TECHNOLOGY STRATEGY

– Spring 2014 –

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Required Reading
Course packet at UT Copy Center.
(Note: It is a violation of the honor system to duplicate course packets.)

Course Overview

Technologies have long been recognized as vital drivers of economic growth and wealth creation, as well as potential sources of competitive advantage. Technologies also create the impetus for organizational change and renewal, as firms attempt to seize technological opportunities to attain competitive advantage in the marketplace. However, several characteristics of technology-intensive industries compound the challenge of firm strategy. These characteristics refer, for example, to high levels of R&D investments, significant uncertainty surrounding technological innovations, highly skewed distribution of returns from R&D investments, and interdependencies across the innovation ecosystem. Moreover, technology-based firms typically accumulate R&D investments during long gestation periods and face short time windows to recoup those investments before new technologies emerge, sometimes rendering pre-existing technologies obsolete. Examining how these issues that often arise in technology-intensive settings affect competitive strategies constitutes this course’s agenda.

The course is organized around four modules, each of which focuses on different aspects of strategy in technology-intensive industries. The first module explores technology-driven markets with the goal of understanding how technologies evolve and what challenges they pose for firms competing in such markets. The second module examines how firms create value, placing the discussion against the backdrop of the broader technological context that we explore in the first module. This module comprises topics such as allocation of inventive effort, organization of R&D activities, and knowledge-sourcing strategies. In module three we turn to the challenges of capturing value from technology investments. These challenges relate to the protection of intellectual property, competition with similar technologies and potential substitutes, network externalities, and standard-driven competition. Finally, students will have the opportunity to integrate their learning and apply the course content to examination of the technology strategy of a real organization. Students will work in groups to conduct an in-depth analysis of an industry that is experiencing impactful technological change, as well as of the technology strategy of a particular firm in that industry. The final product will be a report that comprises not only the aforementioned in-depth analysis but also realistic strategic recommendations for the top executives of your targeted company.
The perspective adopted in this course is that of a general manager concerned with firm strategy. Many managers have viewed technological innovations from a functional perspective and approached them as an engineering issue, a marketing problem, or a challenge for the design of rewarding systems and organizational structures. This course, in contrast, approaches technology from a big-picture viewpoint with an emphasis on how technological innovations can affect the logic of value creation and value capture in the industry and the corresponding implications for firm strategy. This course is designed to increase your effectiveness and skills in analyzing, understanding, and crafting firm strategy in technology-intensive contexts. The goal of the course is not to develop a deep understanding of technology itself—it does not assume that students have a technological background, nor does it assume that students have worked in technology-based companies.

The content of this course and the analytical approach it adopts, besides preparing students who expect to work in technology-intensive industries, are also suited for those interested in consulting, financial services, and venture capital industry, as well as those students whose primary goal is to take an advanced strategy course. Students seeking to develop a career in consulting can enhance their abilities to analyze competitive landscapes marked by inordinately high levels of uncertainty and interdependencies. Students seeking a career in financial services can become better equipped to evaluate the strategy of firms in industries in which technology plays a significant role. Students heading to the venture capital industry can also benefit from understanding technology strategy, since much of venture capital investments are concentrated in technology-intensive industries. More broadly, this course provides students with the opportunity to refine their skills in analyzing competitive strategies in complex business environments.

**Course Objectives**

1. Develop an appreciation for the role of technological innovations in fueling economic growth and economic change, as well as a rich understanding of the implications they carry for firm strategy.
2. Develop an understanding of fundamental concepts and frameworks relevant to technology strategy, such as discontinuous changes, internal and external knowledge-sourcing strategies, interdependencies across innovation ecosystems, open innovations, intellectual property strategies, and standard-driven competition.
3. Sharpen skills for rigorous analytical thinking and effective communication by applying this conceptual understanding to examine the competitive strategies of real-world technology-based companies.
4. Amplify the analytical apparatus for addressing strategic issues that arise in inordinately complex environments characterized by high levels of technological uncertainty, network externalities, and interdependencies involving outside parties such as universities, regulators, investors, and financial analysts.
5. Gain familiarity with some of the practical realities faced by firms competing in a vast array of innovation-driven industries, such as biofuels, biotechnology, digital photography, e-books, flat panels, infrastructure, mobile devices, microprocessors, music, pharmaceuticals, video-games, and wind energy.
Instructional Method

The instructional method in this course is based on the premise that students can learn more effectively through the combination of conceptual rigor with practical applications. To ensure students’ exposure to rigorous conceptual content, classes will be infused with key insights from current research on technology strategy, including the instructor’s own published and on-going research on the competitive strategies of technology-based companies. Rigorous academic content provides students with the opportunity to refine their critical reasoning and analytical skills that are essential to their understanding of firm strategy in inordinately complex environments. Moreover, this conceptual focus enhances the generalizability of the knowledge that students develop in this course – it helps students acquire fundamental skills that they can later apply to a broad range of industries and specific business situations.

