



**UTTyler**  
THE UNIVERSITY OF TEXAS AT TYLER

**The University of Texas at Tyler**  
*Soules College of Business*  
*Department of Technology*

**Research Techniques**



## **TECH 5303 – RESEARCH TECHNIQUES IN HRD/TECHNOLOGY**

### **Course Syllabus**

Course: TECH 5303  
Title: Research Techniques in  
HRD/Technology  
Section: 001/060  
Pre-requisite: None  
Semester: Spring 2025  
Class Time: Online  
Class Location: Online Canvas

Instructor: Mohammed Ali, PhD, MBA, CSMS  
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Office Hours: TR 2:00 pm -5:00 p.m.  
And by appointment

### **Course Description**

This course is designed to help students understand research methods and processes applicable to engineering and technology. Emphasis will be placed on defining research problems, collecting, analyzing, recording, and interpreting data.

### **Lecture Notes and Classroom Environment:**

The lecture notes will be available online on the Canvas site for the course. Additionally, students are required to take notes during face-to-face classes (if necessary and take place) on supplemental lecture materials, problem-solving, and diagrams that the instructor writes/draws on the classroom board. A student is **NOT allowed** to take photos of notes on the board.

### **Textbook (Required)**

Christensen, L.B., & Johnson, R.B. & Turner, L.A. (2019). *Research Methods: Design and Analysis*. 13<sup>th</sup> edition. Pearson: Upper Saddle River, NJ. ISBN-13: 978-0135719305.

American Psychological Association. (2019). *Publication manual of the American Psychological Association*. 7<sup>th</sup> edition. Washington, DC: Author. ISBN 978-1433832161.

(The 6<sup>th</sup> edition of this book can also be used, freely available online from UT Tyler's library.)

### **Course Objectives:**

Upon successful completion of this course, participants will be able to:

1. Define, compare, and contrast validity and reliability in research.
2. List four significant components of a research project and discuss the organizational structure of each.
3. List and explain significant research methods, including characteristics, data demands, and each technique's application.
4. Plan and conduct an original research project and write a research report or a proposal.

### **Student Learning Outcomes**

1. Understand basic assumptions underlying scientific research, its characteristics, approaches, and data collection methods by successfully reviewing journal articles and passing quizzes and exams with a 70% or better.
2. Identify research problems, form hypotheses, and implement ethics in scientific research by successfully passing quizzes and exams with a 70% or better.
3. Measure variables and sampling, validate research methodologies design and experiment procedure by completing research papers and exams with a 70% or better.
4. Analyze and interpret data using descriptive and inferential statistics by successfully reviewing journal articles and completing quizzes and exams with a 70% or better.

### **Core Competencies:**

1. Computer-Based Skills: Participants will use various skills in the online environment.
2. Communication skills: Participants will use various communication skills to communicate their findings, expertise, and knowledge about various course topics to other participants and the instructor.
3. Interpersonal skills: Participants will interact as they discuss their research projects through online discussions and peer review activities.
4. Problem Solving (Critical Thinking): Participants will use conceptual thinking and creativity to develop and present their responses to module assignments and formulate research questions.
5. Personal Accountability for Achievement: Participants will complete assignments according to the schedule and timelines and participate in discussions on time.
6. Competence in Technology Principles: Participants will apply course concepts to their area(s) of subject matters or majors.

### **Grading Policy and Criteria to Determine Final Course Grade:**

Grading components are assigned weights

Online Discussion & Participation	100
Textbook Quizzes	350
Journal Review Assignments	100
Research Paper	300
Final Exam	150

TOTAL POINTS = 1000

\*NOTE: This is NOT set in stone, pending the number of assignments, quizzes, and projects given.

### **Grade Scale Breakdown:**

- A=90 - 100%
- B=80 - 89%
- C=70 - 79%
- D=60 - 69%
- F=BELOW 60%

### **Course Policies:**

#### **Attendance:**

Attendance is mandatory, which will be determined by submitting quizzes, assignments, and exams. No make-ups unless:

1. Organized university trip.
2. Illness or death in the immediate family (mother, father, brother, and sister).
3. Illness of student.

