Strategic Cost Analysis
15.521
Spring 2019

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Section A Tuesday-Thursday 2:30pm-4:00pm **E51-376**
Section B Tuesday-Thursday 4:00pm-5:30pm **E51-376**

COURSE OVERVIEW

If you want to be a consultant, investor, entrepreneur or manager, this course is for you. This course is about how to understand costs (and revenues, for that matter). Costs take many different forms in an organization, and follow many different patterns. People in business (i.e. you) need to understand their organizations' costs for many reasons, not least of which is to make good decisions. But costs can be deceiving, especially costs presented by accountants! By taking this course you will gain a deep understanding of when to trust the cost numbers you are given, when not to, and when and how to develop your own numbers.

Class Website - Stellar
Class materials (slides, handouts, problem sets, solutions, etc) are available online at: **http://stellar.mit.edu/S/course/15/sp18/15.521**.

You need to register and have an Athena account to be able to see the class materials (non-MIT students: see below for how to register and obtain an Athena account).

GRADING

Grading for the course will be based on in-class quizzes, a case analysis, and professionalism:

In-class Quizzes & Homeworks	**50%**
Costing System Design Project	**30%**
Professionalism	**20%**
Total	**100%**

IN-CLASS QUIZZES & HOMEWORKS

Part of your course grade — 50% — will be determined by your performance on *in-class quizzes and one homework assignment (*the *Vermont Spirits Distillery* case, due on February 12; I will explain further in class). There are three class sessions devoted to in-class quizzes; see the course schedule below. (I used to have quizzes every day, but I found they took up too much time, so now I have 4 sessions devoted to "cumulative" quizzes. You can think of them as something like mid-term exams if you 'd like.)

COSTING SYSTEM DESIGN PROJECT

Part of your course grade — 30% — will be determined by your performance on a costing system you will design and implement. I can think of no better way to convince yourselves that you actually understand costing systems than by designing and implementing one.

I will provide you with detailed information about a company and its activities, and you and your team will propose a system for accounting for the costs and revenues of that company. This assignment will be due towards the end of the term (on a date yet to be determined).

PROFESSIONALISM

Part of your course grade — 20% — will be determined by your *professionalism*. The class's collective learning depends critically on the professionalism with which all of us approach the course.

Treat this course the same way you would a work assignment, and treat me and your classmates as you would your work colleagues. Think of our class sessions as business meetings. We generally show up for business meetings on time and prepared, and you should do the same for our class meetings.

I assume that everybody will approach the course professionally, so every student begins with 8 out of the 10 points for professionalism. You can either increase or decrease those points. Actions that increase your professionalism score include making insightful comments in class, aiding in correcting a classmate's confusion, listening to, digesting, and responding to your classmates' comments, and being engaged in the class discussion even though you have nothing significant to contribute. Actions than can decrease your professionalism score include making irrelevant or wasteful comments in class, arriving to class late or leaving early, making frequent sorties from class to do whatever it is that people do when that make such sorties, and falling asleep in class (although I should take some of the blame for people falling asleep in class; if I can't keep you awake then I am doing something very wrong).

Course Schedule

Day	*Date*	*Subject*	*Cases/Readings/Assignments*
Day 1	*Tues Feb 5*	Introduction	• Keating, *Introduction*
Day 2	*Thurs Feb 7*	Costs	• *Bridgeton Industries*
Day 3	*Tues Feb 12*	Costs	• *Parkview Hotel*
Day 4	*Thurs Feb 14*	Product costing	• *Vermont Spirits Distillery* ***(Homework due)***
Day 5	*Thurs Feb 21*	Standard costs and absorptions costing	• *Keating*, Chapters 2 and 3
Day 6	*Tues Feb 26*	The make vs. buy decision	
Day 7	*Thurs Feb 28*	**Quiz Day #1**	
Day 8	*Tues Mar 5*	Cost allocations	• *Keating*, Chapters 4 and 5
Day 9	*Thurs Mar 7*	Activity-based costing	• *Destin Brass*
Day 10	*Tues Mar 12*	Activity-based costing	• *Siemens Electric Motor Works (A)*
Day 11	*Thurs Mar 14*	**Quiz Day #2**	
Day 12	*Tues Apr 2*	Joint costs	• *Bulwer Island Refinery*
Day 13	*Thurs Apr 4*	Transfer pricing	• *Keating*, Chapter 10
Day 14	*Tues Apr 9*	Transfer pricing	• *Polysar Limited*
Day 15	*Thurs Apr 11*	Costs, pricing and investments	• Keating, Chapters 6 and 7
Day 16	*Thurs Apr 18*	**Quiz Day #3**	
Day 17	*Tues Apr 23*	The complexity of organizations	• Video*: "Decision Steel"*
Day 18	*Thurs Apr 25*	Accounting & organizations	• *Keating*, Chapter 8
Day 19	*Tues Apr 30*	Accounting & organizations	• *Keating*, Chapter 8
Day 20	*Thurs May 2*	Performance measurement	• *Keating*, Chapter 9 • *ATH MicroTechnologies, Inc. (A)*
Day 21	*Tues May 7*	Performance measurement	
Day 22	*Thurs May 9*	Cost Forecasting	• *TMR Inc.*
Day 23	*Tues May 14*	Accounting & strategy	• *Mueller-Lehmkuhl GmbH*
Day 24	*Thurs May 16*	Putting it all together	• *Scovill Inc.: NuTone Housing Group*

