IDSC 6050:
Information Technologies and Solutions

Section 070
Spring 2016/Term A
Completely online

Course Description

IDSC 6050 provides IT-based links to business functions with state-of-the-art knowledge and technologies. The traditional role of Information Technology within a firm has been to increase operational efficiency by becoming a lean-and-mean custodian of standardized business processes. Increasingly, as the pace of global competition accelerates, forward-thinking firms are also looking to the IT function to become a technology-driven provider of innovation capabilities. Over the last decade, dramatic changes in technologies opened new business opportunities both for new high-tech ventures and for the already established companies. Therefore, from a business perspective it is always important to be aware of technological advances and to be able to recognize emerging trends. This course will provide a comprehensive overview of current and emerging technologies in several different areas, focusing on the needs of the modern Net-enhanced organizations. While the course will provide a brief overview of the traditional Internet technologies, the focus of the course is on the more recent trends in information technologies, including the developments in advanced Web technologies, Web 2.0 and social media, wireless technologies, cloud computing and Web services, Internet security, IT-driven innovation, etc. The goal of the course is for the students to develop an in-depth understanding of these technologies and explore various opportunities that these technologies can create.

Taking IDSC 6040 vs. IDSC 6050

This course is one of two menu courses (IDSC 6040 and 6050) that make up the required MIS component for Part-Time MBA students. Both courses focus on IT; however, 6040 provides much more of a managerial perspective on IT (with some technology-related issues), and 6050 provides much more of a technological perspective on IT (with some business/managerial implications). In other words, IDSc 6040 is well suited for students interested in understanding the business value of IT, management and governance of IT, and in exploiting IT in other functional areas. IDSc 6050 is well suited for students interested in gaining a deeper understanding of current and emerging information and communication technologies, both in terms of their technological capabilities and the possibilities to leverage them in business

settings. Both courses are designed to be fairly self-contained, i.e., a comprehensive IT background is not required for either one. So, depending on the students' needs and interests, they should choose the class that complements their background and current expertise the best.

Faculty Information

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Assistant Professor

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University of Minnesota, Twin Cities

Carlson School of Management

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Office: CSOM 3-370

Home Page: http://www.tc.umn.edu/~ssen/

Office Hours: By appointment

Teaching Assistant

Yaqiong Wang

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Office Hours: By appointment

Course Objectives

1. Provide a comprehensive overview of current and emerging information technologies, focusing on their impact on modern organizations.
2. Provide an in-depth understanding of the traditional and advanced Internet/Web technologies:
    - What problems can they solve?
    - How do they work?
    - What are their benefits and limitations?
    - How are they being used in business settings?
    - What is their disruptive power and future potential?
3. Train students to understand and evaluate emerging information technologies.

Course Prerequisites

Healthy appetite for learning new subjects. Don't need to be a techie, in fact the course is for those that do not have a technical background.

Course Delivery Methodology

- Playlist of videos on each topic will be posted every week (on Monday). News Forum will be used for announcements (students are expected to follow it).

- Students are expected to view the video "lectures" of the topic that week, post content and engage in discussions on the class YellowDig board, take a weekly online quiz (the course video lectures are embedded in the quiz) by the end of the week (e.g. due by 8:00pm Sunday night of the topic week).

- Meet with your group members to work on group activities (such as the Mini-Project, Term Group Project and your Short Paper).

Teaching and/or Instructional Philosophy

The course will be about learning from online resources, sharing and discussing. Share your views on a topic or an article when you post them and comment on articles shared by others. The course is not about passing exams, it is about collaborative learning. So instead of just surfing the web, surf it with a purpose - to discover and share interesting news about technology with each other.

Course Materials

Required Course Materials

There is no required textbook for this course. Online readings will be assigned for each session (and will be posted on the course website about a week in advance).

Moodle

Moodle is the University of Minnesota's course management system and we will be using Moodle with this course. Our Moodle class page is considered our "home base" for our course and you should be logging in and accessing our Moodle class page on a very frequent basis. You should be able to login to Moodle with your UMN Internet ID and password and see the link to our Moodle class site.

General Course Format

An online course places the student directly in the center of their own learning. It is both more difficult and easier than an in-class course. It is easier because you get to choose the time when you are going to work on the course assignments. It can be more difficult because you have to discipline yourself to make sure that you find the appropriate time in your schedule to complete the assignments.

The course content will consist of videos chapters which will be invaluable for you to view (at your convenience) in order to successfully complete the course requirements. The study of managerial accounting is primarily concerned with providing useful and pertinent information to managers that enable them to accomplish their business objectives. As such managerial accounting involves the disciplines of accounting, marketing, business operations, and most importantly strategic management. Understanding the course content requires vigilance of your part to be assured you are able to contribute to the class at an MBA level in one of the best business schools in the nation.

