



EAST TEXAS A&M UNIVERSITY
MATH 403–01W / MATH 403–61W: Mathematical Statistics II
COURSE SYLLABUS: Fall 2026

Instructor Information

Instructor: Dr. K.D. Gayan Maduranga

Office Location: Young Education North, Room 104D

Office Hours: Monday and Wednesday, 12:00 PM–2:30 PM; and by appointment

University Email: Gayan.Maduranga@etamu.edu

Preferred Communication: University email

Communication Response Time: Usually within 24 hours on weekdays, Monday–Friday.

Please use your East Texas A&M University email account for course communication. Include “MATH 403” and your section number (01W or 61W), together with a brief purpose, in the subject line. For example: “MATH 403-01W, Question about Homework 2.”

Course Information

This single syllabus applies to both sections. Unless the instructor announces otherwise, MATH 403–01W and MATH 403–61W use the same course materials, assignments, grading rules, examination procedures, and course schedule.

Section	CRN	Campus	Dates / Delivery
MATH 403–01W	84857	Main Campus	Aug. 24–Dec. 10, 2026; Web Based Class
MATH 403–61W	84858	RELLIS Campus	Aug. 24–Dec. 10, 2026; Web Based Class

Course Title: Mathematical Statistics II

Credit Hours: 3

Level: Undergraduate

Schedule Type: Web Based Class

Term Dates: August 24–December 10, 2026

Scheduled Class Time: No required weekly synchronous meeting time

Primary LMS: myLeo Online (D2L Brightspace)

Online / Asynchronous Delivery

This is a fully online, primarily asynchronous course. There is **no required weekly live class meeting**. Students may complete instructional activities within the posted availability periods, but all assignment, quiz, and examination deadlines remain firm.

For a predictable rhythm, new instructional material will generally be organized around **Tuesday and Thursday**. A typical week may include lecture notes or recorded explanations, assigned reading, worked examples, R demonstrations, homework, quizzes, and announcements. Optional live Zoom problem-solving or review sessions may be offered. If an optional session is offered, participation is encouraged but is not a substitute for completing required asynchronous work.

Materials – Textbooks, Readings, and Supplementary Resources

- **Primary textbook:** J. Susan Milton and Jesse C. Arnold, *Introduction to Probability and Statistics: Principles and Applications for Engineering and the Computing Sciences*, 4th ed.
- **Optional supplementary reference:** D. D. Wackerly, W. Mendenhall, and R. L. Scheaffer, *Mathematical Statistics with Applications*, 7th ed., optional supplementary reference.
- **Additional readings/materials:** Instructor lecture notes, worked examples, R demonstrations, handouts, data sets, and selected supplementary readings posted in the LMS. Instructor notes will supplement Bayesian statistics and other topics as needed.
- **Required statistical software:** The statistical software R will be used for selected examples, homework, simulation, regression/ANOVA work, and interpretation of statistical output. Download R from the [R Project](#). Students may use RStudio as an interface for R.
- **Required examination technology:** Respondus LockDown Browser with webcam monitoring for designated online examinations. Detailed requirements appear later in this syllabus.

Planned textbook emphasis: Part I reviews selected prerequisite material from Chapters 1–10. The principal new MATH 403 material will draw from Chapter 11 (Simple Linear Regression and Correlation), Chapter 12 (Multiple Linear Regression Models), Chapter 13 (Analysis of Variance), and instructor notes on Bayesian statistics. Selected additional topics may be introduced if time permits.

Lecture notes, handouts, assignments, announcements, examination information, and other course materials will be posted in myLeo Online (D2L Brightspace). Students are responsible for checking the course site and university email regularly.

Prerequisite

MATH 402 (Mathematical Statistics I) with a minimum grade of C. Students are expected to retain working knowledge of probability, random variables and distributions, joint distributions, expectation and variance, sampling distributions, the Central Limit Theorem, point and interval estimation, and hypothesis testing.

