial use of a computer package as a learning and computational tool. Prerequisite: qualifying score on Math Placement exam or MATH 100 (recommended) or MATH 102 or higher. Core: Mathematics. Lab/Class fee will be assessed.

MATH 231 Course Objectives

All course activities have been designed in keeping with recommendations from the 2016 GAISE report. The course uses a simulation-based-inference approach which treats the logic (and concepts) of statistical inference as paramount.

Core 3 Learning Goals

This University Core course is designed to meet the following four learning goals.

1. Construct and evaluate logical arguments.
2. Apply and adapt a variety of appropriate strategies to solve mathematical problems.
3. Recognize and apply mathematics in contexts outside of mathematics.
4. Organize and consolidate mathematical thinking through written and oral communication.

MATH 231 Grading Scheme / Policy

Grade	Grade Points Per Unit
A	93% - 100%
A-	90% - 93%
B+	87% - 90%
B	83% - 87%
B-	80% - 83%
C+	77% - 80%
C	70% - 77%
D+	67% - 70%
D	60% - 67%
F	< 60%

MATH 231 Evaluation

Your final grade will be based on your success in meeting the goals and objectives of this course as demonstrated throughout the semester and in the course assignments and examinations. The breakdown is shown here, but the individual components are elaborated upon in the following section.

17.5% Exam 1 – Chapters 1 & 2

17.5% Exam 2 – Chapters 3 & 4

25% CUMULATIVE Final Exam – Chapters 1-6

10% WileyPLUS online homework

15% Quizzes

15% Other Assigned work

100% TOTAL

*Note that Chapters 5 and 6 are included in the final exam, but not assessed in a "midterm" exam.]

Note on Quizzes & Exams: These are explained in more detail separately below. However, note that for both of these types of assessments - and possibly others that will be done synchronously - just as in face-to face classes, the teacher can monitor their students, and students can see others working around them. During these times, you will sign into Zoom **from your phone,** keep microphone off, but video on, and set it up to show your workspace (your paper, your hands, your laptop, at least some of your face.) Acceptable views are shown in the Tech Skills Assignment. If for any reason, this requirement is a problem for you, you need to tell me about it *now* (not at the time of an assessment). Alternatively, you can reach out to Math 231 coordinator, kschumm@towson.edu to discuss the matter. [or Assistant Chair of the Math Department, fshore@towson.edu.]

Exams:

Exams (two midterms and a cumulative final exam) will be administered online, from within Blackboard. All MATH 231 students will take exams at the same time; see "Dates of Major Exams". These common exam times are outside of the normal class meeting time. Exam times were published at the start of the semester (see near top of this syllabus), and students

are responsible for making sure they are free at those times. If you think you have a legitimate reason for not being able to take the exam at the published time, you must speak to me about that right away.

Quizzes:

There will be five quizzes - one each on chapters 1, 2, 3, 4, and 6. The lowest quiz score will be dropped. No make-up quizzes will be offered.

WileyPLUS online homework:

These assignments are accessed on the WileyPLUS platform. Online homework assignments can be submitted up to 1 day late with a 10% penalty. After that there is a 20% penalty. At the time of the exam, the online homework results for the chapters covered on the exam will be copied into the Blackboard gradebook, and the associated assignments will be effectively closed. Homework scores will be transferred to Blackboard in three "units": Chapters 1&2, Chapters 3&4, and Chapters 5&6. All assignments within a given unit will count equally, and the lowest assignment score will be dropped from each unit. The three unit grades will contribute equally to the final grade.

Other Assigned Work: This category will include other work assigned to do outside of class, as well as an occasional graded in-class assignment, and possible in-class mini-quizzes.

In general: If you are having a personal crisis that is affecting your schoolwork, please talk to me.

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MATH 231 Key Dates

- Monday, August 24 - First day of classes
- Sunday, August 30 - Last day to drop a course with no grade posted to academic record; last day to add
- Monday, September 7 - Labor Day holiday (TU closed)
- Friday, October 2, 2-4pm - Exam 1, Chapters 1&2
- Monday, November 2 - Last day to withdraw with a grade of "W"; last day to change to Pass or Audit grading option
- Friday, November 13, 2-4pm - Exam 2, Chapters 3&4
- Wednesday, November 25 - Sunday, November 29 - Thanksgiving holiday (TU closed)
- Monday, December 7 - Last day of classes
- Saturday, December 12, 10:15am - 12:15pm - Cumulative final exam, Chapters 1-6

MATH 231 Remarks and Policies

1. **Each student is expected to follow the policies and obey and the rules and regulations of Towson University** and should expect these rules and regulations to be enforced.

