THE TSENG COLLEGE, CALIFORNIA STATE UNIVERSITY NORTHRIDGE

MSEM COHORT #16
MSE602: ENTREPRENEURSHIP AND INNOVATION FOR ENGINEERING PROFESSIONALS
SUMMER 2025: MAY 27, 2025 – JULY 08, 2025 /// SECTION #10594

Instructor Contact Information

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COURSE DESCRIPTION

This course will cover an in-depth understanding of what entrepreneurship is, how to manage an entrepreneurial project, and will relate how innovation is the key aspect of being a successful entrepreneur. This course will include writing a real Venture Proposal & Business Plan for a new or existing company using the latest software.

ABOUT YOUR INSTRUCTOR

- Ghassan “Gus” H. Elias: BS/MS; Industrial/Manufacturing Systems Engineering.
- Expertise: Engineering Consulting, Decision-Making/Risk Analysis and Facility Planning. Industrial Safety & Material Control - global certification programs for commissioning electronic & pneumatic devices in General (Non-Hazardous) Locations, Hazardous ‘Classified’ Areas & Potentially Explosive Atmospheres.

COURSE OVERVIEW

There are **three** learning activity tracks that run in parallel throughout this **condensed** course. The **first track** entails discussions of topics on CANVAS particularly pertinent to advanced engineering, innovation, and technology management. The **second track** involves weekly reading assignments and review of PPT lecture modules, a weekly live-video-lecture (via Zoom) by the instructor (every Wednesday, from 6-8 pm, PDT), and a midterm & final exam. The **third track** is the team development of an entrepreneurial and/or intraprenuerial venture proposal plan (innovation & technology-based). By the second week of the semester, teams consisting of **4-6** members each will be established. **Note:** only the term project (venture proposal) will be a team effort. All other course tasks and requirements (exams, assignments, etc.) are done on an individual basis. **Weekly sessions run from Tuesday at 12:00 am till Monday at 11:59 pm.**

COURSE LEARNING OBJECTIVES

This course is designed to contribute primarily to the students’ knowledge and understanding of how to:

- Identify and construct various sections of a business model canvas as well as a Venture Proposal & Business Plan.
- Create an awareness of the "Design Thinking" approach.
- Obtain an in-depth analysis of identifying a target market.
- Demonstrate an entrepreneurial/intrapreneurial mindset.
- Understand and implement marketing skills as a part of entrepreneurship.
- Understand other Venture Proposal & Business Plan-related concepts such as intellectual property and the financial standing of an organization.
- Be aware of the risks associated with innovation and entrepreneurship and know how to manage them.

REQUIRED TEXTBOOKS AND READINGS

1. Successful Business Plan: Secrets and Strategies --- 7th Edition (22 chapters). Author: Rhonda M. Abrams ----- **(ISBN-13: 978-1933895826, ISBN-10: 1933895829)**
2. The Management of Technology and Innovation: A Strategic Approach --- 3rd Edition (12 chapters). Authors: White, Margaret A. and Bruton, Garry D. ----- **(ISBN-13: 978-0-357-03920-5, ISBN-10: 0357039203)**

GOOD READING REFERENCES (OPTIONAL)

- The Money Connection; Flanagan
- Start Your Business: A Beginner's Guide -- Reierson
- Starting and Operating a Business in California -- Jenkins
- The Successful Business Organizer -- Abrams
- Managing Engineering and Technology -- Babcock & Morse

LECTURE SLIDES

There are 8 lecture modules covering a broad spectrum of general managerial principles. These modules do not necessarily correspond with the sequence of Chapters & Topics covered in both textbooks.

VIRTUAL CLASSROOM SESSIONS

Synchronous (live) Virtual Classroom sessions will be held on a weekly basis and are worth 7.5% of the overall course grade. These weekly sessions will be held on Tuesdays, from 6:30 pm to 8:30 pm (PDT), but the sessions may go over a bit (about 15-30 minutes, thus adding more value to the course) due to the need to cover relevant material and answer students' inquiries. Although attendance during the sessions is optional, you are highly encouraged to join and participate to achieve a richer, more effective, and interactive learning experience. A recorded version of the session will be available for those who are unable to attend. Attending the live sessions is optional but students are responsible for reviewing the recorded session within the same week in which the session is scheduled and for contributing to the discussion that took place during the session in the associated session forum.

Virtual Classroom Guidelines

When participating in a live Virtual Classroom, please follow these guidelines:

- It is recommended that you review the lectures, activities, and readings for the week prior to participating in the weekly session.
- In preparation for the session, please arrange to be in a quiet area without loud background noise or interruptions so that you can provide your complete, focused attention during the session.
- As a courtesy, please aim to join the session prior to the start time and participate in the entire session.
- Configure your audio each time you participate in a session.
- Please use your headset with microphone when participating in the sessions.
- Respectful behavior and professional courtesy are always a requirement.
- Attending the live sessions is optional but students are responsible for reviewing the recorded session within the same week in which the session is scheduled and for contributing to the discussion that took place during the session in the associated session forum.