Course Description

A calculus-based continuation of mathematical statistics with emphasis on statistical inference and statistical modeling. The course begins with a structured review of essential MATH 402 material and then develops new topics including correlation, simple and multiple linear regression, analysis of variance (ANOVA), Bayesian statistics, and other selected topics as time permits. Statistical computing and interpretation using R are incorporated where appropriate.

Course Organization

The course is intentionally organized as a continuation of MATH 402.

- **Part I – MATH 402 Review:** Essential probability and inference material from MATH 402 is reviewed and integrated. **Midterm Exam I** assesses the **MATH 402 prerequisite/review material covered in Part I**.

- **Part II-A – First MATH 403 Unit:** Simple and multiple linear regression form the first major new MATH 403 unit. **Midterm Exam II assesses this first portion of new MATH 403 material.**
- **Part II-B – Later MATH 403 Unit:** ANOVA, selected extensions, Bayesian statistics, and other topics as time permits.
- **Comprehensive Final Examination:** The final assesses essential prerequisite ideas and all MATH 403 material, with greater emphasis on the new MATH 403 content.

Student Learning Outcomes

By the end of the course, students should be able to:

1. apply prerequisite probability and statistical-inference concepts from MATH 402 in more advanced statistical settings;
2. work with sampling distributions, estimators, confidence intervals, and hypothesis-testing concepts needed for later statistical models;
3. derive and interpret least-squares estimators for a simple linear regression model;
4. construct and interpret confidence intervals, hypothesis tests, and prediction procedures in simple linear regression;
5. assess regression assumptions using residual analysis, measures of fit, correlation, and appropriate diagnostic tools;
6. formulate and analyze multiple linear regression models, including a matrix formulation of least squares when appropriate;
7. interpret inference for multiple-regression parameters and use indicator variables and selected model extensions when appropriate;
8. formulate and interpret analysis-of-variance models and carry out corresponding F tests, comparisons, and contrasts;
9. explain important connections between regression and analysis of variance;
10. formulate basic Bayesian models using a prior distribution, likelihood, and posterior distribution and interpret Bayesian estimates or predictions;
11. use R for selected probability/statistical computations, simulations, regression/ANOVA analyses, graphical diagnostics, and interpretation of computer output; and
12. communicate statistical reasoning and conclusions clearly in mathematical, computational, and written form.

Course Requirements

Minimal Technical Skills Needed

Students should be able to:

- use university email and myLeo Online (D2L Brightspace) to read announcements, access modules, download materials, and upload assignments;
- use an updated web browser and manage files and folders on a computer;

- create, save, combine when needed, and submit clear PDF documents;
- install or access R/RStudio, open and save scripts, run commands, and locate saved output;
- install and launch Respondus LockDown Browser using the institution-specific access provided through the course/LMS;
- use a functioning webcam and microphone when required by the examination setup; and
- maintain backup copies of course files and use a reasonable backup plan for internet/device access when feasible.

Required Hardware and Internet Access

Because this is an online course, students need regular access to a computer and a reliable internet connection. A phone alone is not an adequate primary device for this course. Designated online examinations require a device compatible with the current Respondus LockDown Browser requirements and a functioning webcam. Students should verify compatibility and complete the required Respondus practice activity well before the first examination.

Students who rely on campus, library, workplace, or shared computers are responsible for confirming in advance that the device permits installation/use of required software. A technical problem discovered at the examination deadline does not automatically create an extension or make-up opportunity.

Instructional Methods

The course will use a combination of structured online modules, mathematical derivation, worked examples, guided problem solving, assigned reading, R demonstrations, homework, quizzes, online examinations, and optional virtual review/problem-solving sessions. Materials will be organized through myLeo Online (D2L Brightspace).

