



**TMGT 597.02W – Technology and Innovation
Course Syllabus: Summer II 2015**



Instructor: Dr. Andrea Graham
Assistant Professor
Department of Engineering & Technology

Office Location: Charles J. Austin Engineering & Technology
Building, Room 216

Virtual Office Hours: MWF /Times online will vary each day.

Office Phone: (903) 886-5474

Office Fax: (903) 886-5960 (Inform instructor when a fax is sent)

University Email Address: andrea.graham@tamuc.edu

COURSE INFORMATION

CRN: 50408 (02W)

Delivery format: Web-based (02W)

This course is 100% online. No face-to-face meetings are conducted. All correspondence will be via email with the Professor.

Semester Credit Hours: 3 SCH

Course Dates: July 13, 2015 to August 13, 2015

Course Description: This course will explore current breakthrough technologies and disruptive innovations that have emerged over the past few years. A close examination will be conducted to understand the importance of management strategy in navigating the rapid climate of changing technology to ensure a company's success. Working individually, students will be required to explore the current body of literature /knowledge and conduct research on a technological advancement. Extensive and advanced readings, research, and writing assignments will be required.

Prerequisite: TMGT 595.

Course Text:

Textbook (Required): Wharton on Managing Emerging Technologies

Edited by: George S. Day, Paul J. H. Schoemaker and Robert E. Gunther
Published by: John Wiley and Sons, Inc., 2000
ISBN: 0-471-36121-6

Textbook (Optional): Innovator's Dilemma: When New Technologies Cause Great Firms to Fail (Management of Innovation and Change)

By: Clayton Christensen
Published by: Harvard Business Review Press; Reprint edition
(November 19, 2013)
ISBN: 978-1422196021

Reference Sources:

- **Association of Technology, Management, and Applied Engineering**
www.atmae.org
- **Publication Manual of the American Psychological Association (APA)**
6th Edition-2010
ISBN: 10: 1-4338-0561-8

Student Learning Outcomes (SLO)

Student Learning Outcomes define what you should know and be able to do as a result of your successful completion of this course of study. All of the activities that constitute this course are designed toward your accomplishment and mastery of that goal.

- **Student Learning Outcome #1:** The learner, based on their textbook and outside readings, research and study of the current body of literature will be able to compose and author their own original **Literature Review Paper** on a current breakthrough technology or disruptive innovation that fully comply with the course writing and formatting guides and the **APA Publication Manual**, 6th Edition..
- **Student Learning Outcome #2:** The learner, based on their textbook and outside readings, research and study of the current body of literature will be able to thoroughly discuss the differences in strategy and managerial styles guiding companies in sustained technologies and disruptive innovations.

COURSE OPERATIONAL POLICIES

This graduate course will require you to read, conduct extensive research and write at a level appropriate for a university master's level student. It is assumed that you can read and write at this level coming into the course.

- You will be expected to read and comprehend the course syllabus, course emails and course announcements.
- You will be expected to manage your time effectively and efficiently throughout the semester.
- You will be expected to meet all deadlines and due dates.
- You will be expected to participate fully in the course by checking announcements, emails and responding to emails when appropriate.
- You will be expected to practice **professionalism** and a **formal business writing style and format** in all of your written correspondence (*including emails*) and in your verbal interactions with the professor, staff and students.
- You will be expected to devote **at least 15 clock hours** to this course each week of the semester (including on-line and off-line).
- You will be expected to log into **eCollege** often and to check for correspondent from your Professor daily.
- Work, vacation, travel, sickness/accident/death outside your immediate family does **NOT** constitute an approved excuse for not completing assignments, projects, examinations and/or not meeting course deadlines and due dates.

COURSE ASSESSMENT COMPONENTS

This course will consist of two grading components to assess the student's mastery of the material.

1. **Weekly discussion board assignment.** Each week a question will be posted to the eCollege Discussion Board to engage students in meaningful dialogue focused on the course content. Students will be required to make a meaningful contribution to the discussion board so each response must be reflective and should integrate excerpts from the textbook readings, research and outside reading with proper citing. The student will be required to provide a direct answer to each question as well as responses to two other answers. There will be four questions. **Each question will be worth 25 points.**

2. **Writing Assignment.** An original literature review paper on a current breakthrough technology or disruptive innovation. A list of technologies and paper requirements is outlined in the Assignment section of the syllabus. **The writing assignment will be worth 100 points.**

GRADING AND EVALUATION POLICY

IMPORTANT NOTE: The grading policy and requirements outlined in this syllabus are **non-negotiable**. All students will be held to an identical standard and given the same opportunities to earn the maximum points allowed for any given assignment.