ONLINE DISCUSSION FORUM GUIDELINES

Online discussions pose an opportunity for rich and meaningful learning and interaction. Active and regular participation is important as a means of learning and reflecting on course content and making higher level connections between weekly topics.

Each week your discussion forum postings and responses will be graded on these criteria:

- Demonstrate a thoughtful approach to the content, not just a summary.
- Cite research, class readings and supporting evidence in your discussion posts and responses to demonstrate your understanding and to share your reasoning with other participants.
- Incorporate quotes from other participants' responses as a way of synthesizing and extending the conversation.
- Relate new content to what you have already learned in the course to date.
- Relate content to your own personal experiences, professional experiences, or current events.
- Critically analyze the content, be grammatically correct and proofread for spelling errors. It counts in the real world, so it counts here too.
- Make your initial posts early in the week giving others time to keep the discussion going.
- Initial postings and responses need to extend discussions already taking place or pose new possibilities or opinions not previously stated comments.
- Demonstrate evidence of graduate-level thinking about the topics and professional interactions with other participants.
- Demonstrate that you have interesting and provocative things to contribute to the discussion.
- Demonstrate that you have interesting and provocative things to contribute to the discussion.

COURSE REQUIREMENTS

Midterm Exam (selected material)	**30%**

Course Learning Objectives Addressed:

- Identify and construct various sections of a business model canvas as well as a Venture Proposal & Business Plan.
- Create an awareness of the "Design Thinking" approach.
- Obtain an in-depth analysis of identifying a target market.
- Demonstrate an entrepreneurial/intrapreneurial mindset.
- Understand and implement marketing skills as a part of entrepreneurship.
- Understand other Venture Proposal & Business Plan-related concepts such as intellectual property and the financial standing of an organization.
- Be aware of the risks associated with innovation and entrepreneurship and know how to manage them.

Purpose:
To gauge the student's overall levels of comprehension pertaining to the material covered. The material covered in the midterm exam sheds light on the premises of invention, innovation, management techniques, risk-taking, target markets, venture proposals & business plans.

Instructions:
The midterm exam is based on selected material --- administered online via CANVAS. The format consists of essay type questions pertaining to the subject matter & general/contemporary business & entrepreneurial domains. **More instructions will be posted on CANVAS's exam page.** The exam's duration depends on the number and complexity of questions given at the time.

Grading Criteria:
After a thorough evaluation of the students' responses, the grades will be posted on CANVAS. The midterm exam is worth **30%** of the overall course grade.

Due Date: The midterm exam will be given at the end of Week 3 into the summer semester; with an

open testing window of three full days **starting on Friday, 13-Jun-2025 at 12:00 am (PDT) and ending on Sunday, 15-Jun-2025 at 11:59 pm (PDT)**.

Venture Proposal & Business Plan	**25%**

Course Learning Objectives Addressed:

- Identify and construct various sections of a business model canvas as well as a venture proposal & business Plan.
- Create an awareness of the "Design Thinking" approach.
- Obtain an in-depth analysis of identifying a target market.
- Demonstrate an entrepreneurial/intrapreneurial mindset.
- Understand and implement marketing skills as a part of entrepreneurship.
- Understand other Venture Proposal & Business Plan-related concepts such as intellectual property and the financial standing of an organization.
- Be aware of the risks associated with innovation and entrepreneurship and know how to manage them.

Purpose: To learn the methodologies needed for composing a thorough and a strong venture proposal & business plan.

Instructions:

- The Venture Proposal & Business Plan shall be structured "exactly" as the per the detailed format laid out in the Abram's manual.
- Each group leader/facilitator shall submit the following:
  - The complete Venture Proposal & Business Plan (Final Report as a MS Word document or PDF) .... **worth 18% of the overall course grade**.
  - PPT presentation file .... **worth 7% of the overall course grade**.
  - The random group formations and term project guidelines will be posted on CANVAS in the announcements section.

Important Note: Each individual student must submit his/her SPEF (Self & Peer Evaluation Form), ***else the plus/minus (+/-) incentive grade for the course will be forfeited.***

Grading Criteria:
Grading will target all the items needed to structure a successful Venture Proposal & Business Plan as listed in the Abram's manual.

Important Due Dates:

a) Each group leader/facilitator is to submit one report (on behalf of his/her group) listing 3 unique/distinct innovative project proposals for review. Out of the three proposals, only one proposal will be approved by the instructor. This task is due at the end of Week #1 and prior to Lecture #2 (Week #2): **Monday, 02-Jun-2025, by 11:59 pm (PDT)**.

b) A progress status report must be generated by each group and uploaded via a specific CANVAS link on **Monday, 16-Jun-2025, by 11:59 pm (PDT), which is one day after concluding the midterm exam**. Details will be posted on CANVAS.

c) Both the complete Venture Proposal & Business Plan (write-up report, worth 18%) and the PPT presentation file (worth 7%), plus the individual SPEF are due on **Monday, 30-Jun-2025, by 11:59 pm (PDT)**, to be uploaded via specific CANVAS links.

