



**TMGT 595.01W Applied Research in Engineering & Technology
Course Syllabus: Spring 2013
Web Based**

Instructor: Dr. Brent Donham
Department Head & Associate Professor
Department of Engineering & Technology

Office Location: Charles J. Austin Industrial Engineering & Technology Building, Room 119

Office Hours: Monday/Wednesday
8:00 – 9:00 AM or by appointment

This is a web based course. Instructor will be available via email throughout the day, Monday – Friday and on the weekends. Times will vary but email will be checked on a regular basis.

Due to administrative responsibilities there will be times the instructor will not be available during the scheduled office hours. Effort will be made to inform students in advance when there will be a conflict. Instructor will be available other times during the week by appointment.

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COURSE INFORMATION

Materials – Textbooks, Readings, Supplementary Readings:

Textbook(s) Required: Locke, L. F., Silverman, S. J., & Spirduso, W. W. (2010). *Reading and understanding research* (3rd ed.). Thousand Oaks, California: SAGE Publications. ISBN 978-1-4129-7574-2.

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

Course Description:

Study of the research methods and processes applicable to industrial engineering/technology
Emphasis on defining research problems, collecting, analyzing, recording, and interpreting data.
Students will be required to conduct a research project.

This course must be taken during the first semester in the Technology Management program.

Student Learning Outcomes:

1. Discuss applied and theoretical forms of research.
2. Differentiate descriptive, correlational, interpretive, and experimental research methods.
3. Demonstrate the ability to review appropriate literature.
4. Construct an appropriate reference list from scholarly sources of materials.
5. Identify appropriate research problems.
6. Demonstrate principles of academic integrity and intellectual ownership.
7. 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.

COURSE REQUIREMENTS

Instructional / Methods / Activities Assessments

This is an online course which utilizes facilitated lectures, discussions, and a series of assignments to assist students in achieving the course learning outcomes.

This is a graduate level course. Grammar, spelling, and demonstrated organization of thought will be considered in the grading of all assignments.

Discussions: 100 points (10% of total course grade)

Student Learning Outcomes #1, #2, #6

Each student is required to be an active and engaged participant in discussion forums. The discussion forums are related to chapter readings and/or lecture notes and will occur throughout the semester.

Assessment Method: Each discussion forum grade will be based upon content, timeliness, and quality of the responses, as well as the level of participation.

Active Participation (minimum requirements)

- 1 point: Main post to discussion topic between **Monday - Wednesday**
- 1 point: Response to another student's post between **Monday - Wednesday**
- 1 point: 1st response to another student's post between **Thursday - Sunday**
- 1 point: 2nd response to another student's post between **Thursday - Sunday**

Content (minimum requirements)

- 2 points: One source used to support information in the main post. Source must be cited and a reference provided in the main post.
- 1 point: The main post includes more than a repeat of the information in the textbook or other source (e.g. provide application for the topic, related experiences, etc.)
- 1 point: A second source is used to support information in the main post or in one of the other responses. Must be cited and a reference provided.
- 2 points: Responses to other students are more than "I agree" or "I disagree" statements. Responses must include a reason(s) why you agree or disagree and should also include additional information or follow on questions to encourage the continuation of the conversation.

Quizzes: 150 points (15% of total course grade)

Student Learning Outcomes #1, #2, #4

Quizzes will be used to assess a student's knowledge and skills related to applied research.

Assessment Method: Quizzes will be given throughout the semester to assess the material/topics covered in associated course readings and/or course activities. Quizzes will be multiple choice and the points associated with each quiz will be clearly documented.

Reading Research Report: 100 points (10% of total course grade)

Student Learning Outcomes #1, #2, #3

Students will demonstrate a systematic approach to reading and analyzing research reports and reviews.

Assessment Method: A 12-step map developed as a guide for reading research reports and reviews will be completed for a minimum of 3 research reports. Grades will be based upon accuracy and completeness in completing the maps.

Manuscript Abstract: 100 points (10% of total course grade)

Student Learning Outcomes #5, #6, #7

Each student will select a research problem and/or topic appropriate to their degree and will identify a research journal or professional publication appropriate for the publication of the selected topic. Each student will develop and write an abstract for the article or research proposal based upon final manuscript instructions and APA style.