To capture the pragmatic, action-oriented, and complex nature of technology strategy, this course places great emphasis on in-depth case analysis and discussion. This case-based approach provides an extensive opportunity to integrate abstract concepts and frameworks and apply them in a practical business strategy context. Moreover, case studies stimulate immersion in the specific realities faced by technology-based firms competing in a variety of industries. By grappling with issues similar to those faced by the general managers of real-world organizations, students can establish linkages between conceptual knowledge and normative knowledge, thus refining their abilities to provide strategic recommendations that are informed by sound reasoning and, whenever possible, supported by empirical evidence.

In addition, a field project conducted during the semester enables students to apply course content to examine the technology strategies of real organizations and to devise realistic strategic recommendations. In essence, students will work in groups to analyze how technology is expected to transform the logic of value creation and value capture in an industry of their choice. Next, informed by such industry-level analysis, students will examine the strategic implications from the viewpoint of a particular firm and propose a few realistic strategic recommendations.

The instructional method outlined here implies that the evaluation of a student’s performance in this class will largely rely on her/his contributions to class discussions and to their field project.

Course Requirements and Evaluation

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<thead>
<tr>
<th>Requirement</th>
<th>Weight</th>
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<tr>
<td>Class contributions</td>
<td>30%</td>
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<tr>
<td>Case write-ups</td>
<td>20%</td>
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<tr>
<td>Field project</td>
<td>50%</td>
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<tr>
<td>Presentation (20%)</td>
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<tr>
<td>Final Report (30%)</td>
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<td><strong>TOTAL</strong></td>
<td>100%</td>
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Individual final grades will result from a student’s performance in each of the activities and assignments listed above. The purpose of grading in this course, as in all courses, is twofold. The first one is to evaluate your performance for purposes of the academic system. The other one is to provide you with feedback on your ability to develop, utilize, and share your ideas and conclusions concerning the topics and situations covered in the course.
Class Contributions

Attendance

As discussed earlier, the instructional method in this course emphasizes in-depth case analysis and, accordingly, an important part of learning takes place in the classroom. Moreover, this is not an easy course, since it provides an in-depth introduction to an extraordinarily complex subject. Accordingly, cutting classes will adversely affect your own learning, your classmates’ experience in the class, and your grade. If for some unavoidable reason you must miss a class, it is your responsibility to find out from your classmates what materials we covered in class, what assignments were made, and what handouts you missed.

Preparation

At the end of the syllabus you find a detailed session plan indicating the learning objectives, topics, and materials that we will cover in each session. When designing this syllabus, I tried to reduce the reading load as far as possible without compromising the course content and your learning experience. Of course, if you become interested in a topic, I would be delighted to suggest further readings. For the learning process to be effective, it is absolutely necessary that you carefully prepare the cases and readings before class and actively participate in discussions during class. Preparation involves reading all the materials assigned for a particular session, as well as a thorough analysis of the case and developing a personal position on the case’s issues. Unless you think about these issues and adopt a personal position when preparing for class, it will be very hard to contribute to class discussions and learn from your peers' contributions.

At the start of a typical session, I will ask a couple of students to review their key learning points from the previous session, or to share with their classmates how the content covered in the previous class informs their perspectives on some contemporaneous management issues faced by real organizations. When addressing a case in class, I will ask a few students to open the discussion by answering a specific question or discussing a specific issue. The aforementioned preparation should be sufficient for such a leadoff role. Toward the end of a typical class, I will ask a few students to close the session by summarizing the key takeaways that should be derived from that session’s readings, cases, and in-class discussion. After the selected students report their conclusions, other students may then comment and modify or extend the list of learning points.

Evaluation of class contributions

Effective class contributions refer to both the content of your comments and the process of class participation. When assessing your class contributions, I will ask myself the following questions, which capture some of the behaviors that lead to effective class contributions:

a) Is this person an excellent listener?

b) Are the points made relevant to the discussion and linked to the comments of others?

c) Are the comments informed by concepts we covered in class and in the readings? Although you may not agree with all the concepts introduced in a particular reading, you should be able to substantiate your position with an informed, evidence-driven perspective.
d) Do the comments convey analysis and insight, or are they, instead, simple recitations of case facts or cursory speculations?

e) Do the comments add to our understanding by clarifying and highlighting the important aspects of earlier remarks?

f) Does the participant distinguish among different kinds of data – facts, opinions, personal convictions, theoretical concepts, etc.?

g) Is this person willing to test new ideas or are all comments safe?

h) Does this person raise great questions that appropriately expand the scope of our conversation, spur a meaningful debate, or help us cut to the heart of the matter?