Final Exam (selected material)	**30%**

Course Learning Objectives Addressed:

- Identify and construct various sections of a business model canvas as well as a Venture Proposal & Business Plan.
- Create an awareness of the "Design Thinking" approach.
- Obtain an in-depth analysis of identifying a target market.
- Demonstrate an entrepreneurial/intrapreneurial mindset.
- Understand and implement marketing skills as a part of entrepreneurship.
- Understand other Venture Proposal & Business Plan-related concepts such as intellectual property and the financial standing of an organization.
- Be aware of the risks associated with innovation and entrepreneurship and know how to manage them.

Purpose:
To gauge the student's overall levels of comprehension pertaining to the material covered. The material covered in the final exam sheds light on the premises of invention, innovation, management techniques, risk-taking, target markets, venture proposals & business plans.

Instructions:
The final exam is based on selected material --- administered online via CANVAS. The format consists of essay type questions pertaining to the subject matter and general/contemporary business & entrepreneurial domains. **More instructions will be posted on CANVAS's exam page.** The exam's duration depends on the number of questions given at the time.

Grading Criteria:
After a thorough evaluation of the students' responses, the grades will be posted on CANVAS. The final exam is worth **30%** of the overall course grade.

Due Date: The final exam will be given at the end of Week 6 into the summer semester; with an open testing window of three full days **starting on Friday, 04-Jul-2025 at 12:00 am (PDT) and ending on Sunday, 06-Jul-2025 at 11:59 pm (PDT)**.

Discussion Forum	**7.5%**

Purpose:
To provide students and the professor an opportunity to actively engage in asynchronous discussions. The discussion forum offers a broad and diverse spectrum that addresses contemporary managerial issues related to invention, innovation, venture proposals, business plans, operational principles, and common managerial functions.

Instructions:
You will be responsible for completing and participating in the weekly discussion forums that are specific to each week. Your classmates and professor can review and comment if needed on your postings. A minimum input (number of words) is required for each post.

Grading Criteria:
Your grade will be based on the criteria below:
- **Timeliness of post:** Initial post and response to others are posted in a timely manner.
- **Quality of post:** Appropriate comments, thoughtful, reflective, and respectful of others' postings.
- **Relevance of discussion post and response to other posts:** Initial post and response to others are related to the discussion content.

Due Date: Weekly. The due time/date & minimum number of words will be posted on CANVAS.

Virtual Classroom Participation	7.5%

Purpose:
The purpose of this assignment is for you to be able to discuss course-related topics.

Instructions:
In each week during, you will be required to select **one** of the following options to earn participation points:

Option A: Attend the synchronous session. If you choose this option, you will be required to attend the live Virtual Classroom via Zoom and participate in the discussions during the session. You are allowed to miss only 1 out of the 6 live lecture sessions.

Option B: Review the recording of the session to be posted on CANVAS. If you choose this option, you will be required to post your comments in the appropriate Virtual Classroom forum to contribute to the discussions that took place during the session. This way you'll earn credit for attendance. Again, you are allowed to miss only 1 out of the 6 live lecture sessions.

Grading Criteria:
The virtual class sessions require your attendance. The main objective of the weekly sessions is to review the material in an open forum. ALL students are expected to attend via a liver feed camera (ZOOM) and contribute to the virtual class meeting, held on Tuesdays from 6:30-8:30 pm (PDT).

Due Dates: See below

Title	Option A: Attendance Date	Option B: Due Date for Posting in the Forum
Week 1 – Virtual Classroom	Tuesday, May 27th, 6:30-8:30pm	Saturday, 31-May-2025
Week 2 – Virtual Classroom	Tuesday, Jun 3rd, 6:30-8:30pm	Saturday, 07-Jun-2025
Week 3 – Virtual Classroom	Tuesday, Jun 10th, 6:30-8:30pm	Saturday, 14-Jun-2025
Week 4 – Virtual Classroom	Tuesday, Jun 17th, 6:30-8:30pm	Saturday, 21-Jun-2025
Week 5 – Virtual Classroom	Tuesday, Jun 24th, 6:30-8:30pm	Saturday, 28-Jun-2025
Week 6 – Virtual Classroom	Tuesday, Jul 1st, 6:30-8:30pm	Saturday, 05-Jul-2025

STANDARD OPERATING PROCEDURES

1. Class members are expected to maintain personal and professional standards consistent with the Code of Ethics of the National Society of Professional Engineers, the Preamble and Fundamental Canons of which are as follows:

   Engineering is an important and learned profession. As members of this profession, engineers are expected to exhibit the highest standards of honesty and integrity. Engineering has a direct and vital impact on the quality of life for all people. Accordingly, the services provided by engineers require honesty, impartiality, fairness, and equity, and must be dedicated to the protection of the public health, safety, and welfare. Engineers must perform under a standard of professional behavior that requires adherence to the highest principles of ethical conduct. Engineers, in the fulfillment of their professional duties, shall:

   - Hold paramount the safety, health, and welfare of the public.
   - Perform services only in areas of their competence.