Assessment Method: The abstract will be graded using the following rubric.

Identification and submission of the author's guidelines for the journal/publication, including the abstract (submitted during the planning phase of the final manuscript project). (10 points)

Abstract submitted by the specified deadline. (20 points)

Adheres to the APA 6th edition style mechanics or the specific style specified by the journal/publication. (10 points)

English mechanics (grammar, spelling, etc.) (10 points)

Abstract content and organization based on APA manual, section 2.04 (50 points)

- 10 points: Accurate
- 10 points: Coherent and readable
- 10 points: Concise
- 10 points: Meets specified word count
- 10 points: Conforms to project guidelines and APA style

Reference List: 150 points (15% of total course grade)

Student Learning Outcome #3, #4

Each student will conduct a literature review for their chosen article topic and will construct an appropriate reference list.

Assessment Method: A minimum of 15 appropriate external sources must be located related to the article topic. Of these sources, a minimum of 10 must be from peer reviewed scholarly journals. **Wikipedia and other related web sites/sources are not appropriate and will not count** towards the required minimum. The reference list will be graded based upon the quantity of sources, adequacy of sources, and adherence to APA style.

Final Manuscript: 400 points (40% of total course grade)

Student Learning Outcomes #3, #4, #5, #6, #7

Each student will select a research problem and/or topic appropriate to their degree and prepare a paper or research proposal suitable for publication.

Assessment Method: The paper or research proposal should adhere to APA style. The paper should be well organized and include 1) title page, 2) abstract, 3) introduction, including review of literature, 4) methods section, 5) results section, 6) discussion/conclusion section, and 7) reference list. The paper should cite a minimum of 15 sources, 10 of which must be from peer-reviewed papers. All sources cited must be included in the reference list. **Failure to cite the appropriate source can result in a zero on this assignment.**

The paper shall be created in Microsoft Word following the manuscript instructions and APA style. The paper shall be 2500-3000 words, excluding the title page, reference list, tables, and figures. The final paper will be graded using the following rubric:

1) Introduction/Review of Literature section, 2) Methods/Results/Discussion sections, and 3) Final Manuscript assignments submitted by the specified deadline. (50 points)

Adheres to the APA 6th edition style. (50 points)

English mechanics (grammar, spelling, etc.) (50 points)

Content and organization. (250 points)

- 50 points: Adheres to the word count and appropriate format for the title page
- 50 points: Organized logically, including 1) title page, 2) abstract, 3) introduction, including review of literature, 4) methods section, 5) results section, 6) discussion/conclusion section, and 7) reference list
- 50 points: Minimum number (15) of sources cited, including 10 peer-reviewed journals
- 50 points: Originality (based upon Turnitin score) and completeness in covering topic
- 50 points: Accurate citations and reference list

Grading

Discussion Forums	100 points
Quizzes	150 points
Reading Research Reports	100 points
Abstract	100 points
Reference List	150 points
Final Manuscript	400 points
Total points possible for semester	1000 points

900 – 1000 points	A
800 – 899 points	B
700 – 799 points	C
600 – 699 points	D
< 600 points	F

A grade of “0” will be assigned to late assignments, unless prior arrangements are worked out with the instructor. The instructor has the final decision on whether late work will be accepted. Late penalties will be assessed to any approved late work.

TECHNOLOGY REQUIREMENTS

This is a web based course. The following technologies will be required for this course.

- Internet access / connection – high speed recommended (not dial-up)
- Microsoft Word
- Microsoft Excel
- Microsoft PowerPoint

ACCESS AND NAVIGATION

This course is delivered by Texas A&M University – Commerce through the eCollege course management system. To get started with the course, go to:

<https://leo.tamu-commerce.edu/login.aspx>.

You will need your CWID and password to log in to the course. If you do not know your CWID or have forgotten your password, contact Technology Services at 903.468.6000

COMMUNICATION AND SUPPORT

Interaction with Instructor Statement:

The communication tools used in this course will be Email and eCollege Announcements. Students should communicate with the instructor through the course email tool or directly to the email address provided in this syllabus. The instructor will communicate with students via email through their myLeo email address.

