

Instructor: Haisu Zhang, Ph.D.

Office: CAB 4029

Phone: 973-596-3019

**Managing Technology and Innovation
MGMT 480, section 001, 3 credits
Fall 2023**

Email: h Zhang@njit.edu (email is the best way to contact the instructor; students are required to include full name, course, and section number in the email to the instructor)

Office Hours: Tuesday/Thursday 2:15-3:45 PM or by appointment (students are recommended to make an appointment with the instructor for a specific time slot for a meeting. The instructor will guarantee to be available during the office hours indicated above; alternative meeting times may be available subject to appointments, online or in person)

Class Time: Tuesday and Thursday 4:00 PM - 5:20 PM

Class Location: CULM LECT 2

1. Course Overview

This course focuses on the strategic management of technology and innovation in firms. It will take the perspectives of various levels of management in studying value creation and value capture through technological innovation, intrapreneurship, and entrepreneurship. Students will examine and analyze how firms effectively manage activities involved in value creation and value capture.

2. Required Course Materials

Strategic Management of Technological Innovation, 7th edition (or 6th edition)¹

By Melissa Schilling

McGraw-Hill Education

Notes: 7th and 6th editions have different ISBN

Each student will also need to purchase two Harvard Business Cases for case study assignments.

3. Learning Outcomes

Upon successful completion of this course, the student should be able to:

- (a) Describe different types of technological changes and innovation.
- (b) Apply the knowledge of technological changes and innovation to real-world business practices.
- (c) Analyze business situations at various levels of management to create and capture value.
- (d) Evaluate the tradeoffs associated with technological innovation.
- (e) Create a plan for sustainable value creation and capture.

In addition to the course-specific learning outcomes listed above, this course intends to help students:

- (a) demonstrate the knowledge and application of business fundamentals (in the technology/innovation domain)

¹ The lectures and coursework are based on the 7th edition. Students who use the 6th edition shall track and study the different content located in the 7th edition.

- (b) demonstrate the ability to deliver effective presentations enhanced by technology
- (c) demonstrate the ability to write clear and concise reports based on relevant information
- (d) demonstrate the ability to understand and use team-building behaviors to accomplish group tasks

4. Course Site

Please go to CANVAS. The Canvas site is where most course materials are posted. Make sure you have an NJIT UCID and password so that you are able to access Canvas. The instructor will use Canvas to post materials throughout the semester. Please be sure to check the site (canvas.njit.edu) frequently. Please contact the helpdesk (973-596-2900) for problems associated with Canvas.

5. Tentative Class Schedule

See Appendix C.

6. Course Deliverables/ Grade Components

Required work	Score	Notes
Individual work		
Mini-presentation	15	Technological innovation
Close-Book Exam One	50	Multiple-choice questions
Close-Book Exam Two	35	Multiple-choice questions
Quizzes	56	7 points/quiz * 8 quizzes = 56 points <i>One quiz with the lowest score will be dropped from final grading: 9 quizzes – 1 dropped quiz = 8 quizzes</i>
Final Paper	35	Due in the final exam week
Attendance on Case Study One Presentation Days	2	All students must attend all the presentation days to earn the 2 points; otherwise, 0 point. No in-between
Attendance on Case Study Two Presentation Days	2	All students must attend all the presentation days to earn the 2 points; otherwise, 0 point. No in-between
Teamwork		
In-class Exercise: Idea Generation	4	Participation is required for earning points.
In-class Exercise: Cross-functional Communication	4	Participation is required for earning points.
In-class Exercise: Virtual Team in Innovation	4	Participation is required for earning points.
Case Study One	30	Peer evaluation is conducted. Each student's score = team project score x peer evaluation
Case Study Two	30	Peer evaluation is conducted. Each student's score = team project score x peer evaluation
Case Presentation (either case study one or case study two)	15	50% of grade by students and 50% of grade by the instructor <i>Each student team is required to complete two case studies; each student team presents only one case.</i>
TOTAL	282	

Notes: Students who do not submit peer evaluation by the deadline will receive a penalty of 5% reduction in case study individual grade.