- Issue public statements only in an objective and truthful manner.
- Act for each employer or client as faithful agents or trustees.
- Avoid deceptive acts.
- Conduct themselves honorably, responsibly, ethically, and lawfully so as to enhance the honor, reputation, and usefulness of the profession.

Engineers uphold and advance the integrity, honor, and dignity of the engineering profession by:

- using their knowledge and skill for the enhancement of human welfare;
- being honest and impartial, and serving with fidelity the public, their employers, and clients;
- striving to increase the competence and prestige of the engineering profession; and
- supporting the professional technical societies of their disciplines.

2. Students must take **ORIGINAL NOTES** and submit **ONLY ORIGINAL WORK**.
3. Class members are expected to access CANVAS regularly to participate in, and contribute to, the weekly discussion forums.
4. Tardy/Late submissions of assignments are unacceptable. **NO EXCEPTIONS!**
5. Class members must always be considerate and respectful to their colleagues.
6. Activate and use your **CSUN email address** for **ALL academic correspondences**. Do **NOT** use your personal email address to communicate with the instructor. Messages from **non-CSUN** email addresses **will NOT be acknowledged**. Instructor will only utilize SOLAR's email database to communicate with class members.

LETTER GRADE ALLOCATION (CURVING WILL NOT BE UTILIZED)

Total Percentage	Letter Grade
>92 – 100	A
89 – <92	A-
85 – <89	B+
80 – <85	B
78 – <80	B-
75 – <78	C+
70 – <75	C
60 – <70	D
<60	F

GENERAL GRADING CRITERIA

Points will be assigned based on the following general criteria:

- Reading assigned online lectures and other materials.
- Depth and quality of thinking and reflecting evidenced in class discussions and written work submitted.
- Timely submission of all assignments (Late submissions will **not** be accepted).
- Cooperative and collaborative effort.
- Professional attitude and respectful behavior.
- By not submitting the individual SPEF, students will forfeit the +/- grade incentive.
- Once again, curving of grades will **NOT** be utilized.

GRADING INFORMATION

This course syllabus is your contract with the CECS, MSEM and the instructor. Students must read the syllabus thoroughly and adhere fully to ALL the stated terms and listed guidelines. No Exceptions!

- **'A' grade range (A to A-)** is reserved for work that is exceptional. This means that it is professional and reflects the writer's/s' careful consideration of audience and purpose; shows perfect to near-perfect understanding of the necessary concepts and analytical tasks; where appropriate, it shows the capacity to think creatively or to see implications beyond the immediate scope of the question; contains all necessary information (invention); is arranged in a logical manner, is memorable; delivery is visually appealing; and is free of mechanical errors and is formatted as specified. Work must be flawless to attain an A/A-. Work with minor flaws that is nonetheless excellent in other ways will earn an A-.
- **A grade in the B range** means that the work is acceptable at the graduate level (B- range) to very good (B/B+). This work satisfies all (B+) or most (B/B-) of the requirements of the question/research task, shows the capability to think beyond the task by relating it to other areas of knowledge in or outside of the course; is neatly presented and shows above-average use of academic English. If the work is decently written, is formatted basically correctly, and covers most of the required content, but has several minor flaws or one major flaw, the grade will be B-.
- **A grade in the C range** means that the work, while covering much of the required ground, does not show graduate-level analytic and expressive ability. That is, major and minor items may be missing or incorrect; and while the language may communicate most points adequately, it does not qualify as above-average academic work.
- **A grade in the D range** shows that the work does not, overall, achieve an acceptable level of coverage of the requirements AND/OR the language is insufficient to make the writer's points understandable to the reader. The content may be either incorrect to an unacceptable degree, or very incomplete.
- **A grade of F** indicates that so little of the required content is covered that grading the paper is an exercise in futility. It may mean that very major points have clearly not been grasped or have been misunderstood by the student. An F may also indicate that the ideas are expressed in such a way that they are not at all understandable to the reader. A grade of F is also awarded when assigned work is not handed in, or not handed in by the set deadline.

COURSE EVALUATION COMPONENTS

(Plus/minus grading is used as indicated in the **Grading Information** section)

- **15% / Class Participation:** Weekly discussion threads & assignments posted on CANVAS (7.5%), Virtual Classroom Sessions (7.5%).

- **30% / Midterm Exam (*selected material*):** True/False, Multiple Choice and Essay type questions. Covers specific reading assignments, discussion & lecture material. Open book & open notes /// **Individual effort**.

- **25% / Venture Proposal & Business Plan *(Team Effort & Individual Contribution)*:**

    - Comprehensive Venture Proposal & Business Plan & PPT Presentation Slides plus the Self & Peer Evaluation Form

  Notes: All groups will provide the instructor the venture proposals via a Canvas assignment submission link, by the announced date.