The final course grade for each student will be based on the following:

Assignments: **200 Total Possible Points in this course of study.**

GRADING SCALE

A = 200-180

B = 179-159

C = 158-138

D = 137-117

F = 116-0

- Late assignments, projects and examinations may receive a score of “0” points at the discretion of the Professor based on the written facts presented by the student.
- No extra credit, additional work to improve a grade or the re-ding of an assignment, project or examination will be permitted in this course.
- If in the event a deadline/due date is missed and you, the student, believe you have a valid reason that meets university guidelines and that meets the course policy, notify me immediately **in writing, providing supporting documentation, if applicable**. I will work with you to find a solution for your situation, if possible.

ASSIGNMENT SUBMITTALS

Assignments must be turned-in to me through the eCollege dropbox designated for the particular assignment.

Except for the cover page, the following information **must** appear in the format shown below using 8 point font, in the upper right-hand corner of **each** page of your course-credit assignments:

Your full name , your CWID number, Assignment #, p. #

Submitted work must be readable and printable using a commonly available Microsoft product (included in Office Suite), Adobe Acrobat (.pdf format), or specified assignment-specific format. Any other formats will not be accepted without prior approval. Students must retain electronic copies of all submitted works and available for resubmission should unforeseen technical circumstances warrant.

The writing and reference formatting style identified in the current edition of the *Publication Manual of the American Psychological Association* (APA) is required for use on written assignments in this course and all courses offered within the TAMU-C Department of Engineering & Technology. The most critical aspect of writing with APA in this course is the

observation of correct citation and reference requirements. Failing to properly cite the work of others constitutes plagiarism, an act of academic dishonesty resulting in disciplinary action. The approved TMGT Manuscript Guide provides program specific information on required and allowed variations from APA Style. These two sources are essential references in preparing written assignments for submission. Only specific assignment instructions supersede these established formatting and style requirements.

In the workplace, you are expected to produce documents that are clear, error-free, and visually effective in communicating the intended message. All work submitted for credit in this course must also satisfy these general professional expectations as well as be appropriate for the specific purpose and audience for which the communication is intended. Quality of work will be reflected in the assignment scores.

All work must identify the student and contain an appropriate assignment identifier within the document.

Electronic file submissions **MUST** conform to the following naming conventions:
Course Prefix&Number–Activity ID–LastNameInitial(s).FileExtension (no spaces in filenames)

Examples:

TMGT597 02W-ReferencePage-LastF.pdf

TMGT597 02W-RoughDraft-GroupK.doc

TMGT597 02W-LiteratureReview-FeynmanR.docx

Important: Files uploaded into eCollege **cannot** contain special characters such as the pound symbol (#). Attempting to upload a file with a restricted character will result in an error message and your file will be rejected. For example, use Assignment1 rather than Assignment#1 in your filename.

As you conduct outside readings and research, familiarize yourself with the requirements of this course. As you read, take notes of points that you may wish to include in your assignment responses. After you have read and researched your source materials, review each assignment and begin to organize your thoughts as to the most effective, complete and concise response. Write a draft first, then read, **think**, and make necessary revisions. Repeat this process as many times as you need in order to produce **your best** response. Be careful of format, word usage, spelling, grammar and be sure to cite your sources, if applicable. Additionally, I will be looking for evidence that you have conducted outside readings and research and that you understood what you read. Write to your intended audience and at a level they can understand. Refer to the **MS-TMGT Manuscript/Assignment Guide** and **APA 6th ed. Style Manual**.

TECHNOLOGY REQUIREMENTS

- This is an online course; thus, access to a modern computer with a reliable, high-speed, Internet connection is required. You must also have sufficient administrative authority on your computer to download, install, and run the necessary software applications.
- Your courses will work with a PC with recent OS versions or Macintosh OS X. Supported browsers include recent releases of Firefox, Aurora, Internet Explorer, Safari, or Chrome.

- It is strongly recommended that you perform a “Browser Test” prior to the start of any on-line course. To launch a browser test, login in to eCollege, click on the ”myCourses” tab, and then select the “Browser Test” link under Support Services.