MIT SLOAN ACADEMIC STANDARDS

As a member of the MIT Sloan academic community, the highest standards of academic behavior are expected of you. It is your responsibility to make yourself aware of the standards and adhere to them. These standards are discussed below, specifically regarding plagiarism, individual work, and teamwork.

> This discussion of academic honesty is not exhaustive, and there may be areas that remain unclear to you. If you are unsure whether some particular course of action is proper, it is your responsibility to consult with your professor and/or teaching assistant for clarification.

When students are found to have violated academic standards, disciplinary action will result. Possible consequences include grade reduction, an F grade, a transcript notation, delay of graduation, or expulsion from MIT Sloan.

Plagiarism

Plagiarism occurs when you use another's intellectual property (words or ideas) and do not acknowledge that you have done so. Plagiarism is a very serious offense. If it is found that you have plagiarized -- deliberately or inadvertently -- you will face serious consequences, as indicated above.

The best way to avoid plagiarism is to cite your sources - both within the body of your assignment and in a bibliography of sources you used at the end of your document.

Internet Research

> Materials gathered through research via the Internet must be cited in the same manner as more traditionally published material. Lack of such citation constitutes plagiarism.

These definitions were drawn from the MIT Libraries website. For more information please visit: http://libraries.mit.edu/tutorials/general/plagiarism.html

Individual Assignments

When you are asked to do ***individual*** work, you are expected to adhere to the following standards:

- Do not copy all or part of another student's work (with or without "permission").
- Do not allow another student to copy your work.
- Do not ask another person to write all or part of an assignment for you.
- Do not work together with another student in order to answer a question, or solve a problem, or write a computer program jointly.
- Do not consult or submit work (in whole or in part) that has been completed by other students in this or previous years for the same or substantially the same assignment.
- Do not use print or internet materials directly related to a case/problem set unless explicitly authorized by the instructor.
- Do not use print or internet materials without explicit quotation and/or citation.
- Do not submit the same, or similar, piece of work for two or more subjects without the explicit approval of the two or more instructors involved.

Please note that many classes will require a combination of teamwork and individual work. *Be sure that you follow all the guidelines for individual work when a faculty member identifies an assignment as an individual one.*

Team Assignments

When you are asked to ***work in teams***, there is a broad spectrum of faculty expectations. Three general types of appropriate collaboration on team assignments are described below. The instructor will indicate in the syllabus what his/her expectations are. If there is any uncertainty, it is the student's responsibility to clarify with the professor or TA the type of team work that is expected.

Type 1 collaboration: the professor states that collaboration is alloTues, but the final product must be individual. An example of this might be a problem set.

- You are alloTues to discuss the assignment with other team members and work through the problems together.
- What you turn in, however, must be your own product, written in your own handwriting, or in a computer file of which you are the sole author.
- Copying another's work or electronic file is not acceptable.

Type 2 collaboration: the professor states that collaboration is encouraged but that each person's contribution to the deliverable does not have to be substantial (taking a "divide and conquer" approach). An example of this might be a brief progress report.

- Each team member is encouraged to contribute substantially to the team assignment, however, the team may choose to assign one or more team members to prepare and submit the deliverable on behalf of the team.
- Regardless of how work is shared or responsibilities are divided aThursg individual team members, each member of the team will be held accountable for the academic integrity of the entire assignment. If, for example, one member of the team submits plagiarized work on behalf of the team, the entire team will be subject to sanctions as appropriate.
- The team may not collaborate with other students outside of the team unless the professor explicitly permits such collaboration.

Type 3 collaboration: the professor states that collaboration is expected and that each team member must contribute substantially to the deliverable. An example of this might be the FYC or the OP project.