Each will require either a **doctor's statement** or a **signed statement** from the individual in charge of the trip.

A student will lose a letter grade in the course each time he or she is absent or late three times. Any student entering the classroom one minute after the scheduled starting time will be considered late.

### **Talking:**

While the instructor is talking (in a face-to-face class), it is understood that no one should be talking. Students talking in class prevent other students from hearing the instructor and learning the required material to pass the course. If you are caught talking, you **will earn a zero on your daily quiz grade**. On the second offense, you will be **asked to leave**. This behavior is rude and disruptive, and most students who talk in class typically earn lower grades. It should be noted that students who have been granted permission to speak by the instructor should not be interrupted as well. If a student does not like to listen to the lecture or any personal issue arises, they can leave the classroom gently but are **NOT** allowed to disturb or distract their classmates. Please respect your classmates who have paid for this course and want to listen to the lecture and learn the content.

### **Chapter Quizzes and Exams:**

Chapter lectures will follow up with online quizzes. Exam content will be taken from lectures, demonstrations, quizzes, reading and writing assignments, laboratory exercises (if any), and audio-visual materials, i.e., films, tapes, slides, etc. **Cell phones, laptops, iPads, or other electronic communication equipment besides a calculator are not allowed during the exam.** The first violation will receive a warning, and the second violation will result forfeits their right to take the exam.

Make up quizzes and examinations are the student's responsibility. **No excuses will be accepted after the due date has passed.** The instructor must be notified **before** the scheduled exam. If not, the student forfeits their right to take the exam. However, make-up exams will be on a different set of questions. Quizzes and assignments will not be made up unless the instructor has received a prior acceptable excuse for an absence.

### **Late Work:**

All work **not turned in on time will automatically reduce its value to 50% of its total value.** **Exceptions to this will be as per University Policy concerning absences from class. The student is** responsible for taking the quizzes and submitting assignments by the due date or the date administered them. **The instructor is NOT accountable for reminding students about missed quizzes, assignments, or exams.** If you know a quiz/assignment/exam will be late for a valid reason, inform your instructor to avoid unnecessary penalties.

### **Format for Assignment Reports:**

Each assignment must be written so the reader can quickly examine the contents. Materials that are hard to read or require special handling will not be graded. The cover page must contain the following:

1. Assignment Title and Chapter Number bolded
2. Your Name: Prepared by Joe Student

3. Your University I.D Number
4. Course Name and Number
5. The Date
6. Submitted to Dr. Mohammed Ali

Your grade will reflect the quality of the presentation/paper.

### **Cell Phones:**

Cell phones are to be seen and not heard (in a face-to-face class). Please turn off your cell phone during class or turn it to vibrator mode. A ringing cell phone is a distraction and is inappropriate for the classroom. Allowing your cell phone to ring and then answering it is very rude. It is not fair to your classmates who have paid for this course. **Please be considerate and ensure your cell phone is turned off during your classes. Students will be asked to leave for the day if this behavior continues.**

### **Additional Course Management and Classroom Policies:**

1. No retakes of quizzes or exams for "technical difficulties or internet interruptions." Get reliable technology or use the campus resources with Ethernet cabling, NOT Wi-Fi.
2. There are no excuses for leaving the country and missing final exams or presentations in class. A zero will be given for these and any other assignments.
3. Classroom telephone usage—texting, talking, social media—is prohibited. You will be asked to leave the classroom, counted as absent for the day, and NOT allowed to make up any assignments, quizzes, etc.
4. Talking during class while the professor is talking, a guest speaker, or student presentations will be penalized. No class participation points will be awarded—up to 25% of the overall score.
5. If a student is more than 5 minutes late without an excuse, it is an absence. Three absences automatically reduce a letter grade in the class.