Course-specific Software/Hardware/Peripherals

Students will make use of the following software applications to complete course assignments:

MS Word

ACCESS AND NAVIGATION

- This course will be facilitated using eCollege, the Learning Management System used by Texas A&M University-Commerce. To get started with the course, go to: <https://leo.tamuc.edu/login.aspx>.
- In the event the myLEO portal is ever inaccessible and you need to login to eCollege, you should also bookmark the direct URL for eCollege: <http://online.tamuc.org/>
- 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 or helpdesk@tamuc.edu.
- To participate in the online course environment, login to eCollege and follow the instructions provided for each week of the course. Instructions, project guidelines, and relevant resources will be provided as needed throughout the course. The Virtual Classroom should be monitored and contributed to regularly. Special announcements or instructions may also be placed in the Announcements, the Virtual Classroom, or sent directly to your leo email, which should be monitored regularly throughout your enrollment at TAMU-C.

COMMUNICATION AND SUPPORT

Interaction with the Enhanced Section Instructor (Dr. Graham):

Dr. Graham is available via a variety of avenues. The best path depends on the nature of the content you wish to convey or ask. If you have a general question about the class content, the syllabus and course materials are provided within the eCollege environment and may already provide the answer you seek. If you have a question or comment of the nature that would be presented in a traditional classroom environment, please do so in the Virtual Classroom so that others might benefit from and participate in the exchange. If you know the answer to a fellow student's question, please respond. Personal content involving grades, progress, etc. should be addressed with me via private e-mail: Jason.Davis@tamuc.edu. Your name, CWID, and course number (if regarding a specific course) must be included in any and ALL electronic correspondence. All class related E-mail correspondence must have the following in the subject line:

TMGT 597 02W - *First Name, Last Name, subject of correspondence*

Virtual Office and Student Lounge

A *virtual office and student lounge* discussion forums are open for students to post questions related to the course. You are encouraged to post your questions there prior to contacting the TMGT 597 02W-Technology and Innovation-Summer II Term 2015

instructor by other methods. Include a subject line which cues the reader in to the nature of your question. If students have a similar question, the subject line prompts the readers that someone else already asked a similar question. The instructor will attempt to check the virtual office within 48 hours of any posting. Feel free to use the student lounge. Open discussions, sharing of ideas, answering each other's questions is highly encouraged.

Technical Support

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. You may contact the eCollege Helpdesk at 1-866-656-5511 or helpdesk@online.tamuc.org or through the Online Chat by clicking on the "Live Support" tab within your eCollege course.

COURSE AND UNIVERSITY PROCEDURES/POLICIES

Course Specific Procedures:

Academic Honesty Policy

Texas A&M University-Commerce does not tolerate **plagiarism** and other forms of academic **dishonesty**. 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.

Conduct that violates generally accepted standards of academic honesty is defined as academic dishonesty. "Academic dishonesty" includes, but is not limited to, plagiarism (the appropriation or stealing of the ideas or words of another and passing them off as one's own), auto-plagiarism (duplicate submission of single work for credit in multiple or repeated classes), cheating on exams or other course assignments, collusion (the unauthorized collaboration with others in preparing course assignments), and abuse (destruction, defacing, or removal) of resource material. All works submitted for credit must be original works created **by the scholar** uniquely for the class. Works submitted are subject to submission to TurnItIn, or other similar services, to verify the absence of plagiarism. Consequences of academic dishonesty may range from reduced credit on the plagiarized assignment to petition for removal from the academic program or institution, depending on the circumstances and extent of the violation; however, in typical instances, an automatic F on the assignment is considered appropriate as a minimum consequence.

Also, be aware that the statute of limitations for penalties for plagiarism does not end upon the completion of the course or even upon graduation. If an instance of plagiarism is found anytime after the completion of the course, the course grade is subject to change accordingly and any awarded degree utilizing the course is subject to revocation.

To avoid plagiarism, an individual must give credit whenever they:

- a) use another individual's idea, opinion, or theory;
- b) use facts, statistics, graphs, and drawings that are not common knowledge;
- c) use quotations of another individual's spoken or written words; or
- d) paraphrase another individual's spoken or written words.

Guidelines for properly quoting someone else's writings and the proper citing of sources can be found in the APA Publication Manual. Any works referenced must be properly cited in accordance with APA 6th edition style.