All students must individually fill out the Self & Peer Evaluation Form (SPEF) and submit it via a Canvas assignment submission link, by the announced date.

- **30% / Final Exam (*selected material*):** True/False, Multiple Choice and Essay type questions. --- specific reading assignments, discussion & lecture material. Open book & open notes /// **Individual effort**.

ADDITIONAL SAMPLE GRADING CRITERIA

The Venture Proposal & Business Plan PPT Presentation Rubric is in the Canvas course and at the end of this syllabus.

General Criteria

- **Responsiveness**: respond directly to the detailed instructions
- **Analysis:** incorporate material from the readings, lectures, and other course material
- **Reflection and Application:** demonstrate that you have thought carefully about how the material applies to you.
- **Writing:** clarity, grammar, and overall quality and strength of communication.
- **Audio/Visual (For Presentations):** substance of analysis and overall quality of communication.
- **Collaboration:** How well did you work together as a team? Did everyone play their role?

COURSE SCHEDULE

Readings, activities, and the assignments, as well as review of lectures and other course materials are expected to be completed within the week allotted.

Note: Please review the lectures, activities, and readings for the week prior to participating in the weekly session.

Weekly Schedule

Unless otherwise noted, the weekly schedule follows the format below:

- Assignments – due in 1 week, by Monday at 11:59 pm (PDT)
- Discussion Forum
  - Response – due in 1 week, by Monday at 11:59 pm (PDT)
- Virtual Classroom
  - Live Sessions (for all) – Tuesdays from 6:30 pm – 8:30 pm (PDT)
  - Forum Postings (for absentees) – due in 4 days, by Saturday at 11:59 pm (PDT)

Week 1: Tuesday, May 27th – Monday, June 2nd

Learning Objectives:

- Explain the differences & similarities between the approaches of 'Invention vs. Innovation'
- Explain how technology and education move at an exponential pace.

Lecture:

- Module 1: About Groups: All you Need to Know!
- Module 2: Technological Innovation Processes and Approaches to Innovation Concepts

Required Readings:

- White-Bruton Textbook: Preface, About the Authors & Acknowledgments; Part 1 -- Laying the Foundation, Chapters 1 & 2.
- Abrams Textbook: Cover Page thru xxxii, and Chapters 1 thru 4.

Suggested Readings For Further Understanding:

- Individual Online research: Expand your knowledge by conducting further research about the covered topics in the course.

Discussion Forums:

- W1 - Discussion: Invention vs. Innovation.
- W1 - Watch and analyze: “Shift Happens” (an informative video).

Virtual Classroom:

- Participate in the Virtual Classroom.
  OR
- Review the Virtual Classroom recording and post your comment in the Virtual Classroom forum.

Term Project Plan & Activities:

- W1: Getting Started with your Team Members

Week 2: Tuesday, June 3rd – Monday, June 9th

Learning Objectives:

- Identify the value and the role of systemic information in advancing the technological fields.
- Discuss emphasizing the fact that ethics is a premise that can’t be compromised.

Lecture:

- Module 3: Technological Forecasting
- Module 4: Technological Strategy

Required Readings:

- White-Bruton Textbook: Part 2 - Innovation: Internal Strategy; Chapters 3 thru 6.
- Abrams Textbook: Chapters 5 thru 9.

Suggested Readings For Further Understanding:

- Individual Online research: Expand your knowledge by conducting further research about the covered topics in the course.

Discussion Forums:

W2 - Discussion: Communication, Ethics, and Artificial Intelligence,

Virtual Classroom:

- Participate in the Virtual Classroom.
  OR
- Review the Virtual Classroom recording and post your comment in the Virtual Classroom forum.

Term Project Plan & Activities:

- Term Project Inquiries Discussion
- W2: Project Milestone - Proposals

Week 3: Tuesday, June 10th – Monday, June 16th

Learning Objectives:

- Explain the essence behind versatile and dynamic marketing of products and services into the competitive marketplace.

- Provide an analysis of innovation and dynamic management.
- This is a case study of management strategies and approaches in an era of fast technological advancement and brutal competition.

Lecture:

- Module 5: Entrepreneurship and Intrapreneurship
- Module 6: The Evolving Organization

Required Readings:

- White-Bruton Textbook: Part 3 - Obtaining Technology: External Strategy; Chapters 7 & 8.
- Abrams Textbook: Chapters 10 thru 12.

Suggested Readings For Further Understanding:

- Individual Online research: Expand your knowledge by conducting further research about the covered topics in the course.

Discussion Forums:

- W3 - Discussion: Innovation management for businesses and society-at-large.
- W3 - Watch and analyze: "A Day in Glass" (an informative video).

Virtual Classroom:

- Participate in the Virtual Classroom.
  OR
- Review the Virtual Classroom recording and post your comment in the Virtual Classroom forum.