Student Responsibilities and Tips for Success

Students are expected to:

- access the course regularly rather than treating the course as self-paced;
- follow the posted weekly modules and maintain steady progress;
- complete the MATH 402 review seriously because Midterm Exam I assesses that prerequisite material;
- check university email and myLeo Online (D2L Brightspace) regularly, preferably every weekday;
- begin homework and R work early enough to ask questions before deadlines;
- read examination instructions and complete technology checks before each examination;
- keep organized, backed-up copies of R scripts, data files, PDFs, and submitted work;
- ask for clarification when instructions, collaboration rules, or permitted technology use are unclear; and
- use office hours and university academic-support resources before difficulties become severe.

Calculator / Technology

A regular non-programmable scientific calculator may be used on an examination when the examination instructions permit it. Programmable calculators, computer algebra systems, phones, tablets, smart watches, messaging applications, generative AI tools, and other communication-enabled resources are not permitted during examinations unless the instructor explicitly authorizes them in writing. Permitted scratch paper, formulas, tables, or other resources will be stated in the instructions for each examination.

Course Software or Statistical Package

The statistical software R will be used for selected examples, homework, simulation, regression/ANOVA work, and interpretation of statistical output. Download R from the [R Project](#). Students may use RStudio as an interface for R.

For graded R work, students may be required to submit code, output, figures, calculations, and interpretation in the format stated in the assignment. Code should run from a clean session using the stated data and packages unless the instructor specifies otherwise.

Grading

The following weights show how the final course grade is calculated.

Assessment	Weight	Planned Timing
Midterm Exam I	25%	Online exam window: Oct. 5–7, 2026
Midterm Exam II	25%	Online exam window: Nov. 10–12, 2026
Quizzes	15%	Approximately bi-weekly / as announced
Homework	10%	Approximately bi-weekly / as announced
Comprehensive Final Exam	25%	Online final-exam window: Dec. 7–10, 2026
Total	100%	

Assessment Details

Midterm Exam I – MATH 402 Review. Midterm Exam I assesses the prerequisite MATH 402 material reviewed during Part I of the course. It does not imply that every section of Chapters 1–10 will be retaught or tested. The exam will emphasize the specific prerequisite concepts reviewed in the course and identified in posted materials. The planned online exam window is **October 5–7, 2026**.

Midterm Exam II – First MATH 403 Unit. Midterm Exam II assesses the first major portion of the new MATH 403 material, with primary emphasis on simple and multiple linear regression, associated inference, and the course materials developed through Chapters 11–12. The planned online exam window is **November 10–12, 2026**.

Quizzes. Quizzes are intended to encourage steady progress and provide practice with concepts, notation, interpretation, and calculations. Quiz availability and deadlines will be posted in myLeo Online (D2L Brightspace).

Homework. Homework develops the mathematical reasoning, derivations, calculations, R skills when assigned, and statistical interpretation needed for the examinations. Unless otherwise directed, homework must be submitted through myLeo Online (D2L Brightspace) in the required format. Homework sent only by email is not considered submitted.

Dropped Grades. When final course grades are calculated, the **lowest homework grade and the lowest quiz grade will each be dropped.** The dropped-grade policy is intended to provide limited flexibility for one missed or unusually low homework score and one missed or unusually low quiz score; it does not create a general late-work or make-up policy.

Final Examination. The final examination is **comprehensive.** It assesses essential prerequisite ideas from MATH 402 and all MATH 403 material, with greater emphasis on the new MATH 403 topics. The planned online final-exam window is **December 7–10, 2026.** Exact opening/closing times and instructions will be posted in myLeo Online (D2L Brightspace).

Letter Grades

Final course percentages correspond to letter grades as follows:

- **A:** 90% or higher;
- **B:** at least 80% but below 90%;
- **C:** at least 70% but below 80%;
- **D:** at least 60% but below 70%;
- **F:** below 60%.

Strict Late-Work Policy

Late homework and quiz submissions are not accepted. Homework assignments and quizzes must be submitted through myLeo Online (D2L Brightspace) by the posted deadline. Because this is an online course, students are responsible for planning ahead and allowing sufficient time to complete and upload their work.