Scholarly Expectations

Work submitted, particularly at the graduate level, is expected to demonstrate higher-order thinking skills and represent the student's best possible effort on the assignment. A student should NEVER ask an instructor what they made on a particular assignment for the purpose of determining how much effort to put into the next assignment. Any effort, on any activity, that is less than the student's best is insufficient and will most likely be reflected in the grade. If a passing grade is desired in this course, it must be demonstrated by virtue of your performance throughout the course.

Late Work

Projects and assignments MUST be completed and submitted by the designated due dates. Full credit cannot be earned by late or incomplete assignments. Assignments may lose up to 10% of their possible value each day late if submitted after the posted due date/time. (e.g. Assignments can lose all of their value at 10 days past due.) Further, **late project submissions may be rejected** at the instructor's discretion. If a project incorporates peer review activities requiring that all projects be available at the beginning of the review period, one student will not be permitted to hold up the progress of the entire class and may be taken "out of the loop" if necessary to ensure the forward progress of the class.

Attendance

All students must be active participants in class activities. There is no "excused" absence in this course. An absence is an absence, regardless of reason. In on-line courses, attendance is equated to the demonstration of an active, regular presence in the virtual course environment and appropriate progress toward timely assignment completion. An active presence may be shown through participation in, and contributions to, on-line class discussions and the Virtual Classroom. Regular attendance and assignment submissions are essential for success. If an extended situation arises during the course of the semester that prevents you being able to perform to a level allowing you to earn the grade you desire, it may likely be in your best interest to drop the course and re-enroll later. If you're planning an extended vacation during the semester that will interfere with your ability to

participate as required, this will not be the time for you to take this class. Go ahead, drop the class, enjoy your vacation, and re-enroll in a semester in which you are ready to dedicate the time and effort necessary to be successful in your studies. Bottom line... Academic studies require significant effort and dedication. Either you're all in and committed, or you need to step back until you're ready and able to rise to the challenge.

Drops & Withdrawals (and understanding the difference)

Drop – Removal of the student from one or more courses while remaining actively enrolled in one or more remaining courses in a given semester. A drop must be initiated by the student, with reason, subject to instructor approval, or it may be initiated by the instructor in the case of excessive absences, at the discretion of the instructor. Drop requests **must** be submitted on or before the drop deadline. A student **may not** be dropped from a single course after the drop deadline is passed. Requests to drop a course are submitted via the student's myLEO account.

Withdraw – Elective removal of the student from **ALL** courses in which (s)he is enrolled in a given semester. A withdrawal request must be initiated by the student submitting the official [Withdrawal Form](#) to the Office of the Registrar on or before the last day to withdraw. Withdrawals cannot be initiated by instructors and do not require instructor approval.

During the open registration period at the beginning of the semester, students may add or drop courses without specific authorization (prerequisite requirements and permission-only courses excepted). Should the student determine it to be necessary to drop the course, or withdraw from the semester, it is the student's sole responsibility to submit the proper request **PRIOR** to the official deadlines to complete either of these actions.

Drop/Withdrawal requests may **NOT** be submitted through your instructor and informing your instructor of your intent to take either action does not constitute your official request to do so. Instructor approval is required to drop the course after the end of the open-enrollment period and prior to the drop deadline. The student **cannot** be dropped after the drop deadline or withdraw after the withdrawal deadline. (This is university procedure, NOT an instructor decision.) The instructor is **required** to submit the actual grade earned by each student remaining on the official roster after the withdrawal deadline, regardless of the level of grade attainment. The student must contact their academic advisor to determine what effect the drop/withdrawal will have on their academic progress prior to initiating either action.

The student is responsible for confirming official university dates/deadlines and meeting any and all necessary deadlines pertaining to drops & withdrawals. In the event of a discrepancy between a date provided in the course and a date on the official university calendar, the date on the official university calendar, or revised date officially announced by the registrar or other authorized university official, will take precedence.

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, Room 132
Phone (903) 886-5150 or (903) 886-5835
Fax (903) 468-8148
StudentDisabilityServices@tamuc.edu
[Student Disability Resources & Services](#)

Non-Discrimination Statement

A&M-Commerce will comply in the classroom, and in online courses, with all federal and state laws prohibiting discrimination and related retaliation on the basis of race, color, religion, sex, national origin, disability, age, genetic information or veteran status. Further, an environment free from discrimination on the basis of sexual orientation, gender identity, or gender expression will be maintained.

Research Studies/Human Subjects

Refer to the **Texas A&M University-Commerce** Rules & Procedures 15.00.01.R0.01-Human Subject Protection.