Term Project Plan & Activities:

- Term Project Inquiries Discussion

Midterm Exam:

- Covers selected reading assignments & lecture material:
  - All discussion threads & topics posted on CANVAS: Week 1 thru 3.
  - Lecture Modules: 1 thru 4.
  - White-Bruton Textbook: Chapters 1 thru 6.
  - Abrams Textbook: Chapters 1 thru 12.
  - The Zoom lectures covering weeks 1 thru 3.

Week 4: Tuesday, June 17th – Monday, June 23rd

Learning Objectives:

- Explain merits of, and needs for, effective control systems for any enterprise.
- Examine the value and support diversity in the workforce, and expanding the vital role of women in engineering sciences
- Discuss the graded midterm exam: material covered and results (stats)

Lecture:

- Module 7: Form and Financing
- Module 8: Patents, Trade Secrets, Copyrights, and Trademarks

Required Readings:

- White-Bruton Textbook: Part 4 - Building Strategic MTI (Management of Technology & Innovation) Success; Chapters 9 &10.
- Abrams Textbook: Chapters 13 thru 17.

Suggested Readings For Further Understanding:

- Individual Online research: Expand your knowledge by conducting further research about the covered topics in the course.

Discussion Forums:

W4 – Discussion: Control Systems & Static vs. Dynamic Management.
W4 – Discussion: Expanding the Role of Women in Engineering & the Sciences.

Virtual Classroom:

- Participate in the Virtual Classroom.
  OR
- Review the Virtual Classroom recording and post your comment in the Virtual Classroom forum.

Term Project Plan & Activities:

- Term Project Inquiries Discussion
- Project Status Report: due 1 day after concluding the midterm exam.
- Implement status report feedback from instructor.

Additional Activities:

- Week #4 - Midterm Exam Answers: Expected Bullet Points & Analyses

Week 5: Tuesday, June 24th – Monday, June 30th

Learning Objectives:

- Summarize the necessity of innovation and its major effects on our lives via both the national and global economies.
- Examine an expert's opinion into the differences between the invention and innovation processes.

Lecture:

- No lecture modules – great emphasis on the group term project (Complete Venture Proposal & Business Plan and PPT file)

Required Readings:

- White-Bruton Textbook: Part 4 - Building Strategic MTI (Management of Technology & Innovation) Success; Chapters 11 & 12.
- Abrams Textbook: Chapters 18 thru 22.

Suggested Readings For Further Understanding:

- Individual Online research: Expand your knowledge by conducting further research about the covered topics in the course.

Discussion Forums:

W5 - Discussion: Creative thinking and technological Inventions

Virtual Classroom:

- Participate in the Virtual Classroom.
  OR
- Review the Virtual Classroom recording and post your comment in the Virtual Classroom forum.

Term Project Plan & Activities:

- Term Project Inquiries Discussion
  - Use this discussion forum to post any questions related to the group term project (focus on completing Venture Proposal & Business Plan and PPT file)
- W5 – Submittal: Venture Proposal and Business Plan Presentation File (PPT)
- W5 – Submittal: Venture Proposal & Business Plan (Final Write-Up Report)
- W5 – Submittal: Self & Peer Evaluation Form (Individual)

Week 6: Tuesday, July 1st – Monday, July 7th

Learning Objectives:

- Identify and construct various sections of a business model canvas as well as a Venture Proposal & Business Plan
- Discuss the self-measurement and evaluation of one's comprehension levels pertaining to the management of technological innovation.
- Explain the important societal aspects that help in strengthening a mindset that strives to assure equality and fairness in the workforce.

Lecture: No lecture modules – Review submittals of Venture Business Plan, PPT file, and SPEF's.

- **Required Readings:** Review at your leisure all the reading material/assignments from the beginning of the semester .... and present any questions that you may have during the last weekly lecture (course review session). Also, all inquiries are welcome via email or if posted on CANVAS.

Suggested Readings For Further Understanding:

- Individual Online research: Expand your knowledge by conducting further research about the covered topics in the course.

Discussion Forums:

W6 - Discussion: Gender bias in the workforce

Virtual Classroom:

- Participate in the Virtual Classroom.
  OR
- Review the Virtual Classroom recording and post your comment in the Virtual Classroom forum.

Term Project Plan & Activities:

- Term Project Inquiries Discussion
  Term Project Discussion and Evaluation/Critique Offered by the Instructor.

Final Exam:

- Covers selected reading assignments & lecture material:
  - White-Bruton Textbook: Chapters 7 thru 12.
  - Abrams Textbook: Chapters 13 thru 22.
  - Lecture Modules: 5 thru 8.
  - All discussion threads & topics on CANVAS (throughout the semester)

Additional Activities:

- Complete the Course Survey (End of Term)

A Note About The Use Of Generative Artificial Intelligence

Generative AI (**GenAI**) tools, such as ChatGPT, are powerful resources that can enhance learning, critical thinking, and problem-solving in engineering management. In this course, students are permitted to use GenAI tools ethically and responsibly to support their coursework, but not to replace critical thinking or domain knowledge.