Students can expect to receive a response to emails within 48 hours after the email was sent to the instructor. In most cases, the response time will be shorter.

If at any time you experience technical problems (e.g., you can't log in to the course, you can't see certain material, etc.) please contact the eCollege HelpDesk, available 24 hours a day, seven days a week. The HelpDesk can be reached by at helpdesk@online.tamuc.org or by calling (toll-free) 1-866-656-5511.

COURSE AND UNIVERSITY PROCEDURES/POLICIES

Course Specific Procedures:

Academic Dishonesty

Texas A&M University-Commerce will not condone plagiarism in any form. Plagiarism represents disregard for academic standards and is strictly against University policy. Plagiarized work can result in a “0” on a given assignment(s) or an “F” for the course as well as further administrative sanctions permitted under University policy. You may discuss course work and other course materials with fellow students (except during tests), but it is inappropriate to have another student do your course work or provide you with any portion of it.

Guidelines for properly quoting someone else’s writings and the proper citing of sources can be found in the APA Publication Manual. If you do not understand the term “plagiarism”, or if you have difficulty summarizing or documenting sources, contact your professor for assistance.

University Specific Procedures:

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

Texas A&M University-Commerce

Gee Library 132

Phone (903) 886-5150 or (903) 886-5835

Fax (903) 468-8148

StudentDisabilityServices@tamu-commerce.edu

[Student Disability Resources & Services](#)

Student Conduct

All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment. (See *Code of Student Conduct from Student Guide Handbook*).

Students are expected to attend all class periods and to be prepared for each class. Students are expected to refrain from any disruptive behaviors during class, which includes but is not limited to working on assignments/projects from another course, reading non-course materials, or using the computer for non-class purposes. Cell phones, iPods, and other electronic devices should be turned off during class.

COURSE OUTLINE / CALENDAR

(RR) – Reading and Understanding Research

(APA) – Publication Manual of the American Psychological Association

	Topic	Reading Assignment(s)
Week 1	- Course introduction - Academic honesty / Plagiarism*	- Course syllabus - “A Tutorial on Plagiarism” Video
Week 2	- Types of research - Introduction to statistics used in research	- Chapter 5 (RR) - Appendix B (RR)
Week 3	- Quantitative and Qualitative research	- Chapter 6 (RR) - Chapter 10 (RR)
Week 4	- Research reports	- Chapter 1 (APA) - Chapter 1 (RR)
Week 5	- Research manuscript structure and content - (Planning phase assignment due)	- Chapter 2 (APA)
Week 6	- Selecting research reports - Literature review	- Chapter 3 (RR)
Week 7	- Reference list - (Reference list due)	- Chapter 6, Sections 6.22-6.32 (APA) - Chapter 7 (APA)
Week 8	- Reading research reports and reviews - (Reading Guide assignment due)	- Chapter 7 (RR) - Chapter 11 (RR) - Chapter 13 (RR)
Week 9	- Reading research reports and reviews	- Chapter 7 (RR) - Chapter 11 (RR) - Chapter 13 (RR)
Week10	- APA style mechanics	- Chapter 3, Sections 3.01-3.04 (APA) - Chapter 4 (APA) - Chapter 5 (APA)
Week 11	- Crediting sources - (Introduction/Review of Literature due)	- Chapter 6, Sections 6.01-6.21 (APA)
Week 12	- Writing guidelines	- Chapter 3, Sections 3.05-3.22 (APA)
Week 13	- Sources of credibility	- Chapter 2 (RR)
Week 14	- Publication process - (Methods, Results, Discussion due)	- Chapter 8 (APA)
Week 15	- Abstracts - (Abstract due)	- Chapter 2, Section 2.04 (APA)
Week 16	- (Final manuscript due)	-

NOTE: No assignment will be graded until the Student Academic Honesty Policy has been read, signed, and submitted.

NOTE: Students will be required to successfully pass a written comprehensive exam at the end of their MS TMGT program. It is strongly recommended that students retain electronic copies of the syllabus and coursework for each graduate course used to satisfy the M.S. Technology Management degree requirements in order to prepare for the comprehensive exam in the TMGT 599 course.