### **Tentative Schedule**

#### **WEEK 1: Jan 13 – Jan 18, 2025**

- Course syllabus descriptions, class announcements, policies, and discussion
- Chapter 1 - Introduction to Scientific Research
- Discussion Topic - 1

#### **WEEK 2: Jan 19 – Jan 25, 2025**

- Chapter 2 - Research Approaches and Methods of Data Collection
- Discussion Topic - 2

#### **WEEK 3: Jan 26 – Feb 1, 2025**

- Chapter 3 - Problem Identification and Hypothesis Formation
- Discussion Topic - 3

#### **WEEK 4: Feb 2 – Feb 8, 2025**

- Chapter 4 – Ethics
- 1<sup>st</sup> Research Paper Assignment

#### **WEEK 5: Feb 9 – Feb 15, 2025**

- Chapter 5 - Measuring Variables and Sampling

**WEEK 6: Feb 16 – Feb 22, 2025**

- Chapter 6 – Research Validity
- Discussion Topic - 4

**WEEK 7: Feb 23 – Mar 1, 2025**

- Chapter 7 - Control Techniques in Experimental Research
- 1<sup>st</sup> Journal Article Review

**WEEK 8: Mar 2 – Mar 8, 2025**

- Chapter 8 - Procedure for Conducting an Experiment

**WEEK 9: Mar 9 – Mar 15, 2025**

- Chapter 9 - Experimental Research Design
- 2<sup>nd</sup> Research Paper Assignment

**WEEK 10: Mar 16 – Mar 22, 2025**

- Spring Break, No classes

**WEEK 11: Mar 23 – Mar 29, 2025**

- Chapter 10 - Quasi-Experimental Designs
- Chapter 11 – Single Case Research

**WEEK 12: Mar 30 – April 5, 2025**

- Chapter 12 – Nonexperimental Quantitative Research Methods
- Chapter 13 – Survey Research

**WEEK 13: April 6 – April 12, 2025**

- Chapter 14 - Qualitative & Mixed Methods Research
- 2<sup>nd</sup> Journal Article Review

**WEEK 14: April 13 – April 19, 2025**

- Chapter 15 – Descriptive Statistics
- Discussion Topic - 5

**WEEK 15: April 20 – April 26, 2025**

- Chapter 16 - Inferential Statistics
- 3<sup>rd</sup> and Final Full Research Paper Assignment

**WEEK 16: April 27 – May 2, 2025**

- Final Exam – Comprehensive MCQ

**Date of Final Exam:** Friday, May 2, 2025—The online exam opens at 8 a.m. or sooner and closes at midnight (11:59 p.m.). However, I may have it available as early as Tuesday.

**Last Date to Withdraw from the course(s):** March 31, 2025.

**Census Date and Policies:** Refer to the respective section below.

## **COVID Guidance**

- *Information for Classrooms and Laboratories:* It is essential to take the necessary precautions to ensure a healthy and prosperous year. UT Tyler continues to urge you to protect yourselves against the flu, COVID, and any new threats that may be developing. Be diligent about preventive measures such as washing hands, covering sneezes/coughs, social distancing, and vaccinations, which have slowed the spread of viruses. Encourage those who don't feel well to stay home, and if they show symptoms, ask them to get tested for the flu or COVID. Self-isolation is essential to reduce exposure ([CDC quarantine/isolation guidelines \(Links to an external site.\)](#)). Please work with your faculty members to maintain coursework and consult [existing campus resources \(Links to an external site.\)](#) for support.

## **Technology Access:**

This is an online course and will require reliable technology. Required technology includes:

### **Hardware:**

- Desktop or laptop computer with internet access.
  - Note: if your internet connection is down, you must gain access to avenues such as the UTT computer lab (BEP249 or HPR 134) and a public library to complete and submit your work on time.
- A camera, microphone, and sound speakers.