**Case Write-ups**

During the course, you will work in groups (the same groups for the field project further detailed in the section below) and submit two write-ups articulating the key points in the analysis of two cases – one related to value creation (Sessions 5-12), another related to value capture (Sessions 16-25). Each group should decide which cases to analyze. The write-ups are due at the start of the session in which the respective case is discussed in class. In other words, the first write-up is due at no later than Session 12, and the second write-up no later than Session 25.

Further information about the content of the write-ups will be discussed in class during our first session. Each write-up (one per group) should not exceed 2 double-space typewritten pages, using 1-inch margins all around and a 12-point font. I will read only the first 2 pages, so please stay within this page limit. You may include up to 3 additional pages with supporting exhibits containing charts, tables, or figures that you consider pertinent to the analysis. Make sure that each additional page contains only one exhibit, which should be explicitly referenced and explained in the main text.

**Field Project**

During the semester, students will work on a field project, which will help them consolidate their learning and apply the course content to examination of the technology strategy of a real organization. In a self-selected group of 5 or 6 students (see Group composition below), students will conduct an in-depth analysis of an industry that is experiencing impactful technological change, as well as of the technology strategy of a particular firm in that industry. The final product will be a report that comprises not only the aforementioned in-depth analysis but also realistic strategic recommendations for the top executives of your targeted company.

The field project is broken down into several sequential parts. The rationale behind this design is twofold. First, decomposition of the project into interrelated parts should facilitate your progressive accumulation of knowledge about what constitutes an inherently complex issue, as well as encourage you to distribute your effort during the course of the semester. Second, by working in sequential segments and submitting intermediate reports, you will have the opportunity to receive feedback you can build upon to revise your analysis and tighten the logic underlying your arguments before you turn in the final report, which is the only report of the field project that will be graded. The assignment for each segment and the respective due date are listed below.
Group composition  
(due Session 5, January 29)  
Identify the group members, the technology industry, and the targeted company for your report.

Segment 1  
(due Session 9, February 12)  
Characterization of the technological environment. Identify the technology that underlies your industry. Discuss how that technology has evolved, highlighting any discontinuities that have recently emerged or that you expect to occur. Provide a brief discussion of your preliminary thoughts on how these recent (or expected) technological changes affect competition in the industry, and the ways in which firms create and capture value. This report should be 6-8 pages long (not counting exhibits), double spaced, 12 point font, 1-inch margins).

Segment 2  
(due Session 22, April 7)  
Creating value and capturing value. Having developed a rich understanding of the technological environment, as well as some preliminary ideas about the strategic implications associated with a recent or expected technological change, you should now provide an in-depth analysis of the challenges that firms competing in the industry face in creating and capturing value. Your analysis should be informed by the key questions discussed in class. For instance, are firms expected to develop new knowledge or can they still build on their pre-existing knowledge? What are the implications in terms of knowledge sourcing strategies? Has there been a shift in what constitute the relevant value capture mechanisms? Which players in the innovation ecosystem are more likely to benefit from the technological change?

Complement your report with your preliminary ideas about the strategic implications from the viewpoint of the focal firm. For instance, you should discuss whether it is particularly well-positioned to seize the opportunities, whether it is particularly vulnerable to the emerging challenges, and the extent to which the unfolding technological change affects or disrupts the ways in which that firm creates innovations and captures the corresponding value. Conclude this report with a brief outline of your recommendations for the technology strategy of the targeted company. This report should be 6-8 pages long (not counting exhibits), double spaced, 12 point font, 1-inch margins).

Presentations  
(Sessions 26 and 27, April 21 and 23)  
Groups will have the opportunity to present their projects to the class during sessions 26 and 27. The presenting groups will have a chance to share their key insights and to receive additional feedback they can build on to refine their final reports.
Final report. Equipped with a rich characterization of the technological environment and with an in-depth understanding of how technologies affect value creation and value capture in the industry, you should evaluate the current technology strategy of the targeted company and provide strategic recommendations. To frame the report, imagine that your team is responsible for charting the technology strategy of the company and that this report is intended to prepare the board to discuss this issue.