7. Calculation of the Course Grade

<u>Total Score</u>	<u>Grade</u>	<u>Total Score</u>	<u>Grade</u>
90 – 100%	A	75 – 79.9%	C+
85 – 89.9%	B+	70 – 74.9%	C
80 – 84.9%	B	60 – 69.9%	D
		< 60%	F

8. Posted Grades

All grades for course deliverables will be posted on Canvas in a timely manner. Students have two weeks to challenge a grade after it has been posted. When the two-week period is over the professor will not revisit an assignment, unless an excuse is verified by the office of Dean of Students. Do not e-mail requests for additional points unless there is an error in grading. Keep in mind that **fairness** is the key to grading.

Grades are not ‘given out’ by the professor; they are ‘earned’ by the student. Make sure you ‘earn’ a grade that you can live with.

9. Mini-presentation: Technological Innovation

Each student is required to give a presentation of today’s technology-related innovation in the beginning of the class. The order of presentation will be randomly assigned. Each student will present a case of innovation that was **not** previously presented by other students in this course. The presentation should last up to 10 minutes, so students should keep the presentation precise. The presentation is in the format of PowerPoint slides. Each presentation may be followed by Q&A. The presentation includes the following content:

a. Post the topic (2 points)

Notes: Each student is required to post the name of technology-related innovation on Canvas discussion forum **before** the scheduled presentation. As such, other students can always check the discussion forum to ensure their topics are new to the class (i.e. do not overlap with previous topics). Keep in mind that you cannot present an innovation that has been presented in this class.

b. Presentation content

- What is the technology-related innovation? And where do you find it? (3 points)

Notes: This innovation can be goods or services introduced within the past **one** year (cannot be longer than one year) or being developed (if so, it must be close to completion). If a student decides to pursue the latter, please make sure that you can obtain sufficient information about the innovation in progress to give the presentation. Please note that “technology” itself is a broad term, so students should not focus on only those products used on a daily basis, such as smartphone and TV. Innovation can be either tangible goods (e.g. vehicle and phone) or intangible service (e.g. telecommunication and mobile app). It can be in the B2C (for consumers) market or B2B market (for organizations). A good place to look for articles is the Kickstarter, Indiegogo, Wall Street Journal, Business Week, Fortune, Forbes, New York Times - Technology Section, or any trade magazines from an industry you are interested in.

- How did (or will) the innovation impact the company (that develops it) and the industry? (2 points)

Notes: The impacts can be positive and/or negative, from various perspectives.

- How did (or will) the innovation impact its customers? (2 points)

Notes: If the innovation is in a B2C market, customers are individual consumers; if it is in a B2B market, then customers are others companies. The impacts can be positive and/or negative.

- c. Presentation style
 - Slides readability (2 points)
 - Logic flow and organization of the slides (1 point)
 - Communication of the presenter (2 points)
- d. References (e.g., sources of your information; web links) (1 point)

10. Quizzes

Multiple quizzes will be given throughout this semester. These periodic quizzes will be based on materials covered in lectures. Each question is worth 1 point. When in-person class returns, quizzes will be given in paper. Each quiz covers content from prior class(es) and same-day class. If the student misses a quiz and has an excuse approved by the office of Dean of Students, a make-up quiz will be given, so that the student will not receive any penalty.

In the end of this semester, a quiz with the lowest score will be dropped from the final grading. Only one quiz will be dropped from the final grading. No other required grading components will be dropped from final grading.

11. Exams

- Exam One will cover content of Chapters 1-7, slides, and lecture content.
- Exam Two is not cumulative and it will cover all content taught after Exam One.

At least one week before each exam, the case study is due. Thus, each student can take a full use of the time between case study due date and exam date to prepare for the exam, because there is not any other written assignment required during that period.

Severe illness or an unplanned emergency situation is the only legitimate reason for not taking a scheduled exam. Legitimate documentation must be presented to the Office of Dean of Students. Only verified excuses by that office will result in makeup exams. All makeup exams will be administered at the convenience of the instructor, and may be scheduled before the regular exam time. Work is not considered as an approved reason for absence in the exams. For more details, please refer to the section of Class Policies.