Surveys/Course Evaluations

Your feedback may be requested by Texas A&M University-Commerce during the semester/term regarding your course. *It is important that you take a serious and constructive approach to this activity.* The information gained from you will assist in course evaluation by the university/college/department to insure that effective learning is taking place within the existing course structure. If changes are indicated, this will help with course re-design and/or other revisions that will make the course more relevant for future students and the employers of graduates.

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 the Student Guide Handbook*).

Students are expected, at all times, to recognize constituted authority, to conform to the ordinary rules of good conduct, to be truthful, to respect the rights of others, to protect

private and public property, and to make the best use of their time and effort toward the educational process.

At no time is a student allowed to exchange dialog with, make requests of, or make implications to a member of faculty that could be construed as a request for, or expectation of, preferential or differential treatment among members of a class. A student may not place an instructor in a position in which there is an expectation by the student that (s)he will be evaluated, assessed, or given consideration in a manner inconsistent with that of the entire class. All students within a class will be held to an identical standard of expectation and assessment, within the law.

This Syllabus

This syllabus constitutes the contractual document between faculty and students in the course. A student's continued enrollment in the course following the posting of the final, official syllabus at the beginning of the term signifies the student's understanding of and complete acceptance of this contract and the procedures, requirements, and evaluation criteria contained herein. Any student not accepting this contract is to immediately drop this course. The syllabus identifies credit-earning activities for which you will be responsible to submit in the course. The occurrence of a need to vary from the original syllabus is rare; however, unforeseen circumstances and logistical issues could arise during the course of a semester that necessitates a minor modification in the originally planned activities or procedures. Changes to a syllabus are not made without sufficient justification and assurance that any changes implemented would not impact the students' ability to complete the course. Any variations that may be determined necessary during the course by the instructor will be appropriately announced in the courseware along with relevant information pertaining to the modification and an updated version of the syllabus will be provided.

FINAL COMPREHENSIVE EXAM FOR THE MASTER'S DEGREE

Refer to Texas A&M University-Commerce Procedure 11.04.99.R0.20.

Technology Management Master's Students will be required to successfully pass a qualifying/comprehensive examination 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 that will be administered in association with in the TMGT 599 course.

COURSE ASSIGNMENTS

1. **Discussion Board Questions.** On Monday of each week a question will be posted to the discussion board within eCollege. You will be required to make a meaningful contribution to the discussion board. Each response submitted must be reflective and should integrate excerpts from the textbook readings, research and outside reading with proper citing. You are required to provide a direct answer to each question as well as responses to two other answers. There will be four questions. Grading will be based on quality, timeliness, grammar, spelling, and

TMGT 597 02W-Technology and Innovation-Summer II Term 2015

knowledge of the content and overall contribution to the learning community. **Each question will be worth 25 points.**

The characteristics of a quality online discussion posting are:

- **Substantial:** Messages should relate to the subject matter and provide information, opinions or questions about that subject matter.
- **Concise:** Studies have shown that messages that are several screens long do not get many replies. The point of your message should be clear.
- **Provocative:** A good message is one that prompts others to reply or object.
- **Explanatory:** A good message explores, explains, or expands on a concept or overall
- **Timely:** A good member of the learning community gets on regularly and replies to messages in a timely fashion.
- **Logical:** A good message should contain a clearly stated conclusion of thesis supported by premises, reason, evidence or grounds of belief.
- **Grammatical:** A good, clear, concise message should be well written and free of typos and sentence fragments.

Requirements: First response to original question must be between 150-200 words and contain at least one cited reference from a scholarly source. This can include the course textbook, peer reviewed journal article, other textbooks, and online periodicals. Cited material from Wikipedia or any other wiki sites, blogs, and personal websites are absolutely **prohibited**. Using any prohibited source will result in a grade of "0" for the assignment. In second and third responses, to other submitted answers, must add to , not repeat, what the student has contributed using cited sources. If you disagree with the answer posted then you must provide an opposing view/argument with credible references.

Due Dates: For this course, a week is defined as Monday-Sunday. Each **first response** must be posted by **noon on Thursday** of the question week. Subsequent responses must be posted no later than 5pm on Sunday.