Students need to maintain domain knowledge and critical thinking skills to be able to evaluate the output provided to them from the GenAI tool they are using, as ultimately the student is responsible for the output from the GenAI tool that they are including in their course assignments.

If permitted by the faculty member to use GenAI in the course, students must adhere to the following guidelines:

1. Transparency & Attribution: If students use GenAI to generate content for assignments, projects, or discussions, they have to clearly disclose its use and cite the tool appropriately. Please make sure to look up how to cite content from GenAI tools.

2. Academic Integrity: Submitting AI-generated work as your own without meaningful engagement, critical evaluation, or modification violates academic integrity policies. AI should assist your work, not replace original thought. GenAI should be used in a supportive and collaborative manner only, but it is not meant to replace the student developing a problem-solving thought process.

3. Verification of output provided by the GenAI tool: AI-generated content may contain inaccuracies. Students should always fact-check and critically evaluate outputs before using them in academic work.

4. Check extent to which GenAI is permitted to be used: The GenAI tool may not be allowed to be used for all the assignments – hence the student should make sure to verify with the instructor as to which assignments they can or cannot use it for.

A Note About Provisions for Disability

Students who need accommodation due to a disability must register with CSUN Disability Resources and Educational Services. Through a wide array of services, this office assists students to realize their academic and career goals. A team of disability and educational specialists are available to students on a year-round basis. In addition, students may receive training on assistive technology and access the help of educational support specialists who function as peer mentors.

Please contact the Tseng College Program Manager if you require assistance in registering with CSUN Disability Resources and Educational Services. Once you have registered with the Center, please inform the instructor as soon as possible so that any necessary accommodations can be completed before the course begins.

A Note About Appropriate Academic Conduct

N.B.: The information regarding appropriate academic scholarship is excerpted from The Tseng College of Extended Learning document entitled, *ACKNOWLEDGEMENT OF ACADEMIC AND PROFESSIONAL RESPONSIBILITIES*, which you received at the beginning of the program. Please review it if you have any questions.

ACADEMIC DISHONESTY

The maintenance of academic integrity and quality education is the responsibility of each student within this university and the California State University system. Cheating or plagiarism in connection with an academic program at a campus is listed in Section 41301, Title V, California Code of Regulations, as an offense for which a student may be expelled, suspended, or given a less severe disciplinary sanction. Academic dishonesty is an especially serious offense and

diminishes the quality of scholarship and defrauds those who depend upon the integrity of the campus programs. Such dishonesty includes:

A. CHEATING

Intentionally using or attempting to use unauthorized materials, information, or study aids in any academic exercise.

Comments:

1. Faculty members are encouraged to state in advance their policies and procedures concerning examinations and other academic exercises as well as the use before examinations of shared study aids, examination files, and other related materials and forms of assistance.

2. Students completing any examination should assume that external assistance (e.g., books, notes, calculators, conversation with others) is prohibited unless specifically authorized by the instructor.

3. Students must not allow others to conduct research or prepare any work for them without advance authorization from the instructor. This comment includes, but is not limited to, the services of commercial term paper companies.

4. Substantial portions of the same academic work may not be submitted for credit in more than one course without authorization.

B. FABRICATION

Intentional falsification or invention of any information or citation in an academic exercise.

Comments:

1. “Invented’’ information may not be used in any laboratory experiment or other academic exercise without notice to and authorization from the instructor. It would be improper, for example, to analyze one sample in an experiment and covertly “invent’’ data based on that single experiment for several more required analyses.

2. One should acknowledge reliance upon the actual source from which cited information was obtained. For example, a writer should not reproduce a quotation from a book review and indicate that the quotation was obtained from the book itself.

3. Students who attempt to alter and resubmit returned academic work with intent to defraud the faculty member will be in violation of this section. For example, a student may not change an answer on a returned exam and then claim that they deserve additional credit.

C. FACILITATING ACADEMIC DISHONESTY

Intentionally or knowingly helping or attempting to help another to commit an act of academic dishonesty.

Comments:

1. For example, one who knowingly allowed another to copy from his or her paper/work by any means of communication during an examination would be in violation of this section.

D. PLAGIARISM

Intentionally or knowingly representing the words, ideas, or work of another as one's own in any academic exercise.

Comments:

1. Direct Quotation: Every direct quotation must be identified by quotation marks, or by appropriate indentation or by other means of identification and must be promptly cited in a footnote. Proper footnote style for any academic department is outlined by the APA Style Manual. This publication is available in the Matador Bookstore and is at the reference desk of the Oviatt Library.

2. Paraphrase: Prompt acknowledgment is required when material from another source is paraphrased or summarized in whole or in part in your own words. To acknowledge a paraphrase properly, one might state: "to paraphrase Locke's comment . . .'' and conclude with a footnote identifying the exact reference. A footnote acknowledging only a directly quoted statement does not suffice to notify the reader of any preceding or succeeding paraphrased material.

3. Borrowed Facts or Information: Information obtained in one's reading or research which is not common knowledge among students in the course must be acknowledged. Examples of common knowledge might include the names of leaders of prominent nations, basic scientific laws, etc.