In this course we will be using web cameras for you to participate in creating VoiceThread group-presentations and video discussion boards. **You will need a high-quality web camera to participate in this class.**

The course is conducted completely online, but I still recommend that you and your group schedule a once-a-week synchronous web meeting (using Google hangouts, for example) where you go over class ideas together, prepare and work on creating your group presentations, and in general, seek out and utilize your group as a source of support and learning in the course. If you are unable to commit to meet synchronously with your groups for a between a half-hour to one-hour time period each week, we recommend that you wait to take the face-to-face version of this class. Your groups are an important part of your learning experience.

In this course you are expected to do all the reading and homework materials, participate actively in your groups, and in general, work as hard or harder than a face-to-face course. This is not scare you. This is prepare you that being an online does not mean this is an easy course, nor is it a course for you to hide in the background and not participate. As such, I look forward to engaging and constructive

discussions in class and to review high-quality course work handed in by everyone in class.

To give you an idea of how a typical course week in this course may run, I have prepared the following list. Bear in mind that I reserve some adjustment room to adjust things as needed given constraints that may arise during the course.

A typical week might look like:

- Viewing video "lectures"

- Posting content on the class YellowDig board

- Taking a weekly online quiz (the course video lectures are embedded in the quiz) by the end of the week (e.g. due by 8:00pm Sunday night of the topic week).

- Meeting with your group members to work on group activities (such as the Mini-Project, Term Group Project and your Short Paper).

- The Mini-Project, Term Group Project and Short Paper are due at scheduled times during the course.

- Group Term Projects:

  - Groups of up to four students will be assigned by me during the first week of the course.

  - We will be using UMN VoiceThread as the suggested method for the group presentation. We will be having a practice activity, but be sure to read the information on the class Moodle page and get started working in your groups.

Course Schedule

Short paper & mini-project (HTML exercise) group size: 3
Term project group size: 4-6
Students will be assigned to groups randomly by the instructor.
Intra-group peer evaluation will be used to ensure equal participation of all group members.

Week	Date	Topic	Assignments
0	January 18 - 24		Short paper and Group term project topic is announced Introduce yourself in Class Voice Thread
1	January 25 - 31	**Internet Fundamentals** - Fundamental concepts and building blocks - Internet architecture & protocols - Basic Internet technologies	Quiz Post on YellowDig
2	February 1 - 7	**Mobile Computing** -Mobile applications & platforms - Wireless technologies (2G, 3G, 4G, Satellite) - Sensor networks, RFID, NFC - Wireless network architectures - Mobile data growth trends - Bandwidth pricing strategies	Quiz Post on YellowDig Practice Presentations by groups on Voice Thread
3	February 8 - 14	**Web Communications** - Introduction to WWW - Overcoming "statelessness" - Server technology overview - Dynamic content generation - Performance issues - Browsers, markup languages - Web 2.0	Quiz Post on YellowDig **Short paper** is due on Feb 10 by 11:55 pm CT Mini Project instructions provided.

4	February 15 - 21	**Cloud Computing** - Service-oriented computing - Application interoperability / business integration - Virtualization - Grid computing - Peer-to-peer technologies	Quiz Post on YellowDig Term Project presentations (Group A, B)
5	February 22 - 28	**Information Security** - Information security threats - Social engineering - Overview of IT security technologies - Fundamentals of cryptography - Digital signatures, certificates - Cyber censorship and kill-switch	Quiz Post on YellowDig Term Project presentations (Group C, D) **Mini Project** is due on February 27 by 11:55 pm CT
6	March 1 - 6	**Social Computing** - Social media trends - Online advertising and auctions - Open innovation / "crowd-sourcing" - Prediction markets	Quiz Post on YellowDig Term Projects presentations (Group E, F)
7	March 7 - 12		Post on YellowDig Term Project peer evaluation*

* All students need to watch the term project presentations of the other groups and submit their evaluations

Note 1: The list of topics may be adjusted over the course of the term. All changes will be reflected in the schedule on the course Moodle site in advance.

Last day of lecture materials posted: March 1
Last day for submission of peer evaluation of all term projects: March 12

Grading

Grading Distribution

Percent	Item	Type	Short Description
20%	Short Paper	Groups of 2-3 students (TBA)	A small two-week assignment Topic will be announced in Week 1
20%	Mini Project	Groups of 2-3 students (same as short paper)	A small two-week hands-on group assignment. You will need to convert the short paper into a website. We will put all your webpages together to create a website/web repository. Here's what the previous batch did: http://www.tc.umn.edu/~ssen/IDSC6050/index.html
20%	Quizzes (asked after every video)	Individual	Based on the lecture videos/slides. To be taken before the due date for that topic.
20%	Group Term Project	Groups of 4-6 students (TBA)	A term-long group project and Voice Thread presentations. Presentations to start on Week 4.
20%	Online Participation	Individual	Participation in YellowDig (measured as how interesting are the contributions and comments, engagement with others in online discussions, etc)

Grading Criteria

Will be specified in respective assignments.