Use the first two segments (and feedback) to discuss the technology-level and industry-level issues. Then, analyze in detail the strategic implications from the viewpoint of the targeted company, highlighting the key challenges it faces in terms of value creation and value capture. Critically evaluate the current technology strategy of the targeted company and devise two or three distinct realistic recommendations. The complete final report should have between 18 and 24 pages (double spaced, 12 point font, 1-inch margins) plus exhibits.

McCombs Classroom Professionalism Policy

The highest professional standards are expected of all members of the McCombs community. The collective class reputation and the value of the Texas MBA experience hinges on this.

You should treat the Texas MBA classroom as you would a corporate boardroom.

Faculty are expected to be professional and prepared to deliver value for each and every class session. Students are expected to be professional in all respects.

The Texas MBA classroom experience is enhanced when:

- **Students arrive on time.** On time arrival ensures that classes are able to start and finish at the scheduled time. On time arrival shows respect for both fellow students and faculty and it enhances learning by reducing avoidable distractions.

- **Students display their name cards.** This permits fellow students and faculty to learn names, enhancing opportunities for community building and evaluation of in-class contributions.

- **Students do not confuse the classroom for the cafeteria.** The classroom (boardroom) is not the place to eat your breakfast tacos, wraps, sweet potato fries, or otherwise set up for a picnic. Please plan accordingly. Recognizing that back-to-back classes sometimes take place over the lunch hour, energy bars and similar snacks are permitted. Please be respectful of your fellow students and faculty in your choices.

- **Students minimize unscheduled personal breaks.** The learning environment improves when disruptions are limited.
• **Students are fully prepared for each class.** Much of the learning in the Texas MBA program takes place during classroom discussions. When students are not prepared they cannot contribute to the overall learning process. This affects not only the individual, but their peers who count on them, as well.

• **Students attend the class section to which they are registered.** Learning is enhanced when class sizes are optimized. Limits are set to ensure a quality experience. When section hopping takes place some classes become too large and it becomes difficult to contribute. When they are too small, the breadth of experience and opinion suffers.

• **Students respect the views and opinions of their colleagues.** Disagreement and debate are encouraged. Intolerance for the views of others is unacceptable.

• **Laptops are closed and put away.** When students are surfing the web, responding to e-mail, instant messaging each other, and otherwise not devoting their full attention to the topic at hand they are doing themselves and their peers a major disservice. Those around them face additional distraction. Fellow students cannot benefit from the insights of the students who are not engaged. Faculty office hours are spent going over class material with students who chose not to pay attention, rather than truly adding value by helping students who want a better understanding of the material or want to explore the issues in more depth. Students with real needs may not be able to obtain adequate help if faculty time is spent repeating what was said in class. There are often cases where learning is enhanced by the use of laptops in class. Faculty will let you know when it is appropriate to use them. In such cases, professional behavior is exhibited when misuse does not take place.

• **Phones and wireless devices are turned off.** We’ve all heard the annoying ringing in the middle of a meeting. Not only is it not professional, it cuts off the flow of discussion when the search for the offender begins. When a true need to communicate with someone outside of class exists (e.g., for some medical need) please inform the professor prior to class.

Remember, you are competing for the best faculty McCombs has to offer. Your professionalism and activity in class contributes to your success in attracting the best faculty to this program.

**Academic Dishonesty**

I have no tolerance for acts of academic dishonesty. Such acts damage the reputation of the school and the degree and demean the honest efforts of the majority of students. The minimum penalty for an act of academic dishonesty will be a zero for that assignment or exam.

The responsibilities for both students and faculty with regard to the Honor System are described in the Appendix. As the instructor for this course, I agree to observe all the faculty responsibilities described therein. As a Texas MBA student, you agree to observe all of the student responsibilities of the Honor Code. If the application of the Honor System to this class and its assignments is unclear in any way, it is your responsibility to ask me for clarification.
**Students with Disabilities**

Upon request, the University of Texas at Austin provides appropriate academic accommodations for qualified students with disabilities. Services for Students with Disabilities (SSD) is housed in the Office of the Dean of Students, located on the fourth floor of the Student Services Building. Information on how to register, downloadable forms, including guidelines for documentation, accommodation request letters, and releases of information are available online at http://deanofstudents.utexas.edu/ssd/index.php. Please do not hesitate to contact SSD at (512) 471-6259, VP: (512) 232-2937 or via e-mail if you have any questions.

**Religious holy days**

By UT Austin policy, you must notify me of your pending absence at least fourteen days prior to the date of observance of a religious holy day. If you must miss a class, an examination, a work assignment, or a project in order to observe a religious holy day, you will be given an opportunity to complete the missed work within a reasonable time after the absence.