12. Case Study

Additional information, such as case study guidelines and policies, will be posted on Canvas in separate file(s). Assignments of case studies are teamwork. Each team will study two cases in this class. Each time, multiple cases will be given to the class, and each case can only be taken by one team (first come, first served). The grade is calculated based on two components: team grade and peer evaluation. Each student's grade = team grade * peer evaluation (%). For instance, if your team receives 25 (out of 30 points) for a case study and you receive 92% for peer evaluation, your individual grade is 23 (25*92%) out of 30 points. **Students who do not submit peer evaluation by deadline will receive a penalty of 5% reduction in case study individual grade.**

Each team is required to complete PowerPoint slides. Moreover, detailed explanations must be added in the notes section. Each team is required to submit the slides with notes to the instructor for grading. In general, the slides should be brief, but the notes section should include details, explanations, rationales, backgrounds, etc. The notes are considered as "written paper."

Cases will be presented to the class. Although each team studies two cases in the semester, each team will present only one case (either Case Study One or Case Study Two). The order will be decided randomly. Presentation is assessed by both the instructor (50%) and the class (50%). Please refer to the appendices for grading of peer evaluation and team presentation. **A student who misses his or her own presentation without an approved excuse will receive "0" for the**

presentation and attendance grades. Class attendance is required on all presentation days throughout the class for each student to earn the attendance grade. In other words, attendance is required on all presentation days unless the excuse is approved by the office of Dean of Students. In addition, students are required to stay throughout the class. Leaving early without an approved excuse will be counted as missing class, and thus may result in “0.”

Peer evaluation is used to prevent “free riding” in teamwork. A given student’s “free-riding” behavior may sometimes be severe. If a student has not contributed to the team project, other teammates can use the following class policy to “fire” this student. The team should first attempt to communicate with the student who has not contributed to the team project. The communication needs to be, at least, emails, though other methods (e.g., phone calls and text messages) may be used as additional communication tools within the team. In the emails, the team must Cc the instructor. If there is no response from that student after two attempts of email communication (after two business days of waiting for a reply for each communication; at least four business days of waiting in total), the team may ask him or her to leave the team if all other team members vote “yes” for it. In such a case, this student will independently complete the project and is not allowed to join other teams.

13. In-class Exercise

There are three in-class exercises this semester. For each exercise: Participation = 4 points; no participation or absence = 0 point. There is no in-between.

The first exercise is related to chapters 1 and 2; the second exercise is related to chapter 12; and the third exercise is related to chapters 11 and 12. The third (i.e., last) in-class exercise will be held via Webex, as students will experience virtual teamwork in innovation. The third exercise is the only exception for meeting mode this semester – except for the class for the third exercise (online meeting), all other classes will be held in person (i.e., face-to-face meetings), unless noted otherwise.

14. Final Paper

Final Paper is due in the Final Exam week (due date/time to be announced). Each student is required to submit this assignment by the end of the due date/time set by the instructor in the Final Exam week. The Final Paper is considered as a part of the “final exam” in this course. It is due in the final exam week.

15. Guaranteed Extra Credits

No makeup for any extra credit.

While students are expected to attend classes, attendance in a regular lecture is not checked. However, in any given day when the attendance rate is lower than 70%, the instructor will offer 1-point extra credit (i.e., a quiz including questions mainly based on lectures). The instructor will grade the quizzes and students may or may not earn the credits, and thus students are recommended to listen to the lectures carefully. This extra-credit opportunity is given only in a regular class (e.g., class without quizzes, exams, team presentation, and in-class exercise).

A second extra-credit opportunity is the voluntary, anonymous mid-term course evaluation. The instructor would like to hear from students about their evaluations and expectations in this course, so that the instructor can improve his teaching techniques, if needed, to fulfill student needs. Those who complete the mid-term course evaluation, designed as an online survey, will be given extra credit as an incentive. Please note that the mid-term course evaluation is only for the instructor in this course to help improve his teaching quality.

For the three in-class exercises, the winning team(s) will receive extra credit. The winning is decided either by class votes or the accuracy of the answer, depending on which exercise is implemented.

