

SYLLABUS – EGG460

Technology Commercialization

Day: **Time:** **Room:**

Course Objectives: This course provides an introduction to commercializing technologies, products and services in the modern marketplace. Students will learn how to identify, rationalize the features, advantages, and benefits, how to evaluate potential markets, how to develop marketing, sales, and production strategies. Intellectual property protection, financing and team building will also be covered in this course. Projects will be assigned to students based on an actual technology to become commercialized; utilizing feasibility studies and producing executive summaries (Tech Com Plan), students will compete in the Tech Com awards as part of final project 3 Credits.

Instructor and Office Hours:

Grading: Grading will be based upon the following point system:

Class attendance (taken during first five minutes of class):	20%
Homework:	10%
Participation:	10%
Mid Term & Individual Pitch:	10%
Final (Tech Com Plan & Oral Presentation):	50%

Course Material

There is no required text book for EGG 460, class notes will be distributed in class & through web references.

Projects

Real commercialization projects will be assigned in the first week. Students will work as entrepreneurs on commercializing technology-based products in the marketplace during the semester. Students may go to a tradeshow to practice their marketing and sales skills for technology-based products and services. Following Mid Term break students will choose concept technologies to create capstone Tech Com Plan and Final Oral Presentation,

Attendance

Your **attendance** to all regularly scheduled class meetings is **mandatory**. Likewise, **team meetings** outside of class are **mandatory**. Meetings with other people to gather information about your project will be assigned in team meetings. Your participation in gathering data is mandatory. Class register will be taken within the first 5 minutes of class. Don't be late!

Class Professionalism & Participation

Students will be evaluated based on their level of professionalism in class, outside of class, and during in-class activities. Class participation involves participation during lectures, and guest presentations. Here are some additional pointers regarding participation:

If you almost never speak out in class or miss several classes, you will receive a participation grade of 5 or lower. If you rarely say anything inspired, your participation grade will be in the 10-20 range (depending on how "occasionally" and how well prepared you are). "Inspiration" - the path to a "30" participation grade – involves such actions as:

- ☐ outside reading and applying it in the discussion (with citations)
- ☐ integrating comments from previous classes, events, lectures or presentations
- ☐ reaching back to something said previously that is pertinent to the discussion at the moment
- ☐ taking substantive issue with a classmate's analysis
- ☐ coherently sourcing material from several resources
- ☐ tying in brief personal experiences you have had that is relevant to the discussion
- ☐ generally demonstrating that you have carefully read and understood the assigned readings
- ☐ not dominating class discussion

Learning Outcomes

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

- Effectively lead a class discussion of a week's case study
- Identify what constitutes technology and how commerce created markets
- Demonstrate how technology commercially benefits existing markets, and how creating new, efficient technologies can evangelize a market
- Evaluate legal protections which currently exist for intellectual property owners
- Apply conceptual material introduced in the classroom to outside readings, lectures and guest presentation

Course Projects

The projects will be the analysis of case studies. Teams will be required to review a case and present their results to the class. For this assignment there is no need to summarize the material as all teams will be analyzing the same case.

Class Summaries

Students are expected to write a two to three paragraph summary of each class. Class summaries are due at the day before of each class for previous class.

Case Presentations

Throughout the semester, student teams will be assigned to lead the class discussion of the case and/or readings for the week. Teams will be expected to briefly introduce and summarize the readings, and then to compare and contrast them with other readings for the week and/or past weeks. Students will also be expected to fully engage the class through questions regarding key points, interpretation of the readings, etc. Formal presentations (i.e., PowerPoint, business dress) are not required for this exercise.

Course Description:

Becoming the best:

As an Entrepreneur or Employee in organizations that use technology for commercial benefit, the module is designed for those students who want to push the boundaries of undemanding and navigate the complex world of taking technologies to market.

Since the dawn of mankind, technology has progressed society ahead of any other factor, creating civilizations and effecting our every day life. There has never been such an enlightened time in human history that affords so many to achieve so much.

