

The University of Texas at Tyler
College of Business and Technology
Department of Human Resource Development and Technology

Syllabus

Course: TECH 5303
Title: Research Techniques in Technology
Section: 06 ONLINE
Semester: Long Summer 2019

Instructor: Dominick E. Fazarro, Ph.D.
Other Availability: N/A
Class Time: N/A
Email: dfazarro@uttyler.edu

Course Content:

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

Required Textbook:

Christensen, L.B., & Johnson, R.B. & Turner, L.A. (2014). Research methods: Design and Analysis. Pearson: Upper Saddle River, NJ. ISBN-13: 978-0-205-96125-2

American Psychological Association. (2010). Publication manual of the American Psychological Association (6th ed.). Washington, DC: Author. ISBN 978-1-4338-0561-5

Course Learning Objectives:

These are the objectives for this course:

- ❖ Understand the nature of research in general
- ❖ Understand the differences between quantitative and qualitative research
- ❖ Demonstrate the ability to review appropriate literature
- ❖ Construct an appropriate reference list from scholarly sources of materials
- ❖ Identify appropriate research designs
- ❖ Develop research problems and hypotheses
- ❖ Understand different methods of data collection and analysis influence results
- ❖ Demonstrate the ability to organize and prepare a manuscript suitable for publication, satisfying the style from the Publication Manual of the American Psychological Association and/or professional journal

At the end of the course, students learning outcomes should be achieved in the Industrial Management program along with assessments used:

- Students will be able to appreciate the science and knowledge. *(by earning a grade of 70% or higher on assignments)*
- Students will be able to use skills to generate a research idea. *(by earning a grade of 70% or higher on assignments)*
- Students will be able to appreciate ethical issues of research *(by earning a grade of 70% or higher on assignments and case studies)*

- Students will be able to apply concepts (sampling methods, research validity, and statistical conclusion before research begins. *(through case studies & assignments)*)
- Students will be able to apply different research methods to establish research parameters. *(by graded assignments)*
- Students will be able to appreciate the analyzing and interpreting of data. *(by earning a grade of 70% or higher on the final paper)*
- Students will be able to write a formal research paper for publication.

Core Competencies:

- *Communication skills:* Each student will be able to effectively communicate orally along with written reports describing the operations and techniques needed for scholarly research.
- *Interpersonal skills:* Each student will engage in cooperative learning for building working relationship within the groups.
- *Problem-Solving:* Each student will gather and use critical-thinking skills to develop a facility plan for maximum production and efficiency.
- *Change-building skills:* Each student will engage in how to incorporate change when necessary for survivability and become less dependent on being in the “complacent mode”.

Assignments

- Interpreting research designs in peer-reviewed articles
- Internet (Research) Assignments
- Assigned reading materials
- Final Exam (PowerPoint Presentation) **NO VOICE OVER REQUIRED!!!!**

Learning-Management

Students will be able to view announcements, course progress, and retrieve some assignments using CANVAS™. This technology enable students to be proactive in their learning and effective communication between the student and instructor.

Grading Policy and Criteria to Determine Final Course Grade:

A-F system will be used to determine final grades for the course. Each student can receive a total of 100% distributed as follows:

Book Assignments (30 pts)	25%
Journal Reflection (35 pts)	25%
<u>Final Project (100 pts)</u>	<u>50%</u>
Total	100%

The final grade in this course will be determined by using the following scale:

90%	-	100%	A
80%	-	89%	B
70%	-	79%	C
60%	-	69%	D
Less than		60%	F

Calendar/Schedule:

Date	No.	Topic/Activity	Reading (Pgs.)/Sources DUE DATE
May 20	1	Orientation	May 20
May 21	1	CHAPTER 1-Introduction to Scientific Research	1-22
May 21	1	Assignment	May 28
May 30	2	CHAPTER 2-Research Approaches and Methods of Data...	25-60
May 30	2	Assignment	Jun 6
Jun 10	3	CHAPTER 3-Problem Identification and Hypothesis...	63-85
Jun 10	3	Assignment	Jun 17
Jun 19	4	CHAPTER 4-Ethics	88-126
Jun 19	4	Assignment	Jun 25
Jun 19	4	EXPLANATION OF RESEARCH PROJECT	Jun19
Jun 26	5	CHAPTER 5-Measure Variables and Sampling	131-155
Jun 26	5	Assignment	July 1
July 3	5	CHAPTER 6-Research Validity	158-172
July 3	5	Assignment	July 9
July 11	6	CHAPTER 8-Experimental Research Design	217-246
July 11	6	Assignment	July 17
July 22	7	CHAPTER 9-Procedure for Conducting and Experiment NO ASSIGNMENT/READ CHAPTER	249-266
July 24	8	CHAPTER 10-Quasi-Experiemental Designs	269-287
July 24	8	Assignment	July 29
July 30	9	CHAPTER 12-Survey Research	313-340
July 30	9	Assignment	Aug 2
Aug 5	10	CHAPTER 14-Descriptive Statistics	373-404
Aug 4	10	Assignment	Aug 8
Aug 8	10	CHAPTER 16-Preparing the Research Report for Presentation... NO ASSIGNMENT/READ CHAPTER	447-477
Aug 10	11	UPLOAD PRESENTATION	Aug 10 at 11PM