**Campus Safety**

Please note the following recommendations regarding emergency evacuation from the Office of Campus Safety and Security, 512-471-5767, http://www.utexas.edu/safety:

- Occupants of buildings on The University of Texas at Austin campus are required to evacuate buildings when a fire alarm is activated. Alarm activation or announcement requires exiting and assembling outside.
- Familiarize yourself with all exit doors of each classroom and building you may occupy. Remember that the nearest exit door may not be the one you used when entering the building.
- Students requiring assistance in evacuation should inform the instructor in writing during the first week of class.
- In the event of an evacuation, follow the instruction of faculty or class instructors.
- Do not re-enter a building unless given instructions by the following: Austin Fire Department, The University of Texas at Austin Police Department, or Fire Prevention Services office.

Further information regarding emergency evacuation routes and emergency procedures can be found at: http://www.utexas.edu/emergency.
Other Administrative Details

1. As the course progresses, I will post information on the blackboard system. So please check the website regularly.

2. I urge you to take notes during class. As I mentioned earlier, one of the main purposes of the course is to help you develop your own personal approach for identifying and addressing key strategic challenges. I will not post slides summarizing cases. After each class I will post slides used in that class to detail assignments or communicate administrative issues.

3. Password-protected class sites will be available for all accredited courses taught at The University. Syllabi, handouts, assignments and other resources are types of information that may be available within these sites. Site activities could include exchanging e-mail, engaging in class discussions and chats, and exchanging files. In addition, class e-mail rosters will be a component of the sites. Students who do not want their names included in these electronic class rosters must restrict their directory information in the Office of the Registrar, Main Building, Room 1. For information on restricting directory information see: http://www.utexas.edu/student/registrar/catalogs/gi02-03/app/appc09.html.

4. I frequently call on individuals whose hands are not raised to participate in class discussions. The goal is both to engage everyone in the discussion and to provide a basis for your class contribution grade.

5. To help me learn your names and assign your class contribution grades, I will circulate a seating chart by the start of our second session. Please take the same seat each class.

An expanded version of this syllabus including a detailed session plan will be available to students registered for MAN385 – Dr. Polidoro – Spring 2014.
APPENDIX

Honor Code Purpose

Academic honor, trust and integrity are fundamental to The University of Texas at Austin McCombs School of Business community. They contribute directly to the quality of your education and reach far beyond the campus to your overall standing within the business community. The University of Texas at Austin McCombs School of Business Honor System promotes academic honor, trust and integrity throughout the Graduate School of Business. The Honor System relies upon The University of Texas Student Standards of Conduct (Chapter 11 of the Institutional Rules on Student Service and Activities) for enforcement, but promotes ideals that are higher than merely enforceable standards. Every student is responsible for understanding and abiding by the provisions of the Honor System and the University of Texas Student Standards of Conduct. The University expects all students to obey the law, show respect for other members of the university community, perform contractual obligations, maintain absolute integrity and the highest standard of individual honor in scholastic work, and observe the highest standards of conduct. Ignorance of the Honor System or The University of Texas Student Standards of Conduct is not an acceptable excuse for violations under any circumstances.

The effectiveness of the Honor System results solely from the wholehearted and uncompromising support of each member of the McCombs School of Business community. Each member must abide by the Honor System and must be intolerant of any violations. The system is only as effective as you make it.

Faculty Involvement in the Honor System

The University of Texas at Austin McCombs School of Business Faculty's commitment to the Honor System is critical to its success. It is imperative that faculty make their expectations clear to all students. They must also respond to accusations of cheating or other misconduct by students in a timely, discrete and fair manner. We urge faculty members to promote awareness of the importance of integrity through in-class discussions and assignments throughout the semester.

Expectations Under the Honor System

Standards. If a student is uncertain about the standards of conduct in a particular setting, he or she should ask the relevant faculty member for clarification to ensure his or her conduct falls within the expected scope of honor, trust and integrity as promoted by the Honor System. This applies to all tests, papers and group and individual work. Questions about appropriate behavior during the job search should be addressed to a professional member of the Career Management Office. Below are some of the specific examples of violations of the Honor System.

Lying. Lying is any deliberate attempt to deceive another by stating an untruth, or by any direct form of communication to include the telling of a partial truth. Lying includes the use or omission of any information with the intent to deceive or mislead. Examples of lying include, but are not limited to, providing a false excuse for why a test was missed or presenting false information to a recruiter.