### **Software:**

- A current operating system (Microsoft or Apple)
- A web browser (Internet Explorer, Chrome, Safari, Firefox, etc.)
- Access to Blackboard and Patriot mail. Note: Google Chrome does not support JAVA. Please do not use it for Soft Chalk lessons.
- Microsoft Office (Available at no charge to the student at <https://www.uttyler.edu/it/office365/proplus.php>)
- Note: Do NOT use Google Docs for writing assignments
- Also standard plug-ins such as Java, Flash, QuickTime, Adobe Reader, or another FDF reader such as Preview on the Mac.
- Other software, as noted in each module, such as E-Portfolio

## **Technical Support:**

Technology-related problems (e.g., Patriot email, blackboard, access problem to the myUTTyler, etc.) can often be solved by calling the UT Tyler Information Technology Hotline (903) 565-5555 x2 or by emailing them at [itsupport@patriots.uttyler.edu](mailto:itsupport@patriots.uttyler.edu). In your email, be sure to include the following:

- The title and number of the course
- The Blackboard page in the question
- A description and message number for any error message that you receive
- What were you doing at the time you got an error message

## **Discrimination:**

The policy of this department is to make your college experience as pleasant as possible. However, if you feel that you are being discriminated against, belittled, or not treated appropriately,

please notify the instructor anonymously or in person immediately after class. It is not the intention of any of the faculty in this department to make your college experience unpleasant. Remember, the first step in the process is to inform the instructor so s/he can be aware of the problem and take corrective action. If the problem continues to persist, please inform the chair of the department. The dean can then be notified if the situation continues after a few days. A grievance can then be filed in the Office of Student Services if there has still been no change in the instructor's behavior. It should be noted that filing a grievance is a profound act and should NOT be done just because you received a bad grade on an exam or in the course. Communication is an effective tool to solve problems and is rarely used enough. Most people are not deliberately trying to upset you; they are unaware of your vantage point.

### **Offensive Language:**

Any offensive language will not be tolerated in the classroom, laboratory, or online. How you speak to your friends outside the classroom is your business; however, when you are in the classroom, you must follow the University of Texas rules of conduct. **You will be asked to leave if your language or conduct is offensive.**

### **Required Activities Scheduled Outside of Regularly-Scheduled Class time (fees, tickets, procedures, and forms required):**

Read the textbook, review notes, and complete assignments.

**Department Website:** <http://www.uttyler.edu/cbt/hrd/tech/>

**Commencement:** TBD; refer to the university website for updates

**Holidays:** Jan 20 – Martin Luther King Jr. holiday; March 17 - 21, 2025 Spring Break.

### **UT Tyler Honor Code**

Every member of the UT Tyler community joins together to embrace Honor and integrity that will not allow me to lie, cheat, or steal, nor will I accept the actions of those who do.

### **Students Rights and Responsibilities**

To know and understand the policies that affect your rights and responsibilities as a student at UT Tyler, please follow this link: <http://www.uttyler.edu/wellness/rightsresponsibilities.php>.

### **Artificial Intelligence Use Policy**

UT Tyler is committed to exploring and using artificial intelligence (AI) tools appropriate for the discipline and task undertaken. We encourage discussing AI tools' ethical, societal, philosophical, and disciplinary implications. All uses of AI should be acknowledged as this aligns with our commitment to honor and integrity, as noted in UT Tyler's Honor Code. Students must not use protected information, data, or copyrighted materials when using any AI tool. Additionally, users should be aware that AI tools rely on predictive models to generate content that may appear correct but is sometimes shown to be incomplete, inaccurate, taken without attribution from other sources, and/or biased. Consequently, an AI tool should not be considered a substitute for traditional research approaches. You are ultimately responsible for the quality and content of the information you submit. Misusing AI tools that violate the guidelines specified for this course is considered a breach of academic integrity. The student will be subject to disciplinary actions as outlined in UT Tyler's Academic Integrity Policy.