A missed homework assignment or quiz receives a grade of zero and may become the dropped score in that category. Students should not expect an extension or make-up simply because an assignment was forgotten, started late, uploaded incorrectly, or affected by routine personal computer/internet difficulties. The dropped-grade policy is the built-in flexibility for an occasional missed or low homework/quiz score.

Exceptions will be made when required by university policy, an approved accommodation, or another officially recognized/documented circumstance. Students should contact the instructor as soon as reasonably possible when such a circumstance affects coursework.

Make-Up Examinations

Make-up midterm or final examinations are not automatic. A student who misses an examination because of an officially excused absence, approved accommodation, documented emergency, or other circumstance recognized by university policy must contact the instructor as soon as reasonably possible, and before the exam when circumstances permit. The instructor will determine the appropriate make-up procedure consistent with university policy. Sending a message after an examination window has closed does not by itself create an excused absence.

Online Attendance, Participation, and Academic Engagement

Because these are web-based sections with no required weekly meeting time, attendance is demonstrated through regular academic engagement. Students are expected to access course materials consistently, complete required activities, submit work by posted deadlines, take examinations during assigned windows, and communicate promptly when circumstances interfere with participation.

Simply logging into myLeo Online (D2L Brightspace) does not by itself demonstrate meaningful academic engagement. Examples of meaningful engagement include completing assigned readings/modules, viewing or working through instructional materials, attempting quizzes/homework, completing R activities, participating in required course communication, and taking examinations.

Optional synchronous sessions do not replace the required asynchronous work unless the instructor explicitly states otherwise.

Online Examination Proctoring: Respondus LockDown Browser and Webcam

Important: This course requires **Respondus LockDown Browser with webcam monitoring** for designated online examinations, including Midterm Exam I, Midterm Exam II, and the Comprehensive Final Exam, unless an approved accommodation or an instructor-authorized alternative applies.

LockDown Browser is a secure testing browser used with learning-management systems such as Brightspace. When enabled for an examination, it restricts access to other websites and applications while the examination is in progress. The webcam feature records the examination session and workspace environment for review as configured for the assessment.

Required Equipment

Students are responsible for having access to:

- a computer compatible with the current Respondus LockDown Browser requirements;
- a functioning built-in or external webcam;
- a functioning microphone when required by the webcam setup;
- a reliable internet connection; and
- the current institution-specific version of Respondus LockDown Browser installed before the examination.

Do **not** wait until an examination begins to install or test the software. Use the institution-specific Respondus download/access link provided through myLeo Online (D2L Brightspace) rather than a download link belonging to another institution.

Required Respondus Practice Check

Before Midterm Exam I, students must complete the ungraded **Respondus Practice Quiz** posted in myLeo Online (D2L Brightspace). The practice activity is used to confirm that LockDown Browser, the webcam, microphone when applicable, and network connection function correctly. The exact practice-quiz deadline will be announced in the LMS.

Before the practice quiz and again before a high-stakes examination when the device or network has changed, students should:

1. launch Respondus LockDown Browser and access this MATH 403 course in myLeo Online (D2L Brightspace);
2. open the LockDown Browser Help Center;
3. run the **Webcam Check** and correct any detected issue;

4. run the **System & Network Check**;
5. use the Help Center/Knowledge Base or university technical-support resources when a problem is identified; and
6. complete and submit the Respondus Practice Quiz successfully.

Completion of the practice activity is not a guarantee that a student's future network or device will remain trouble-free. Students should repeat the checks when they change computers, webcams, locations, or networks.