16. Class Policies

Class Attendance

- a. Attendance will be taken in the first and/or second classes. After that, attendance is not taken in a given **regular** lecture. A regular lecture is defined as a class with only the instructor's lecture without other required class activities, such as presentation, exam, quiz, etc. However, it likely proves very difficult to pass this class without attendance. This course is a mixture of lectures, class discussion, case study, presentations, quizzes, and exams. Students are responsible for everything that is discussed in class, taken up in class, or handed out in class. If you cannot be in a class, let the instructor know the reason for your absence before class begins.
- b. Although attendance is not taken in a given regular lecture, students are **required** to attend the class when a quiz, project, presentation, exam, meeting, and/or other required activities noticed by the office of Dean of Students. Any missed activities without an excuse approved by the office of Dean of Students will result in a loss of credits for class activities/assignments. Excused absences (see below) will result in make-up assignments (for individual work).
- c. Although attendance is not taken, students are **not** allowed to be late for any classes without an official excuse. Being punctual is required for class attendance. Arriving late or leaving early will disqualify a student from participating in any missed class activities (e.g., quiz and extra credits) and will also be counted as a "0".
- d. Excused Absences. Some absences may qualify as "Excused Absences." Unless otherwise instructed by the instructor, students must contact the office of Dean of Students within one week after returning to the campus. In sum, proof of absence requires documentation in all cases. The instructor expects to receive the notification from the office of Dean of Students within two weeks after the student returns to the campus. After that, the grade may not be changed. Athlete students should follow the university policy to provide the instructor with travel schedule for excused absences.
- e. For missed teamwork with an excuse approved by the office of Dean of Students, the instructor will discuss with the individual and the team for makeup.
- f. A student who misses an exam will be given the exam before the scheduled exam date/time, unless noticed otherwise.

Email and Announcements

Students are required to check their NJIT email and Canvas announcements. The instructor sends emails to students frequently for announcements, reminders, etc.

Overall Assignment Guidelines

Written work must be prepared in a professional manner. It is to be typed, with proper grammatical construction and correct spelling. The grade assigned to the work will reflect its analytical soundness. Written work must follow a reasonable outline, assumptions clearly stated, arguments carefully supported, and all secondary sources cited. Oral presentations must adhere to the same criteria.

Communication

- a. Teamwork (between students)
Teamwork is not an easy task. It requires students to adapt to the team dynamics, build work relations with each other, follow the policies and rules, resolve issues in an effective and efficient way, etc. All require successful communication and clarification.
- b. Email Etiquette (to the instructor)

This is a business course, and the expectation is that you will conform to appropriate business letter-writing practice in all of your emails to the instructor. The following are the basics.

- Put the course number (MGMT 480) and section number (001) in the subject line.
- Identify the subject of the e-mail with a brief but descriptive summary of the topic: include a proper salutation, and the assignment details such as the title, number, quiz, or exam.
- Proofread your e-mail for proper sentence structure, capitalization, spelling, and punctuation.
- Conclude the e-mail message with a proper closing (e.g., Regards, Sincerely) and your full name.

c. Checking email

The instructor frequently sends emails to students' NJIT email accounts for important announcements. Students are required to check emails at least 12 hours before each class and once per business day. Students will take responsibility for any missing information due to not checking their emails.

Academic Integrity

Academic Integrity is the cornerstone of higher education and is central to the ideals of this course and the university. Cheating is strictly prohibited and devalues the degree that you are working on. As a member of the NJIT community, it is your responsibility to protect your educational investment by knowing and following the academic code of integrity policy that is found at: <http://www5.njit.edu/policies/sites/policies/files/academic-integrity-code.pdf>.

Please note that it is my professional obligation and responsibility to report any academic misconduct to the Dean of Students Office. Any student found in violation of the code by cheating, plagiarizing or using any online software inappropriately will result in disciplinary action. This may include a failing grade of F, and/or suspension or dismissal from the university. If you have any questions about the code of Academic Integrity, please contact the Dean of Students Office at dos@njit.edu.

Disability accommodation

Educational access is the provision of classroom accommodations, auxiliary aids, and services to ensure equal educational opportunities for all students regardless of their disability. If you are in need of accommodations due to disability please contact Scott Janz (oars@njit.edu), Associate Director of the Office of Accessibility Resources & Services (OARS), Kupfrian Hall 201, to discuss your specific needs. A Letter of Accommodation Eligibility from the OARS authorizing your accommodations will be required. Accommodations need to be requested in advance and will not be granted retroactively.

Classroom behavior

Students are expected to be respectful of one another and the professor in classroom discussions. The goal is to foster a learning environment where students feel comfortable discussing concepts and applying them in class. If for any reason your behavior is viewed as disruptive to the class, you will be asked to leave and you will be marked absent.