2. Project writing assignment : ***Literature Review Paper***– **Due Date: August 11, 2015 by 11:59pm**

Instructions:

- Once you have chosen your technology and organization, you should immediately conduct appropriate literature searches and outside readings in preparation for the writing of your original literature review paper.
- Your manuscript is to have a title page, abstract, introduction, body with a well-developed conclusion and reference page.
- Your total manuscript is to be between **2500** and **3000** words including the title page, abstract, introduction, body, and reference page (s).
- Your manuscript is to have a **minimum of ten (10)** cited references obtained from articles found in refereed journals, articles from edited magazines published by professional organizations or societies, articles from refereed proceedings of professional conferences and/or published textbooks.

- **NOTE:** No article published on the **Internet** that is not directly connected to an established peer-reviewed professional conference, journal or magazine is acceptable as a cited reference source. Published textbooks are also acceptable. The course textbook may be used as one reference source.
- Always keep in mind the intended reader(s) of your literature review when developing and writing your paper. The reader must receive value from your research and what you write.
- You may utilize graphs, charts, tables or figures if it enhances the point (s) you are making. **Do not cut and paste these items in your paper unless they are camera ready proofs/copies!** If these items are of poor quality you will need to re-create them. Points will be deducted if these items are of poor quality.

Introduction to the assignment:

Since our perspective for the class is that of a *Technology Manager*, the purpose of the project is to simulate what it would be like to help a real world client or a firm. During the first week of class, each person will be asked to choose a disruptive technology from table 1 below and a specific organization (business, non-profit or public agency) that is operating within or that is affected by the technology. It is important to choose a technology and organization that you are interested in and that you can get information about. Then, based on your research and the material in class, please prepare a written report that identifies the challenges (problems, issues) for the organization posed by the technology and explains how the organization should respond. Importantly, the description of the organization's response must be based on a **conceptual framework** that you create based on class material and/or outside research. My evaluation of the projects will focus largely on the quality of thinking reflected in your conceptual framework.

Table 1: Disruptive Technologies

Body Adapted Wearable Electronics	Brain-computer Interfaces
Mining Metals from Desalination Brine	Agricultural Drones
Grid-scale Electricity Storage	Agile Robots
Nanowire Lithium-ion Batteries	Smart Wind and Smart Power
Screenless Display	Radio Frequency Identification (RFID) in Medicine

The elements below should be included in your paper.

1. Technology background (what it is, where it came from, current stage of development, major applications now and in the future, technical uncertainties, industries or sectors where it is expected to have impact)

2. Organization background (nature of products and services, competitive position, technology strategy, major rivals, recent financial performance)

3. Challenges, issues or problems created by the new technology.

For example:

- Standardization of personal computers creates the need for manufacturers and distributors to differentiate themselves through the development of new services.

- The emergence of biotechnology and the economics of producing such drugs destroys economies of scale advantages enjoyed by large integrated firms— Merck, Pfizer, Bayer.
- The development of distance learning technologies by “name brand” institutions (Harvard, MIT, Wharton) undermines the “location advantage” enjoyed by regional colleges and universities.

4. Conceptual Framework and Analysis. The technology manager’s job is to diagnose customer’s needs and help develop a response. To do this, one needs an explanation that captures the essential elements of a problem and identifies its causes. Graphically, the framework should be represented as a one-page diagram that can accurately and concisely summarize what the key factors are and how they relate to one another. Behind the diagram, there is a logic and more detailed explanation. Together these answer two key questions: How should management understand the situation facing them? How should they think about meeting the challenges, issues or problems posed by the new technology? The class readings, case discussion and your own research will expose you to many specific frameworks (e.g. how to develop new products, how to increase creativity). But, you are expected to synthesize these and create your own framework tailored to the client’s specific situation. This is the most important part of project, and usually the most difficult. Think of the conceptual framework as the tool you would use to sell and manage the engagement.

5. Conclusions. You may not be in a position to make final recommendations. Nevertheless, your analysis should lead to a definition of the “next steps” the organization should take. Importantly, the justification for these steps should be tied to your analysis and conceptual framework.

IMPORTANT DATES

- | | |
|--------------------------|---|
| • July 13, 2015 | First Class Day of the Summer II Term |
| • July 16, 2015 | Discussion Board question 1- 1st response due |
| • July 23, 2015 | Discussion Board question 2-1st response due |
| • July 30, 2015 | Discussion Board question 3-1st response due |
| • August 6, 2015 | Discussion Board question 4-1st response due |
| • August 11, 2015 | Literature Review Paper due |
| • August 13, 2015 | Final Day of the Summer II Term |