Examination Environment and Conduct

When taking an examination that requires LockDown Browser and a webcam, students must follow the assessment instructions and the following general expectations:

- select a quiet, well-lit location where you can remain for the entire examination and where you are comfortable having the required video recording made;
- place the computer on a firm surface such as a desk or table rather than on a lap, bed, or unstable surface;
- position the webcam so the face remains visible and avoid changing the screen/camera position after the webcam setup is complete unless necessary;
- avoid strong backlighting, such as sitting with a bright window directly behind you;
- turn off and place outside immediate reach all unauthorized devices, including phones, tablets, smart watches, additional computers, and communication devices;
- clear the testing area of books, notes, papers, headphones, or other materials unless the examination instructions specifically permit them;
- remain at the testing device and in the expected webcam view for the duration of the examination except when an approved accommodation or emergency requires otherwise;
- do not communicate with another person, access unauthorized assistance, or use unauthorized on-line/offline resources during the examination; and
- submit the examination through the required LMS procedure before leaving the testing session.

Students should avoid clothing or accessories that unnecessarily obscure the face during webcam verification. Religious observances, disability-related needs, and other approved/protected circumstances will be respected in accordance with university policy.

Permitted Materials During Exams

Each examination will state exactly what materials are permitted. If an item is not listed as permitted, students should assume it is not authorized. Unless the examination instructions state otherwise, students may not use notes, textbooks, outside websites, messaging applications, AI tools, solution services, other people, or secondary devices. A non-programmable calculator and scratch paper may be used only when the examination instructions explicitly permit them.

Respondus Recording and Student Responsibility

The webcam requirement means the student and testing environment may be recorded during the assessment. Students should select an appropriate location before beginning. Students may not disable, obstruct, intentionally defeat, or interfere with required examination-monitoring features. Attempts to circumvent the proctoring setup, access restricted resources, or obtain/provide unauthorized assistance may be treated as academic-integrity violations under university procedures.

Technical Problems During an Examination

Students should prevent avoidable problems by completing the practice quiz and system checks in advance. If a significant technical problem occurs during a timed examination:

1. follow any on-screen Respondus/LMS instructions;
2. if possible, use the Respondus Help Center or available support resources;
3. document the problem as soon as it is safe and possible to do so, including the time, error message, and relevant details;
4. contact the instructor promptly using university email; and
5. contact university technical support when appropriate.

A technical report does not automatically guarantee extra time, a reset, or a make-up examination. The instructor will review the circumstances, available LMS/Respondus records, and university requirements before determining the appropriate response.

Accessibility and Respondus

Approved disability accommodations apply to online examinations. Students who need an accommodation that affects timing, webcam use, testing environment, assistive technology, or examination delivery should work through East Texas A&M University Student Disability Services and should communicate approved accommodations early enough for arrangements to be implemented. Students should not wait until the examination begins to raise an accommodation issue that could reasonably have been arranged in advance.

Academic Integrity and Course Conduct

East Texas A&M University students are expected to maintain high standards of integrity and honesty in all scholastic work. For more details and the definition of academic dishonesty, see the University's undergraduate academic-dishonesty procedure and Academic Integrity Guide.

Plain-Language Academic Integrity Rule

Cheating: simply, do not do it.

Unless the instructor explicitly states otherwise, examinations are individual work and are closed to unauthorized notes, websites, messaging, AI tools, solution services, other people, and communication-enabled devices. Do not give or receive unauthorized assistance.

If a student is found responsible for cheating on an examination under East Texas A&M University's undergraduate academic-dishonesty procedure, the instructor's course-level sanction will be a grade of zero (0 points) on that examination, subject to the University's required

process and the student's appeal rights. The incident will also be reported and handled as required by University Procedure 13.99.99.R0.03. University officials may impose other sanctions when applicable.

East Texas A&M University expects undergraduate students to maintain high standards of integrity and honesty in all scholastic work. Academic dishonesty includes, but is not limited to, cheating, complicity, fabrication, falsification, forgery, unauthorized multiple submissions, plagiarism, unauthorized access, and unauthorized or undocumented AI use. See the [Academic Integrity Guide](#) and [University Procedure 13.99.99.R0.03: Undergraduate Academic Dishonesty](#).