2. **How Class Will Be Conducted**: Our class will be conducted online synchronously this semester. Students are expected to sign into class via a Zoom session at each of our regularly-scheduled class times (12:00pm - 1:50pm). Students should have their videos turned on and their microphones muted. Microphones can be un-muted when asking questions or answering questions and then promptly muted when done with the conversation. The lecture will be presented during the zoom session and there could be either a quiz or in-class activity (or both) interspersed with the lecture. Students have to be present in the session to get credit.

3. **Student Workload Expectations:** Federal and State regulations require that students are expected to spend at least two hours outside of the classroom working on course-related activity for every one in-class hour. For this class, that means the expectation is that you will spend at least eight to twelve hours per week outside of the four "hours" of classroom time for success in MATH 231.

4. **Communication:**##I will communicate with the entire class via announcements in Blackboard, and with individual students via their Towson University email.#You are expected to check both of these regularly, and are expected to respond as appropriate. Please set your Blackboard notification preferences so that you will receive my announcements in a timely manner - sometimes they will contain information that you will want to have promptly.

5. **Recording class sessions:** I may record some (or all) class meeting. Please speak to me ASAP if you are uncomfortable with that.

6. **Calculator**: Students are required to have a scientific**calculator**#in class and available for use on exams (or, alternatively, may use the calculator utility built into Microsoft Windows; no online calculators for exams).

7. **Late work:**See section on WileyPLUS online homework for a discussion of the lateness policy on those assignments. Written homework assignments will only be accepted after the due date with specific approval from me. A student who misses a quiz or exam will receive a zero, except in the case of a documented, University-approved excused absence. See "Attendance/Absence Policy" for University policy regarding excused absences.

8. Should it be necessary to readjust the grading schedule (for example, due to the cancelling of an exam or graded assignment), at the discretion of the instructor, the Final Grade for the course will be calculated using a weighted sum, maintaining the original percentages assigned to the graded categories.

9. **Professionalism** is expected from all of my students:
   a. The student attends every class, arriving on time and staying through the end of class.
   b. The student conducts him/herself during class in a mature manner that does not distract others, including instructor.
   c. The student participates in class activities and discussions in a mature manner.
   d. The student demonstrates reasonableness/flexibility in changes to the schedule or syllabus.
   e. The student communicates with the instructor and peers in a constructive, professional manner.
   f. The student demonstrates a commitment to learning.
   g. The instructor reserves the right to ask a student who demonstrates any disruptive behavior to leave the class session for that session if the situation warrants it,student will be reported to University Administration.

10. **Department of Mathematics Commitment to Diversity: Towson University values diversity and fosters a climate that is** grounded in respect and inclusion. Everyone participating in this course is expected to treat all others in accordance with this vision and policy. TU's diversity tenets include sex, sexual orientation, race and ethnicity, color, nationality, gender identity or expression, mental/physical ability, religious affiliation, age, and veteran status. If you feel these expectations have not been met, please contact the Math Department's Diversity representative, Dr. Goode at egoode@towson.edu.

11. **Support for Course Success:** If you do not understand a concept covered in class, please reach out for help right away, so you don't fall behind. I am available during my office hours, by appointment, and via email. In addition, there is a student support program specifically for MATH 231, called "PLTL," short for "Peer-led Team Learning". (Note: The math tutoring center operated by the Teaching and Learning Center does not cover MATH 231.) Beginning the 3rd or 4th week of class, daily drop-in hours and guided-activity sessions for extra help in Math 231 will be available. Take advantage of that! You will receive correspondence about this program via your TU email address.

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Academic Integrity Policy

The academic integrity policy for this course is consistent with the TU Academic Integrity Policy. The policy can be reviewed here: https://www.towson.edu/about/administration/policies/03-01-00-student-academic-integrity-policy.html

Students with Disabilities Policy

This course is in compliance with Towson University policies for students with disabilities. Students with disabilities are encouraged to register with Accessibility & Disability Services (ADS), 7720 York Road, Suite 232, 410-704-2638 (Voice) or 410-704- 4423 (TDD). Students who suspect that

they have a disability but do not have documentation are encouraged to contact ADS for advice on how to obtain appropriate evaluation. A memo from ADS authorizing your accommodation is needed before any accommodation can be made.

https://www.towson.edu/accessibility-disability-services/

Attendance / Absence Policy

Students are expected to attend all classes. Consistent attendance offers the most effective opportunity for students to understand concepts, materials and expectations of those courses in which they are enrolled. To view the policy in full, please visit https://nextcatalog.towson.edu/syllabi/commontext/attendance/ (http://catalog.towson.edu/syllabi/commontext/attendance/).