Through commerce opportunity exists to continue the evolution of our world whilst facing unique challenges that have never existed previously.

Combines the perspectives of engineering design and technology market identification into a unified product design method. Instruction and hands-on examples of customer needs to quality measures, concept generation, prototype optimization, and market introduction.

Entrepreneurs & Engineers face different ethical questions and challenges than the traditional corporate business person. Specifically, they are not constrained by the requirement to maximize return for shareholders.

Identify what constitutes technology and how commerce created markets. From basic tools to rockets, trading produce to currencies. Innovating new concepts, identifying new trend, measuring the size of opportunities. Understanding the sales process and how to choose routes into suitable markets. Knowing when to reevaluate your strategy through the process of stage gating. Building financial models that prove the commercial potential

Graduate level curriculum with collaborative discussion, students supplement knowledge from debating with each other on case study review and industry expert guest speakers

We will round off the course through a consideration of the idea that each individual makes a statement about who they are and what they value via their Entrepreneurial activities. Our discussion will be focused on a notion of 'Authenticity' rooted in the Existentialist philosophy. In particular, we will look at Kierkegaard's rather audacious claim that there are exactly only three ways of living one's life and the theory backing this claim up.

Some of the topics of this course will be accompanied by case studies that are intended to allow students to better think about the issues raised. Several of these case studies will be drawn directly from the experience of 'Serial Entrepreneurs'. One most valuable and unique aspects of this course is that students will be taught by a real life serial entrepreneur about those experiences and pose questions to him "live" in the classroom.

The instruction uses the Socratic method and therefore follows a natural flow that can be quick paced if students demonstrate fundamental understanding with competent debate and take longer for in-depth drill down when more complex topics are presented.

Students are inter disciplinary with wide variety of skills and capabilities, innovators, lateral thinking's, inventors, business experience, etc.

It is necessary that the syllabus is fluid based on topic, exercises and guest speakers.

Intended focus is advanced technology products, goods or services. Although technology is used in all business applications the module will be focused on new unique innovations opposed to ecommerce.

Course Outline: The following is a meeting-by-meeting outline of how the course topics are arranged. Changes may be made.

Introduction to Technology Commercialization
Technology Evaluation for Research
Features, Advantages & Benefits
Sizing markets
Marketing Plan
Sales Plan
Production Plan
Mid Term Paper & Pitch Presentations
Technology Commercialization Plan (individual framework)
Intellectual Property
Financing
Revenue Stream
Negotiation
The Company
Launch strategy
Practice Presentations
Final Individual Presentation*

UNLV Policies:

Academic Misconduct—Academic integrity is a legitimate concern for every member of the campus community; all share in upholding the fundamental values of honesty, trust, respect, fairness, responsibility and professionalism. By choosing to join the UNLV community, students accept the expectations of the Student Academic Misconduct Policy and are encouraged when faced with choices to always take the ethical path. Students enrolling in UNLV assume the obligation to conduct themselves in a manner compatible with UNLV's function as an educational institution.

An example of academic misconduct is plagiarism. Plagiarism is using the words or ideas of another, from the Internet or any source, without proper citation of the sources. See the *Student Academic Misconduct Policy* (approved December 9, 2005) located at: <https://www.unlv.edu/studentconduct/student-conduct>.

Copyright—The University requires all members of the University Community to familiarize themselves with and to follow copyright and fair use requirements. **You are individually and solely responsible for violations of copyright and fair use laws. The university will neither protect nor defend you nor assume any responsibility for employee or student violations of fair use laws.** Violations of copyright laws could subject you to federal and state civil penalties and criminal liability, as well as disciplinary action under University policies. Additional information can be found at: <http://www.unlv.edu/provost/copyright>.