Stealing. Stealing is wrongfully taking, obtaining, withholding, defacing or destroying any person's money, personal property, article or service, under any circumstances. Examples of stealing include, but are not limited to, removing course material from the library or hiding it from others, removing material from another person's mail folder, securing for one's self unattended items such as calculators, books, book bags or other personal property. Another form of stealing is the duplication of copyrighted material beyond the reasonable bounds of "fair use." Defacing (e.g., "marking up" or highlighting) library books is also considered stealing, because, through a willful act, the value of another's property is decreased. (See the appendix for a detailed explanation of "fair use.")
Cheating. Cheating is wrongfully and unfairly acting out of self-interest for personal gain by seeking or accepting an unauthorized advantage over one's peers. Examples include, but are not limited to, obtaining questions or answers to tests or quizzes, and getting assistance on case write-ups or other projects beyond what is authorized by the assigning instructor. It is also cheating to accept the benefit(s) of another person's theft(s) even if not actively sought. For instance, if one continues to be attentive to an overhead conversation about a test or case write-up even if initial exposure to such information was accidental and beyond the control of the student in question, one is also cheating. If a student overhears a conversation or any information that any faculty member might reasonably wish to withhold from the student, the student should inform the faculty member(s) of the information and circumstance under which it was overheard.

Actions Required for Responding to Suspected and Known Violations

As stated, everyone must abide by the Honor System and be intolerant of violations. If you suspect a violation has occurred, you should first speak to the suspected violator in an attempt to determine if an infraction has taken place. If, after doing so, you still believe that a violation has occurred, you must tell the suspected violator that he or she must report himself or herself to the course professor or Associate Dean of the McCombs School of Business. If the individual fails to report himself or herself within 48 hours, it then becomes your obligation to report the infraction to the course professor or the Associate Dean of the McCombs School of Business. Remember that although you are not required by regulation to take any action, our Honor System is only as effective as you make it. If you remain silent when you suspect or know of a violation, you are approving of such dishonorable conduct as the community standard. You are thereby precipitating a repetition of such violations.

The Honor Pledge

The University of Texas at Austin McCombs School of Business requires each enrolled student to adopt the Honor System. The Honor Pledge best describes the conduct promoted by the Honor System. It is as follows:
"I affirm that I belong to the honorable community of The University of Texas at Austin Graduate School of Business. I will not lie, cheat or steal, nor will I tolerate those who do."
"I pledge my full support to the Honor System. I agree to be bound at all times by the Honor System and understand that any violation may result in my dismissal from the McCombs School of Business."

Excerpts from the University of Texas at Austin Office of the Dean of Students website
(http://deanofstudents.utexas.edu/sjs/acint_student.php)

The Standard of Academic Integrity

A fundamental principle for any educational institution, academic integrity is highly valued and seriously regarded at The University of Texas at Austin, as emphasized in the standards of conduct. More specifically, you and other students are expected to "maintain absolute integrity and a high standard of individual honor in scholastic work" undertaken at the University (Sec. 11-801, Institutional Rules on Student Services and Activities). This is a very basic expectation that is further reinforced by the University's Honor Code. At a minimum, you should complete any assignments, exams, and other scholastic endeavors with the utmost honesty, which requires you to:
- acknowledge the contributions of other sources to your scholastic efforts;
- complete your assignments independently unless expressly authorized to seek or obtain assistance in preparing them;
- follow instructions for assignments and exams, and observe the standards of your academic discipline; and
- avoid engaging in any form of academic dishonesty on behalf of yourself or another student.
For the official policies on academic integrity and scholastic dishonesty, please refer to Chapter 11 of the *Institutional Rules on Student Services and Activities*.

**What is Scholastic Dishonesty?**

In promoting a high standard of academic integrity, the University broadly defines scholastic dishonesty—basically, all conduct that violates this standard, including *any act designed to give an unfair or undeserved academic advantage*, such as:

- Cheating
- Plagiarism
- Unauthorized Collaboration
- Collusion
- Falsifying Academic Records
- Misrepresenting Facts (e.g., providing false information to postpone an exam, obtain an extended deadline for an assignment, or even gain an unearned financial benefit)
- Any other acts (or attempted acts) that violate the basic standard of academic integrity (e.g., multiple submissions—submitting essentially the same written assignment for two courses without authorization to do so)

Several types of scholastic dishonesty—unauthorized collaboration, plagiarism, and multiple submissions—are discussed in more detail on this Web site to correct common misperceptions about these particular offenses and suggest ways to avoid committing them.

For the University's official definition of scholastic dishonesty, see Section 11-802, *Institutional Rules on Student Services and Activities*.

**Unauthorized Collaboration**

If you work with another person on an assignment for credit *without the instructor's permission to do so*, you are engaging in unauthorized collaboration.