- Each team member must make a substantial contribution to the assignment. It is not, for example, acceptable to divide the assignments aThursgst the team members (e.g., part of the team does the FYC and the other part does another project), though the team may divide the work of any one assignment to complete it as they deem appropriate.
- The team may not collaborate with other students outside of the team unless the professor explicitly permits such collaboration.

To repeat, if there is any question about the rules for a particular assignment the student should check with the faculty member.

Relevant Excerpts from the MIT Sloan Professional Standards

MIT Sloan's Professional Standards provide a guideline for professional behavior by students, and faculty inside the classroom. The MIT Sloan School is committed to creating an environment in which every individual can work and study in a culture of mutual respect. When making individual decisions we must keep in mind the interests of the many other stakeholders.

Consistent with the general goal of mutual respect, faculty, students, and staff are reminded to deThursstrate:

- **On-time arrival to classes and presentations, with uninterrupted attendance for the duration.**

For example, those who arrive on time to an event or class and stay until it ends show courtesy to both the speaker and the audience, and avoid disrupting the session for others.

- **On-time initiation and termination of classes and presentations.**

  For example, there is a 10-minute transition time period allocated between MIT Sloan class sessions. A class session or any other public meeting is expected to formally end 5 minutes before its scheduled ending time, and the following class session or meeting is expected to begin 5 minutes after its scheduled starting time. Students and faculty who observe this practice allow classrooms to be cleared in a reasonable way, facilitate traffic flow between rooms, and minimize disruptions to MIT Sloan's tightly-scheduled facilities.

- **Maintenance of a professional atmosphere.** ***This includes, but is not limited to:***

  ⇒ **Using respectful comments and humor**

  Be aware that once you matriculate at MIT Sloan, you'll be representing the MIT Sloan School and MIT for the rest of your life. Make a positive impact as an individual and School representative by extending respect to your MIT Sloan community colleagues and all other guests and strangers. For example, minimize misunderstanding by communicating thoughtfully and using humor carefully in a context of mutual respect with new acquaintances and strangers—and in the context of your preexisting relationships with your friends. Those who use the 'Golden Rule' (e.g., treating others as they would like to be treated themselves) as a starting point in their interactions with others will always have solid friendships and business relationships at hand.

  ⇒ **Utilizing computers and technology suitably (e.g., silencing wireless devices, no web-browsing or emailing)**

  For example, those who switch off their cell phones before the start of class respect our academic environment by allowing uninterrupted learning to proceed. Similarly, those who turn off laptop computers before a class or meeting avoid 'multitasking' activities such as internet browsing and emailing that are unwelcome and distracting to their neighbors. Unless specifically permitted by a faculty member, an event organizer, or a presenter, laptops should remain closed during MIT Sloan class sessions, presentations, and meetings.

  ⇒ **Refraining from distracting or disrespectful activities (e.g., avoiding side conversations and games)**

  As with the improper use of cell phones and laptops, side conversations and game playing during meetings, events, and classes are distracting and discourteous to colleagues, guests, and presenters, reflect poorly on the MIT Sloan School—and should be avoided.

- **Courtesy towards all guests, hosts and participants in the classroom.**

  MBA community members are expected to maintain decorum in interactions with members and guests of the MIT Sloan community. Such behavior should: 1)—reflect MIT Sloan Professional Standards, and; 2)—be consistent with the North American business practices. Appropriate, courteous behavior enhances MIT Sloan's reputation and encourages others to participate in our activities, hire our students, and contribute to our School. In MIT Sloan's environment, MBA students are expected to observe the proper dress, decorum, and etiquette that is appropriate to MIT Sloan Professional Standards and North American business customs for each setting they are in. For example, unless otherwise specified, business casual attire is the norm for the classroom.

- **Observance of the most conservative standards when one is unsure about which norms apply.**

  For example, if you are unsure whether a faculty member allows the use of laptop computers in class, assume that laptops are not permitted unless/until you learn otherwise. And if you are

> *unsure if your comments will be offensive to someone, particularly from another culture, refrain from sharing them.*

These points offer specific illustrative examples to encourage broader reflection of each individual's impact on the MIT Sloan community. For more guidance on these standards, please contact the MBA Student Affairs Office in E52-101 (253-5049), or the MIT Sloan Professional Standards Committee.

Upholding these expectations and the standards upon which they are based is a shared right and responsibility for all faculty, students and staff at the MIT Sloan School. As a learning and professional community, we seek and deserve no less.