Collaboration and Sharing Work

Unless an assignment explicitly permits collaboration, graded work must be completed individually. Students may study together and discuss general course concepts, but they may not copy, share, post, transmit, purchase, or obtain completed solutions, R code, quiz/exam content, or written responses for submission as their own work. If collaboration is authorized, the assignment instructions will state what collaboration is permitted and what each student must submit independently.

Artificial Intelligence (AI) Use

East Texas A&M University acknowledges that there are legitimate uses of Artificial Intelligence, ChatBots, or other software that has the capacity to generate text, or suggest replacements for text beyond individual words, as determined by the instructor of the course.

Any use of such software must be documented. Any undocumented use of such software constitutes an instance of academic dishonesty (plagiarism).

Individual instructors may disallow entirely the use of such software for individual assignments or for the entire course. Students should be aware of such requirements and follow their instructors' guidelines. If no instructions are provided the student should assume that the use of such software is disallowed.

In any case, students are fully responsible for the content of any assignment they submit, regardless of whether they used an AI, in any way. This specifically includes cases in which the AI plagiarized another text or misrepresented sources.

Course-specific AI rule. Generative AI tools may be used only for general study support unless a particular assignment explicitly authorizes additional use. Examples of study support include requesting an alternative explanation of a concept or asking for additional ungraded practice questions. Unless an assignment explicitly states otherwise, AI tools may **not** be used to generate, revise, or check solutions, derivations, R code, statistical analyses, written responses, or interpretations submitted for credit. AI tools are not permitted during quizzes, midterm examinations, or the final examination. Any AI use that is specifically authorized for graded work must be documented as directed by the instructor. Undocumented or unauthorized AI use on graded work will be handled as academic dishonesty under university policy. Students remain fully responsible for the correctness, reproducibility, citation, and originality of all submitted work.

Technology Requirements, Access, and Support

Learning Management System (LMS) – D2L

All course materials, announcements, due dates, quizzes, examination links, grades, and major course communications will be organized through myLeo Online (D2L Brightspace). For current platform and browser guidance, see the [myLeo Online \(D2L\) Guide](#) and the [Brightspace Platform Requirements](#).

Access and Navigation

Students need their campus-wide ID (CWID) and password to access university systems. Students who do not know their CWID or who have password/access difficulties should contact the Center for IT Excellence (CITE) at **903-468-6000** or helpdesk@etamu.edu.

Personal computer or internet problems do not automatically excuse missed coursework. Students should maintain a reasonable backup plan, such as access to a campus/library computer, another reliable device, or another internet connection when feasible. Because Respondus installation may be restricted on shared devices, students should verify any backup device before an examination.

Technical Support

For Brightspace/D2L technical difficulty, use the support options available through the [myLeo Online \(D2L\) Guide](#). Brightspace support may also be reached at **1-877-325-7778**. For myLeo/CWID access issues, contact CITE at **903-468-6000** or helpdesk@etamu.edu.

For Respondus-specific issues, use the LockDown Browser Help Center and the support/knowledge-base options provided through the software. General product information is available from the [Respondus LockDown Browser information page](#). The institution-specific installation/access link will be provided in myLeo Online (D2L Brightspace).

Communication and Support

Interaction with the Instructor

Course correspondence will use university email and announcements in myLeo Online (D2L Brightspace). Students should check their East Texas A&M University email regularly; D2L announcements do not replace the need to monitor university email.

When emailing the instructor, please include:

- “MATH 403,” your section number, and the topic in the subject line;
- an appropriate greeting;
- a clear question or explanation written with professional grammar and punctuation; and
- your full name and CWID when the CWID is necessary to resolve a student-specific administrative issue.

If you have questions or are having difficulty with course material, contact the instructor early and use office hours whenever possible.

Netiquette

Professional conduct applies to email, discussion boards, Zoom, and all other online course communication. Disagreement should focus on mathematical or statistical ideas rather than individuals. Students should not post another student’s work, personal information, or examination content without authorization.