Grading Policy {if applicable}

In 2005, the results of a comprehensive study of grading in the Carlson School were presented to the faculty. In response to the conclusions of the study, the Carlson School faculty developed and approved the following grading policy: Grades are an integral part of the educational process. They are one form of feedback concerning academic performance. The Carlson School is resolute that the differences in course achievement are reflected in the differences in course grades. Grades are based on a combination of exams, terms papers, class participation, case analyses, and other assignments. In all cases, it is the instructor who determines grading

criteria.

1. Core classes will have a median aggregate GPA of 3.33 +/- .1.
2. Elective classes will have a median aggregate GPA of 3.67 +/- .1.
3. Faculty teaching multiple sections of the same course in the same term may use a single distribution over these sections for purposes of complying with the above policies.

Due Dates and Late Work

Late submissions will be subject to penalty, 1 point will be deducted for every hour beyond the deadline. Students are requested to firmly follow the deadlines, and approach the instructor in advance in special circumstances.

Course Policies

General Expectations

1. You are expected to manage and access your University of Minnesota student account on a regular and frequent basis.
2. You are expected to manage and access your University of Minnesota email account on a regular and frequent basis.
3. You should maintain a copy of all submitted assignments and work.
4. Students are expected to read all the readings assigned for the class (unless they are explicitly labeled as optional) and go over all the online resources as well as online presentations/lectures, including other student presentations/postings. This course is analytical. In other words, I will introduce you to approaches and principles that will require you to think logically, solve puzzles, and be imaginative. I have tried to make the course very interactive. It will be essential for you to follow the sequence of presentations and revisit them if need be. I encourage you to ask questions and answer them when you see them in online class material to learn in an interactive manner as well as lend your expertise when relevant.

Student Academic Integrity and Scholastic Dishonesty

Academic integrity is essential to a positive teaching and learning environment. All students enrolled in University courses are expected to complete coursework responsibilities with fairness and honesty. Failure to do so by seeking unfair advantage over others or misrepresenting someone else's work as your own, can result in disciplinary action. The University Student Conduct Code defines scholastic dishonesty as follows:
Scholastic Dishonesty: Scholastic dishonesty means plagiarizing; cheating on assignments or examinations; engaging in unauthorized collaboration on academic work; taking, acquiring, or using test materials without faculty permission; submitting false or incomplete records of

academic achievement; acting alone or in cooperation with another to falsify records or to obtain dishonestly grades, honors, awards, or professional endorsement; altering forging , or misusing a University academic record; or fabricating or falsifying data, research procedures, or data analysis.

Within this course, a student responsible for scholastic dishonesty can be assigned a penalty up to and including an "F" or "N" for the course. If you have any questions regarding the expectations for a specific assignment or exam, ask.

Academic Misconduct

The Carlson School defines academic misconduct as any act by a student that misrepresents the student's own academic work or that compromises the academic work of another. Scholastic misconduct includes (but is not limited to) cheating on assignments or examinations, plagiarizing, i.e., misrepresenting as one's own work any work done by another, submitting the same paper, or substantially similar papers, to meet the requirement of more than one course without the approval and consent of the instructors concerned, or sabotaging another's work. Within this general definition, however, instructors determine what constitutes academic misconduct in the courses they teach. Students found guilty of academic misconduct face penalties ranging from lowering of the course grade or awarding a grade of F or N for the entire course, to suspension from the University.

Student Conduct Code:
http://regents.umn.edu/sites/default/files/policies/Student_Conduct_Code.pdf

Student Conduct and Academic Integrity Website: http://www.oscai.umn.edu/index.html

If you are interested in learning more about how to cite sources and avoid plagiarism, there are online tutorials on the U of M libraries website at http://tutorial.lib.umn.edu/

You can also visit the Center for Writing for additional assistance at http://www.writing.umn.edu/

Accommodations for Students with Disabilities

The University of Minnesota is committed to providing all students equal access to learning opportunities.

Disability Services is the campus office that works with students who have disabilities to provide and/or arrange reasonable accommodations. Students registered with Disability Services, who have a letter requesting accommodations, are encouraged to contact the instructor early in the semester. Students who have, or think they may have, a disability (e.g. psychiatric, attention, learning, vision, hearing, physical, or systemic), are invited to contact Disability Services for a confidential discussion at 612-626-1333 (V/TTY) or at ds@umn.edu. Additional information is available at the DS website at http://ds.umn.edu.

Student Mental Health and Stress Management

As a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance or reduce a student's ability to participate in daily activities. University of Minnesota services are available to assist you with addressing these and other concerns you may be experiencing. You can learn more about the broad range of confidential mental health services available on campus via http://www.mentalhealth.umn.edu/.

Student Writing Support

As a student you may experience challenges in your writing. The University of Minnesota has a resource for you to help you with your writing at http://writing.umn.edu/sws/