Disability Resource Center (DRC)—The UNLV Disability Resource Center (SSC-A 143, <http://drc.unlv.edu/>, 702-895-0866) provides resources for students with disabilities. If you feel that you have a disability, please make an appointment with a Disabilities Specialist at the DRC to discuss what options may be available to you. If you are registered with the UNLV Disability Resource Center, bring your Academic Accommodation Plan from the DRC to the instructor during office hours so that you may work together to develop strategies for implementing the accommodations to meet both your needs and the requirements of the course. Any information you provide is private and will be treated as such. To maintain the confidentiality of your request, please do not approach the instructor in front of others to discuss your accommodation needs.

Religious Holidays Policy—Any student missing class quizzes, examinations, or any other class or lab work because of observance of religious holidays shall be given an opportunity during that semester to make up missed work. The make-up will apply to the religious holiday absence only. It shall be the responsibility of the student to notify the instructor within the first 14 calendar days of the course for fall and spring courses (excepting modular courses), or within the first 7 calendar days of the course for summer and modular courses, of his or her intention to participate in religious holidays which do not fall on state holidays or periods of class recess. For additional information, please visit: <http://catalog.unlv.edu/content.php?catoid=6&navoid=531>.

Transparency in Learning and Teaching—The University encourages application of the transparency method of constructing assignments for student success. Please see these two links for further information: <https://www.unlv.edu/provost/teachingandlearning>
<https://www.unlv.edu/provost/transparency>

Incomplete Grades—The grade of I—Incomplete—can be granted when a student has satisfactorily completed three-fourths of course work for that semester/session but for reason(s) beyond the student's control, and acceptable to the instructor, cannot complete the last part of the course, and the instructor believes that the student can finish the course without repeating it. The incomplete work must be made up before the end of the following regular semester for undergraduate courses. Graduate students receiving "I" grades in 500-, 600-, or 700-level courses have up to one calendar year to complete the work, at the discretion of the instructor. If course requirements are not completed within the time indicated, a grade of F

will be recorded and the GPA will be adjusted accordingly. Students who are fulfilling an Incomplete do not register for the course but make individual arrangements with the instructor who assigned the I grade.

Library Resources

Students may consult with a librarian on research needs. For this class, the subject librarian is Sue Wainscott. (https://www.library.unlv.edu/contact/librarians_by_subject). UNLV Libraries provides resources to support students' access to information. Discovery, access, and use of information are vital skills for academic work and for successful post-college life. Access library resources and ask questions at <https://www.library.unlv.edu>.

Tutoring and Coaching—The Academic Success Center (ASC) provides tutoring, academic success coaching and other academic assistance for all UNLV undergraduate students. For information regarding tutoring subjects, tutoring times, and other ASC programs and services, visit <http://www.unlv.edu/asc> or call [702-895-3177](tel:702-895-3177). The ASC building is located across from the Student Services Complex (SSC). Academic success coaching is located on the second floor of the SSC (ASC Coaching Spot). Drop-in tutoring is located on the second floor of the Lied Library and College of Engineering TEB second floor.

UNLV Writing Center—One-on-one or small group assistance with writing is available free of charge to UNLV students at the Writing Center, located in CDC-3-301. Although walk-in consultations are sometimes available, students with appointments will receive priority assistance. Appointments may be made in person or by calling 702-895-3908. The student's Rebel ID Card, a copy of the assignment (if possible), and two copies of any writing to be reviewed are requested for the consultation. More information can be found at: <http://writingcenter.unlv.edu/>.

Rebelmail—By policy, faculty and staff should e-mail students' Rebelmail accounts only. Rebelmail is UNLV's official e-mail system for students. It is one of the primary ways students receive official university communication such as information about deadlines, major campus events, and announcements. All UNLV students receive a Rebelmail account after they have been admitted to the university. Students' e-mail prefixes are listed on class rosters. The suffix is always @unlv.nevada.edu. **Emailing within WebCampus is acceptable.**

Final Examinations—The University requires that final exams given at the end of a course occur at the time and on the day specified in the final exam schedule. See the schedule at: <http://www.unlv.edu/registrar/calendars>.