Fall 2026 Academic Calendar Notes

Both MATH 403 sections in this syllabus run from **August 24 through December 10, 2026**. Relevant university dates include Labor Day on **Monday, September 7** (University closed), Fall Break on **Thursday–Friday, October 8–9**, Student Thanksgiving Break beginning **Wednesday, November 25**, the University’s

Fall last regular class day on **Friday, December 4**, and the beginning of the Fall final-examination period on **Saturday, December 5**. Because these sections are asynchronous web-based classes with no scheduled weekly meeting time, the course uses clearly announced online exam windows rather than a meeting-pattern final-exam time.

Tentative Course Outline / Calendar

The schedule below treats MATH 403 as a continuation of MATH 402. Part I provides a substantial prerequisite review and culminates in Midterm Exam I. Part II introduces the new MATH 403 material; Midterm Exam II covers the first major portion of that new material, and the final examination is comprehensive. Minor adjustments may be made based on course progress. Substantive changes will be announced in advance through university email and/or myLeo Online (D2L Brightspace).

Week / Dates	Course Part	Topics / Activities	Text
1: Aug. 24–28	Part I: 402 Review	Course orientation; probability review; sample spaces and events; counting; conditional probability; independence; Bayes' theorem; random variables and discrete probability distributions.	Chs. 1–3
2: Aug. 31–Sept. 4	Part I: 402 Review	Discrete distributions; expectation and variance; moment-generating functions; continuous densities/distribution functions; normal, gamma, exponential, and chi-square distributions.	Chs. 3–4
3: Sept. 7–11	Part I: 402 Review	Joint, marginal, and conditional distributions; independence; covariance and correlation; transformations of random variables. Sept. 7: Labor Day; University closed.	Chs. 4–5
4: Sept. 14–18	Part I: 402 Review	Point estimation; method of moments; maximum likelihood; functions of random variables; sampling distribution of $\bar{X}$; Central Limit Theorem; interval estimation.	Ch. 7
5: Sept. 21–25	Part I: 402 Review	Inference for means and variances; Student's t distribution; hypothesis testing; Type I/II errors; significance levels; p -values.	Ch. 8
6: Sept. 28–Oct. 2	Part I: 402 Review	Inference for proportions; comparing proportions; comparison of two means and variances; paired data; integrated MATH 402 review; R interpretation. Complete Respondus practice requirements before Midterm I.	Chs. 9–10
7: Oct. 5–9	Midterm I	Midterm Exam I online window: Oct. 5–7. MATH 402 prerequisite/review material. Oct. 8–9: Fall Break.	Selected Chs. 1–10
8: Oct. 12–16	Part II-A: 403	Simple linear regression: model description, assumptions, least-squares estimation, and properties/distributions of least-squares estimators.	Secs. 11.1–11.2

Week / Dates	Course Part	Topics / Activities	Text
9: Oct. 19–23	Part II-A: 403	Inference for regression parameters; confidence intervals; hypothesis tests; mean-response estimation; prediction of a future response; repeated measurements/lack-of-fit ideas.	Secs. 11.3–11.4
10: Oct. 26–30	Part II-A: 403	Residual analysis and model diagnostics; correlation; inference for correlation; coefficient of determination; simple regression using R.	Secs. 11.5–11.6
11: Nov. 2–6	Part II-A: 403	Multiple linear regression; least-squares model fitting; matrix formulation; properties of least-squares estimators; selected polynomial-model ideas.	Secs. 12.1–12.3
12: Nov. 9–13	Midterm II	Multiple-regression inference; hypothesis testing; indicator-variable ideas and review. Midterm Exam II online window: Nov. 10–12.	Secs. 12.4–12.6
13: Nov. 16–20	Part II-B: 403	Analysis of variance: one-way fixed-effects model; ANOVA decomposition and F test; comparisons and contrasts.	Secs. 13.1–13.4
14: Nov. 23–27	Part II-B: 403	Selected ANOVA extensions; connection between ANOVA and regression; randomized block design and/or matrix formulation as time permits. Student Thanksgiving Break begins Nov. 25.	Selected Ch. 13
15: Nov. 30–Dec. 4	Part II-B: 403	Bayesian statistics: prior distribution, likelihood, posterior distribution, Bayesian estimation/prediction; frequentist vs. Bayesian viewpoints; comprehensive review.	Instructor notes
Final: Dec. 7–10	Final Exam	Comprehensive Final Examination online window. Essential MATH 402 prerequisite concepts and all MATH 403 material, with greater emphasis on MATH 403 topics. Respondus LockDown Browser with webcam monitoring required unless an approved alternative applies.	Comprehensive