   Materials which contribute only to one's general understanding of the subject may be acknowledged in the bibliography and need not be immediately footnoted. One footnote is usually sufficient to acknowledge indebtedness when several connected sentences in the paper draw their special information from one source. When direct quotations are used, however, quotation marks must be inserted, and prompt acknowledgment is required.

VENTURE PROPOSAL AND BUSINESS PLAN PRESENTATION RUBRIC

	Excellent (4)	Good (3)	Adequate (2)	Weak (1)
RESPONSE TO ASSIGNMENT: PowerPoint presentations are expected to completely address the topic and requirements set forth in the assignment, whereby the contents are very appropriate for the intended audience.	The presentation responds to the assignment and addresses the topic and all requirements, at an appropriate technical level for the intended audience.	The presentation responds to the assignment and addresses the topic but has minor weaknesses with respect to some of the requirements and/or appropriate technical level.	The presentation responds to the assignment and addresses the topic but has significant weaknesses with respect to some of the requirements and/or appropriate technical level.	The presentation does not respond to many of the requirements of the assignment, and/or is poorly tailored for the intended audience.
ANALYSIS & DISCUSSION: PowerPoint presentations are expected to provide an appropriate level of analysis, discussion and evaluation as required and targeted by the assignment.	Presented material is completely analyzed and evaluated, providing support for the main points with validated reasoning, discussion of alternatives, explanations, and examples as appropriate.	Presented material is analyzed and evaluated and appropriate reasons, discussion of alternatives, explanations, and examples are given for most of the main points.	Presented material is analyzed and evaluated at a reasonable level but is not used effectively to support many of the main points.	The depth of analysis and evaluation of the presented material is not sufficient, and the discussion contains unnecessary or trivial material.
ORGANIZATION: PowerPoint presentations are expected to be well-organized in overall structure, beginning with a clear statement of the problem and ending with a clear conclusion and recommendations if applicable.	The presentation is well-structured; its organization contributes to its purpose. The problem is clearly stated, and technical content is well-ordered for clarity in delivery.	The presentation is generally well-structured, with only a few flaws in overall organization.	The presentation has a defined structure, but the organization is not optimal for supporting the presentation's content.	The presentation is poorly structured; organizational flaws undermine its effectiveness and clarity.
STYLE/FORM & FORMAT: PowerPoint presentations are expected to be stylistically effective – that is, to consist of visual aids with well-chosen words and graphics which complement the primary objective of the assigned project.	The visual aids (e.g., PowerPoint slides) are informative, well-designed, and easy to read. The number of slides is consistent with the expected and accepted range.	The visual aids are informative and generally supportive of the presentation but could be improved to complement the project's objectives more effectively.	The visual aids are generally supportive of the presentation, but some of them are difficult to read, too busy, and/or not necessary	Visual aids are not designed to effectively to convey the information desired by the target market and audience.
FILE PACKAGING & CONTENT DELIVERY SKILLS: PowerPoint presentations are expected to use an effective narration/writing style which exhibits enthusiasm, generates interest in the audience, and communicates all the intended and desired information.	The slides are professionally prepared while aiming to establish a concentrated connection with, and follow-up by, the targeted audience.	The presentation is well-prepared with the desired contents along with good visual aids but may occasionally stray from topic and/or have other deficiencies in the layout.	The presentation is reasonably-prepared but noticeably weak at the provided visuals, thus not able to communicate all the intended information.	The inability to present valued research and offer proper analysis, is quite apparent throughout the file/study preparation.

CONCLUSIONS: PowerPoint presentations are expected to draw appropriate conclusions and recommendations based on merited facts.	Key points are clearly re-stated at the end so that the audience clearly understands the purpose of the technical work.	The presentation has a conclusion but some of the key points are not highlighted effectively.	The presentation has a brief conclusion but is not substantial in content.	The presentation package just seems to end abruptly without offering a coherent summation for the intended audience and/or target market.

SPEF: SELF & PEER EVALUATION FORM

1. Overall, how effectively did you team work together on the **project**?

2. How many of your team members participated actively in the development of the **project** *most of the time* throughout the semester?

3. Please provide **one** specific example of *something that you learned from the team* that you probably would not have learned working alone.

4. Please provide **one** specific example of *something the other team members learned from you* that they probably would not have learned otherwise.

5. Please provide **one** specific suggestion of a way in which the team could have improved *overall* performance.

6. ***Including yourself***, rate the contributions of each team member to the **project** with respect to ***quantity***: **Note**: Rating is on a scale of 0-5, 0 being Low and 5 being High

#	Team Member Name	Rating
1.		
2.		
3.		
4.		
5.		
6.		

7. ***Including yourself***, rate the contributions of each team member to the **project** with respect to ***quality:*** **Note**: Rating is on a scale of 0-5, 0 being Low and 5 being High

#	Team Member Name	Rating
1.		
2.		
3.		
4.		
5.		
6.		

8. **Additional Comments:**