ASSIGNMENTS

Any assignments in this course must be done in a neat manner and submitted using proper grammar, spelling and punctuation. Proper language will be considered a factor in the instructor's evaluation. Assignments are to be done on 8.5 x 11 paper and submitted on time as specified in the assignment table. Each assignment should include a table of contents if applicable and a cover/title page which contains the following information:

- A. Course Number & Title
- B. Assignment and/or Project Title
- C. Your full name
- D. Instructor
- E. Semester & Date

Date to Withdraw Without Penalty:

July 15, 2019

Final Exam Period:

August 9-10, 2019

Using Canvas for Turning in Assignments

CANVAS will be the tool for communication and turning in assignments. **ALL ASSIGNMENTS WILL OPEN UP AT 7AM AND TURNED IN PROMPTLY AT 11PM.** Folders will be created for each assignment to attach your assignments. Each assignment will have a due date. **IF YOU DO NOT MEET THE DUE DATE FOR THE ASSIGNMENT, THE FOLDER WILL DEACTIVATE. THEREFORE, YOU WILL NOT BE ABLE TO TURN YOU ASSIGNMENT TO RECEIVE CREDIT.** The only exception to turn in an assignment after the due date is if you are ill (with a written excuse) or technical difficulties. **IT IS YOUR REPSONSIBILITY TO COMMUNICATE WITH TECHNICAL SERVICES TO RESOLVE YOU CANVAS MALFUNCTIONS.**

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>

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 to accept the actions of those who do.

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UT Tyler a Tobacco-Free University

All forms of tobacco will not be permitted on the UT Tyler main campus, branch campuses, and any property owned by UT Tyler. This applies to all members of the University community, 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 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 Census Date of the semester in which the course will be repeated. (For Fall, the Census Date is Sept. 12.) 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 both the original and repeated grade being used to calculate your overall grade point average. Undergraduates are eligible to 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 (Sept. 12th) is the deadline for many forms and enrollment actions of which students need to be aware. These include:

- Submitting Grade Replacement Contracts, Transient Forms, requests to withhold directory information, 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 a student who began college for the first time in Fall 2007 or thereafter 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 purposes of this rule, a dropped course is any course that is dropped after the census date (See Academic Calendar for the specific date). Exceptions to the 6-drop rule may be found in the catalog. Petitions for exemptions must be submitted to the Enrollment Services Center and must be accompanied by documentation of the extenuating circumstance. Please contact the Enrollment Services Center if you have any questions.

Disability/Accessibility Services

In accordance with Section 504 of the Rehabilitation Act, Americans with Disabilities Act (ADA) and the ADA Amendments Act (ADAAA) the University offers accommodations to students with learning, physical and/or psychological disabilities. If you have a disability, including non-visible a disability diagnosis such as a chronic disease, learning disorder, head injury or ADHD, or you have a history of modifications or accommodations in a previous educational environment you are encouraged to contact the Student Accessibility and Resources office and schedule an interview with an Accessibility Case Manager. If you are unsure if the above criteria applies to you, but have questions or concerns please contact the SAR office. For more information or to set up an appointment please visit the SAR webpage (<http://www.uttyler.edu/disabilityservices/>) or the SAR office located in the University Center, Room 3150 or call 903.566.7079. You may also send an email to saroffice@uttyler.edu.

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. Revised 09/16

Student Absence for University-Sponsored Events and Activities

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

Social Security and FERPA Statement

It is the policy of The University of Texas at Tyler to protect 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 violation of 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 require assistance during an evacuation, inform your instructor in the first week of class. Do not re-enter the building unless given permission by University Police, Fire department, or Fire Prevention Services.

Student Standards of Academic Conduct

Disciplinary proceedings may be initiated against any student who engages in scholastic 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 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 which 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 specifically 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, for the purpose of preserving 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/or 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, for the purpose of obtaining an academic or financial benefit or injuring another student academically or financially.

ii. "Plagiarism" includes, but is not limited to, the appropriation, buying, receiving as a gift, or obtaining by any means another's work and the submission of it as one's own 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 commit a violation of any section of the rules on scholastic dishonesty.

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

UT Tyler Resources for Students

- UT Tyler Writing Center (903.565.5995), writingcenter@uttyler.edu
- UT Tyler Tutoring Center (903.565.5964), tutoring@uttyler.edu