- This common form of academic dishonesty can occur with all types of scholastic work—papers, homework, tests (take-home or in-class), lab reports, computer programming projects, or any other assignments to be submitted for credit.
- For the University's official definitions of unauthorized collaboration and the related offense of collusion, see Sections 11-802(c)(6) & 11-802(e), *Institutional Rules on Student Services and Activities*.

Some students mistakenly assume that they can work together on an assignment as long as the instructor has not expressly prohibited collaborative efforts.

- Actually, students are expected to complete assignments independently unless the course instructor indicates otherwise. So working together on assignments is *not* permitted unless the instructor specifically approves of any such collaboration.

Unfortunately, students who engage in unauthorized collaboration tend to justify doing so through various rationalizations. For example, some argue that they contributed to the work, and others maintain that working together on an assignment "helped them learn better."

- The instructor—not the student—determines the purpose of a particular assignment and the acceptable method for completing it. Unless working together on an assignment has been specifically authorized, always assume it is not allowed.
- Many educators do value group assignments and other collaborative efforts, recognizing their potential for developing and enhancing specific learning skills. And course requirements in some classes do consist primarily of group assignments. But the expectation of individual work is the prevailing norm in many classes, consistent with the presumption of original work that remains a fundamental tenet of scholarship in the American educational system.
Some students incorrectly assume that the degree of any permissible collaboration is basically the same for all classes.

- The extent of any permissible collaboration can vary widely from one class to the next, even from one project to the next within the same class.
- Be sure to distinguish between collaboration that is authorized for a particular assignment and unauthorized collaboration that is undertaken for the sake of expedience or convenience to benefit you and/or another student. By failing to make this key distinction, you are much more likely to engage in unauthorized collaboration. To avoid any such outcome, always seek clarification from the instructor.

Unauthorized collaboration can also occur in conjunction with group projects.

- How so? If the degree or type of collaboration exceeds the parameters expressly approved by the instructor. An instructor may allow (or even expect) students to work together on one stage of a group project but require independent work on other phases. Any such distinctions should be strictly observed.

Providing another student unauthorized assistance on an assignment is also a violation, even without the prospect of benefiting yourself.

- If an instructor did not authorize students to work together on a particular assignment and you help a student complete that assignment, you are providing unauthorized assistance and, in effect, facilitating an act of academic dishonesty. Equally important, you can be held accountable for doing so.
- For similar reasons, you should not allow another student access to your drafted or completed assignments unless the instructor has permitted those materials to be shared in that manner.

Plagiarism is another serious violation of academic integrity. In simplest terms, this occurs if you represent as your own work any material that was obtained from another source, regardless how or where you acquired it.

- Plagiarism can occur with all types of media—scholarly or non-academic, published or unpublished—written publications, Internet sources, oral presentations, illustrations, computer code, scientific data or analyses, music, art, and other forms of expression. (See Section 11-802(d) of the Institutional Rules on Student Services and Activities for the University's official definition of plagiarism.)
- Borrowed material from written works can include entire papers, one or more paragraphs, single phrases, or any other excerpts from a variety of sources such as books, journal articles, magazines, downloaded Internet documents, purchased papers from commercial writing services, papers obtained from other students (including homework assignments), etc.
- As a general rule, the use of any borrowed material results in plagiarism if the original source is not properly acknowledged. So you can be held accountable for plagiarizing material in either a final submission of an assignment or a draft that is being submitted to an instructor for review, comments, and/or approval.

Using verbatim material (e.g., exact words) without proper attribution (or credit) constitutes the most blatant form of plagiarism. However, other types of material can be plagiarized as well, such as ideas drawn from an original source or even its structure (e.g., sentence construction or line of argument).

- Improper or insufficient paraphrasing often accounts for this type of plagiarism. (See additional information on paraphrasing.)
Plagiarism can be committed intentionally or unintentionally.

- Strictly speaking, any use of material from another source without proper attribution constitutes plagiarism, regardless why that occurred, and any such conduct violates accepted standards of academic integrity.
- Some students deliberately plagiarize, often rationalizing this misconduct with a variety of excuses: falling behind and succumbing to the pressures of meeting deadlines; feeling overworked and wishing to reduce their workloads; compensating for actual (or perceived) academic or language deficiencies; and/or justifying plagiarism on other grounds.
- But some students commit plagiarism without intending to do so, often stumbling into negligent plagiarism as a result of sloppy note-taking, insufficient paraphrasing, and/or ineffective proofreading. Those problems, however, neither justify nor excuse this breach of academic standards. By misunderstanding the meaning of plagiarism and/or failing to cite sources accurately, you are much more likely to commit this violation. Avoiding that outcome requires, at a minimum, a clear understanding of plagiarism and the appropriate techniques for scholarly attribution. (See related information on paraphrasing; notetaking and proofreading; and acknowledging and citing sources.)