Schedule note: Part I reviews selected prerequisite material from MATH 402; it does not mean that every section of Chapters 1–10 will be retaught. Chapter 6 may be referenced as needed for descriptive-statistics or R review. Selected material from Sections 12.7–12.8, Chapters 14–15, or other topics may be introduced if time permits. Examination dates/windows are course-planning dates and may be adjusted with advance notice when necessary or when required by university policy.

Course and University Procedures / Policies

Syllabus Change Policy

This syllabus is a guide. Circumstances and events, including student progress, university changes, technology disruptions, or other events, may make it necessary to modify the course schedule or procedures. Any substantive changes will be announced in advance through university email and/or myLeo Online (D2L Brightspace) whenever reasonably possible.

Student Conduct

All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment. The Code of Student Conduct is described in detail in the [Student Code of Conduct](#). Students should also follow applicable rules of netiquette when interacting through university systems.

Reproducible R Work

For graded R assignments, students should submit the requested code, output, figures, calculations, and interpretation in the required format. Code should run from a clean session using the stated data and packages unless the instructor specifies otherwise. Students are responsible for maintaining backup copies of their files.

Students with Disabilities– ADA Statement

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact:

Office of Student Disability Resources and Services
East Texas A&M University
Velma K. Waters Library Rm 162
Phone (903) 886-5150 or (903) 886-5835
Fax (903) 468-8148
Email: studentdisabilityservices@etamu.edu
Website: [Office of Student Disability Services](#)

Nondiscrimination Notice

East Texas A&M University will comply in the classroom, and in online courses, with all federal and state laws prohibiting discrimination and related retaliation on the basis of race, color, religion, sex, national origin, disability, age, genetic information, or veteran status. Further, an environment free from discrimination on the basis of sexual orientation, gender identity, or gender expression will be maintained.

East Texas A&M Supports Students' Mental Health – Counseling Services

The Counseling Center at East Texas A&M University, located in the Halladay Building, Room 203, offers counseling services, educational programming, and connection to community resources for students. Students have 24/7 access to the Counseling Center's crisis assessment services by calling 903-886-5145. For more information regarding Counseling Center events and confidential services, please visit the [Counseling Center website](#).

Mental Health and Well-Being

The university aims to provide students with essential knowledge and tools to understand and support mental health. As part of this commitment, the University provides access to TELUS Health resources. Students should use the current university-provided TELUS Health access information in myLeo or on the university website to obtain the available services and resources.

Tutoring, Library, and Writing Support

Students are encouraged to use university academic-success resources, including tutoring, mathematics support, the Velma K. Waters Library, and the Writing Center. The Writing Center can assist with clear communication of statistical results. See the [Writing Center](#) and the university website for current tutoring and library services.

Copyright and Course Materials

Course materials are provided for students enrolled in this course. Unless otherwise stated, instructor-created course materials may not be redistributed, posted publicly, sold, uploaded to commercial solution/study sites, or shared outside the course without permission and in accordance with applicable copyright law and university policy. This restriction does not limit a student's lawful use of materials for accessibility accommodations or other uses protected by law.