I expect all work students submit for this course to be their own. I have carefully designed all assignments and class activities to support your learning. Doing your own work, without human or artificial intelligence assistance, is best for your efforts in mastering course learning objectives. For this course, **I expressly forbid using ChatGPT or any other artificial intelligence (AI) tools for any stages of the work process, including brainstorming.** Deviations from these guidelines will be considered a violation of UT Tyler's Honor Code and academic honesty values.

### **Campus Carry**

We respect the rights and privacy of students 21 and over duly licensed to carry concealed weapons in this class. License holders must behave responsibly and keep a handgun secure and concealed. More information is available at <http://www.uttyler.edu/about/campus-carry/index.php>.

### **Tobacco-Free University**

All forms of tobacco will not be permitted on the UT Tyler campus, branch campuses, or any property owned by UT Tyler. This applies to all University community members, including students, faculty, staff, university affiliates, contractors, and visitors. Forms of tobacco not permitted include cigarettes, cigars, pipes, water pipes (hookah), bidis, kreteks, electronic cigarettes, smokeless tobacco, snuff, chewing tobacco, and all other tobacco products. There are several cessation programs available to students looking to quit smoking, including counseling quitlines and group support. For more information on cessation programs, please visit <http://www.uttyler.edu/tobacco-free>.

### **Grade Replacement/Forgiveness and Census Date Policies**

Students repeating a course for grade forgiveness (grade replacement) must file a Grade Replacement Contract with the Enrollment Services Center (ADM 230) on or before the semester's Census Date in which the course will be repeated. Refer to the university's academic calendar to find the exact Census Date. Grade Replacement Contracts are available in the Enrollment Services Center or at <http://www.uttyler.edu/registrar>. Each semester's Census Date can be found on the Contract itself, on the Academic Calendar, or in the information pamphlets published each semester by the Office of the Registrar.

Failure to file a Grade Replacement Contract will result in the original and repeated grades being used to calculate your overall grade point average. Undergraduates can exercise grade replacement for only three-course repeats during their career at UT Tyler; graduates are eligible for two grade replacements. Full policy details are printed on each Grade Replacement Contract.

The Census Date (refer to Academic Calendar) is the deadline for many forms and enrollment actions of which students must be aware. These include:

- Submitting Grade Replacement Contracts, Transient Forms, requests to withhold directory information, and approvals for taking courses as Audit, Pass/Fail, or Credit/No Credit.
- Receiving 100% refunds for partial withdrawals. (There is no refund for these after the Census Date)
- Schedule adjustments (section changes, adding a new class, dropping without a "W" grade)
- Being reinstated or re-enrolled in classes after being dropped for non-payment
- Completing the process for tuition exemptions or waivers through Financial Aid

### **State-Mandated Course Drop Policy**

Texas law prohibits students who begin college for the first time in Fall 2007 or after that from dropping more than six courses during their entire undergraduate career. This includes courses



dropped at another 2-year or 4-year Texas public college or university. For this rule, a dropped course is any course dropped after the census date (See Academic Calendar for the specific date).

The catalog lists exceptions to the 6-drop rule. Petitions for exemptions must be submitted to the Enrollment Services Center and accompanied by documentation of the extenuating circumstance. Please get in touch with the Enrollment Services Center if you have any questions.

### **Disability/Accessibility Services**

By Section 504 of the Rehabilitation Act, Americans with Disabilities Act (ADA), and the ADA Amendments Act (ADAAA), the University of Tyler at Texas offers accommodations to students with learning, physical and psychological disabilities. Suppose you have a disability, including a non-visible diagnosis such as a learning disorder, chronic illness, TBI, PTSD, or ADHD, or you have a history of modifications or accommodations in a previous educational environment. In that case, you are encouraged to visit <https://hood.accessiblelearning.com/UTTyler> and fill out the New Student application. The Student Accessibility and Resources (SAR) office will contact you when your application has been submitted and an appointment with an Accessibility Case Manager. For more information, including filling out an application for services, please visit the SAR webpage at <http://www.uttyler.edu/disabilityservices>, the SAR office located in the University Center, # 3150, or call 903.566.7079.