By merely changing a few words or rearranging several words or sentences, you are not paraphrasing. Making minor revisions to borrowed text amounts to plagiarism.

- Even if properly cited, a "paraphrase" that is too similar to the original source's wording and/or structure is, in fact, plagiarized. (See additional information on paraphrasing.)

Remember, your instructors should be able to clearly identify which materials (e.g., words and ideas) are your own and which originated with other sources.

- That cannot be accomplished without proper attribution. You must give credit where it is due, acknowledging the sources of any borrowed passages, ideas, or other types of materials, and enclosing any verbatim excerpts with quotation marks (using block indentation for longer passages).

Plagiarism & Unauthorized Collaboration

Plagiarism and unauthorized collaboration are often committed jointly. By submitting as your own work any unattributed material that you obtained from other sources (including the contributions of another student who assisted you in preparing a homework assignment), you have committed plagiarism. And if the instructor did not authorize students to work together on the assignment, you have also engaged in unauthorized collaboration. Both violations contribute to the same fundamental deception—representing material obtained from another source as your own work.

Group efforts that extend beyond the limits approved by an instructor frequently involve plagiarism in addition to unauthorized collaboration. For example, an instructor may allow students to work together while researching a subject, but require each student to write a separate report. If the students collaborate while writing their reports and then submit the products of those joint efforts as individual works, they are guilty of unauthorized collaboration as well as plagiarism. In other words, the students collaborated on the written assignment without authorization to do so, and also failed to acknowledge the other students' contributions to their own individual reports.

Multiple Submissions

Submitting the same paper (or other type of assignment) for two courses without prior approval represents another form of academic dishonesty.

You may not submit a substantially similar paper or project for credit in two (or more) courses unless expressly authorized to do so by your instructor(s). (See Section 11-802(b) of the Institutional Rules on Student Services and Activities for the University's official definition of scholastic dishonesty.)

You may, however, re-work or supplement previous work on a topic with the instructor's approval.
Some students mistakenly assume that they are entitled to submit the same paper (or other assignment) for two (or more) classes simply because they authored the original work.

Unfortunately, students with this viewpoint tend to overlook the relevant ethical and academic issues, focusing instead on their own "authorship" of the original material and personal interest in receiving essentially double credit for a single effort.

Unauthorized multiple submissions are inherently deceptive. After all, an instructor reasonably assumes that any completed assignments being submitted for credit were actually prepared for that course. Mindful of that assumption, students who "recycle" their own papers from one course to another make an effort to convey that impression. For instance, a student may revise the original title page or imply through some other means that he or she wrote the paper for that particular course, sometimes to the extent of discussing a "proposed" paper topic with the instructor or presenting a "draft" of the paper before submitting the "recycled" work for credit.

The issue of plagiarism is also relevant. If, for example, you previously prepared a paper for one course and then submit it for credit in another course without citing the initial work, you are committing plagiarism—essentially "self-plagiarism"—the term used by some institutions. Recall the broad scope of plagiarism: all types of materials can be plagiarized, including unpublished works, even papers you previously wrote.

Another problem concerns the resulting "unfair academic advantage" that is specifically referenced in the University's definition of scholastic dishonesty. If you submit a paper for one course that you prepared and submitted for another class, you are simply better situated to devote more time and energy toward fulfilling other requirements for the subsequent course than would be available to classmates who are completing all course requirements during that semester. In effect, you would be gaining an unfair academic advantage, which constitutes academic dishonesty as it is defined on this campus.

Some students, of course, do recognize one or more of these ethical issues, but still refrain from citing their authorship of prior papers to avoid earning reduced (or zero) credit for the same works in other classes. That underlying motivation further illustrates the deceptive nature of unauthorized multiple submissions.

An additional issue concerns the problematic minimal efforts involved in "recycling" papers (or other prepared assignments). Exerting minimal effort basically undercuts the curricular objectives associated with a particular assignment and the course itself. Likewise, the practice of "recycling" papers subverts important learning goals for individual degree programs and higher education in general, such as the mastery of specific skills that students should acquire and develop in preparing written assignments. This demanding but necessary process is somewhat analogous to the required regimen of athletes, like the numerous laps and other repetitive training exercises that runners must successfully complete to prepare adequately for a marathon.