During the lecture time, **NO PHONES** are allowed in class, unless approved by the instructor.

Final Comments

Students registered for this course assume full responsibility for reading and understanding the course administration stated in this file.

Appendix A. Example of Team Presentation Evaluation Form

1. Communication (To which extent did the team present in class?)
2. Slides readability (To which extent were the slides readable?)
3. Logic flow (To which extent did the slides show a clear logic?)
4. Teamwork (To which extent did team members allocate work evenly for the presentation?)
5. Q&A (To which extent did team members answer the professor's questions?)

Appendix B. Example of Peer Evaluation (It will be distributed via an online survey)

Peer Evaluation is confidential!

1. To which extent are you satisfactory with this student's attendance in group discussion? (including arriving on time, communication via email or phone, etc.)
2. To which extent did this student contribute ideas and viewpoints to group discussion?
3. To which extent did this student contribute to preparation for the project (including report writing, data collection, presentation, etc.)?
4. To which extent did this student respect others' opinions?
5. In general, to which extent did this student work with others as a TEAM?

Appendix C. MGMT 480 Tentative Class Schedule

The instructor reserves the right to change the course schedule, as the need arises.

Dates (MM/DD)		Lecture Content	Notes
09/05	Tuesday	Course Introduction	
09/07	Thursday	Chapter 1	Mini-presentation order is decided
09/12	Tuesday	Chapter 2	Quiz 1: syllabus & chapter 1; team formation initiated
09/14	Thursday	Chapters 2,3	Mini-presentation; teams developed
09/19	Tuesday	Chapter 3	Mini-presentation; Quiz 2: chapters 2,3; team formation finalized; Case Study 1 given
09/21	Thursday	Chapter 4	Mini-presentation
09/26	Tuesday	Chapters 4,5	Mini-presentation; Quiz 3: chapters 4,5
09/28	Thursday	In-class Exercise	Mini-presentation; exercise: idea generation (chapters 1-3)
10/03	Tuesday	Chapter 5	Mini-presentation
10/05	Thursday	Chapters 5,6	Mini-presentation; Quiz 4: chapters 5,6
10/10	Tuesday	Chapter 6 Meeting with the Instructor	Mini-presentation; midterm course evaluation (extra credit) distributed; meeting with the instructor in class for case study updates and Q&A
10/12	Thursday	Chapter 6,7	Mini-Presentation; Quiz 5: chapters 6,7
10/17	Tuesday	Team Presentation Day 1	All case study slides are due; class attendance is required
10/19	Thursday	Team Presentation Day 2	Class attendance is required
10/24	Tuesday	Exam One	Chapters 1-7 and lecture content
10/26	Thursday	Chapter 8	Mini-presentation; Case Study 2 given
10/31	Tuesday	Chapters 8,9	Mini-presentation; Quiz 6: chapters 8,9
11/02	Thursday	Chapters 9	Mini-presentation
11/07	Tuesday	Chapter 10	Mini-presentation; Quiz 7: chapters 9,10
11/09	Thursday	Chapters 10,12	Mini-presentation
11/14	Tuesday	Chapters 12 In-class Exercise	Mini-presentation; exercise: cross-functional communication (chapter 12)
11/16	Thursday	Chapters 12,11	Mini-presentation; Quiz 8: chapters 12,11
11/21	Tuesday	Chapters 11,13 In-class Exercise	Exercise: virtual teamwork (chapters 12&11); only this day: online meeting (via Webex) for virtual teamwork
11/23	Thursday	Thanksgiving recess	No class
11/28	Tuesday	Chapter 13 Case Study Q&A	Mini-presentation; Quiz 9: chapters 11,13; instructor is available after the class for Case Study 2 Q&A
11/30	Thursday	Team Presentation Day 1	All case study slides are due; class attendance is required; Final Paper guidelines given
12/05	Tuesday	Team Presentation Day 2	Class attendance is required
12/07	Thursday	Preparation Day	No class; students use the time to prepare for Exam Two
12/12	Tuesday	Exam Two	Chapters 8-13 and lecture content
12/14	Thursday	University Reading Day	No class; students use the time to prepare for Final Paper
Final Exam Week		Final Paper (individual project) is due in the final exam week (due date/time to be announced) and will be submitted on Canvas	