### **Student Absence Due to Religious Observance**

Students who anticipate being absent from class due to a religious observance are requested to inform the instructor of such absences by the second class meeting of the semester.

### **Student Absence for University-Sponsored Events and Activities**

Suppose you intend to be absent for a university-sponsored event or activity. In that case, you (or the event sponsor) must notify the instructor at least two weeks before the planned absence date. The instructor will set a date and time when make-up assignments will be completed.

### **Social Security and FERPA Statement:**

The University of Texas at Tyler has a policy of protecting the confidential nature of social security numbers. The University has changed its computer programming so that all students have an identification number. The electronic transmission of grades (e.g., via e-mail) risks violating the Family Educational Rights and Privacy Act; grades will not be transmitted electronically.

### **Emergency Exits and Evacuation:**

Everyone is required to exit the building when a fire alarm goes off. Follow your instructor's directions regarding the appropriate exit. If you need assistance during an evacuation, inform your instructor during the first week of class. Do not re-enter the building unless given permission by the University Police, Fire department, or Fire Prevention Services.

**Student Standards of Academic Conduct:** Disciplinary proceedings may be initiated against any student who engages in academic dishonesty, including, but not limited to, cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give an unfair advantage to a student or the attempt to commit such acts.

- (i) "Cheating" includes, but is not limited to:
- copying from another student's test paper;
  - using, during a test, materials not authorized by the person giving the test;
  - failure to comply with instructions given by the person administering the test;

- possession during a test of materials that are not authorized by the person giving the test, such as class notes or specifically designed “crib notes.” The presence of textbooks constitutes a violation if they have been expressly prohibited by the person administering the test;
- using, buying, stealing, transporting, or soliciting in whole or part the contents of an unadministered test, test key, homework solution, or computer program;
- collaborating with or seeking aid from another student during a test or other assignment without authority;
- discussing the contents of an examination with another student who will take the examination;
- divulging the contents of an examination to preserve questions for use by another when the instructor has designated that the examination is not to be removed from the examination room or not to be returned or to be kept by the student;
- substituting for another person or permitting another person to substitute for oneself to take a course, a test, or any course-related assignment;
- paying or offering money or other valuable thing to or coercing another person to obtain an unadministered test, test key, homework solution, or computer program or information about an unadministered test, test key, home solution, or computer program;
- falsifying research data, laboratory reports, and other academic work offered for credit;
- taking, keeping, misplacing, or damaging the property of The University of Texas at Tyler, or of another, if the student knows or reasonably should know that an unfair academic advantage would be gained by such conduct; and
- misrepresenting facts, including providing false grades or resumes, to obtain an academic or financial benefit or injure another student academically or financially.

(ii) “Plagiarism” includes, but is not limited to, the appropriation, buying, receiving as a gift, or obtaining another’s work and submitting it as one’s academic work offered for credit.

(iii) “Collusion” includes, but is not limited to, the unauthorized collaboration with another person in preparing academic assignments offered for credit or collaboration with another person to violate any section of the rules on academic dishonesty.

(iv) All written work that is submitted will be subject to review by SafeAssign™, available on Blackboard.

#### **UT Tyler Resources for Students:**

- UT Tyler Writing Center (903.565.5995), [writingcenter@uttyler.edu](mailto:writingcenter@uttyler.edu), <http://www.uttyler.edu/writingcenter/>
- UT Tyler Tutoring Center (903.565.5964), [tutoring@uttyler.edu](mailto:tutoring@uttyler.edu), <https://www.uttyler.edu/tutoring/>
- The Mathematics Learning Center, RBN 4021: This is the open-access computer lab for math students, with tutors on duty to assist students enrolled in early-career courses.
- UT Tyler Counseling Center (903.566.7254) <https://www.uttyler.edu/counseling/>

**Note: The instructor reserves the right to modify the syllabus. However, the Canvas course’s Syllabus link will have the most updated syllabus at any point in the semester.**