

ISYS1021: Digital Technologies: Strategy and Use

Fall 2021

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Office Hours:	1. In Person (Fulton 412B): Tuesdays 3–4:15 PM 2. Virtual: Thursdays 3-4:15 PM Zoom: https://bccte.zoom.us/j/2084021204 3. Virtual: By appointment

TA Office Hours to be announced

Course Overview

This is an introductory course on information technology (IT) and its use in modern organizations. During the past few decades, IT has transformed companies—their business processes, decision-making structures, corporate strategies, and interactions with customers and suppliers. Scan the business news on any day and you will be reading not only about businesses whose success is due to a technology-infused product line or business strategy, but also about businesses struggling with IT issues whether those be security breaches or disruptive challenges from new technology upstarts. As a result, managers and entrepreneurs face significant IT related challenges in their work including: how to justify large IT investments, how to manage risks, how to choose the appropriate technology, and how to integrate the technology with existing processes and systems.

To address these challenges, this course will focus on the central questions:

1. How do organizations use information technology to improve their business processes and create competitive advantage?
2. How do managers employ information technology to solve problems and make critical business decisions?

We will tackle these questions by:

- learning about key business and technology concepts,
- developing a set of frameworks for applying these concepts to the analysis of business situations,
- applying these frameworks to the analysis of actual companies who are using technology to transform their businesses, and
- learning to use various technologies to analyze and solve business problems

Learning Goals and Objectives

By the end of this course, you should be able to:

- Use technology and IS to solve a business problem or make a critical business decision.
- Understand and discuss various management concepts and issues related to systems and technologies.
- Assess the role of IS in an organization, identify areas for the strategic use of IS, and understand where technology makes firms and markets vulnerable to disruption. You will have a recall-level awareness of successful and failed attempts to use IS for competitive advantage so that in meetings you will be able to back up any assertions with concrete.

Course Website

The course website is hosted on Canvas (www.bc.edu/lms). You can go directly to this course by going <https://bostoncollege.instructure.com/courses/1625851> and log in using your BC credentials. You can also access the Canvas website from My Courses in Agora. For a quick overview of Canvas, look at this [brief introductory video](#). More video tutorials can be found [here](#) and answers to frequently asked questions can be found [here](#).

Canvas will include an updated version of the course schedule along with detailed directions on how to complete and submit all course assignments. It is highly recommended that you adjust your Canvas settings to avoid missing notifications about the course.

Textbooks

There is one required book for class: *Information Systems: A Manager's Guide to Harnessing Technology, v9.0*, by John Gallaughier, July 2021, Flat World Knowledge, ISBN (Digital): 978-1-4533-3803-2. Online and print versions may be purchased at this link:

<https://students.flatworldknowledge.com/course/2598075>

IMPORTANT NOTE: The textbook can be read online for \$39.95. You are NOT required to purchase a printed hardcopy of the book or the E-book Downloads. These options are available for an additional charge for those who prefer to not to read on a screen or want an e-book version. The textbook will also be on reserve at the O'Neill Library.

Additional readings may be assigned throughout the semester and posted on Canvas.

Grading

The course grade will be based on the following items, each of which will be explained below:

Class Participation	10%
Homework & In-Class Workshops	15%
Quizzes (3x10%)	30%
Final Exam	30%
Group Project	15%

Final letter grades will be based on the following ranges: A [94 and above]; A- [90-94]; B+ [87-90]; B [83-87]; B- [80-83]; C+ [77-80]; C [73-77]; C- [70-73]; D+ [67-70]; D [63-67]; D- [60-63]; F (below 60). This challenging course allows students to demonstrate their mastery of the subject matter. In general, students in this course can expect a grading distribution as follows:

- 25-35% of students can expect to receive A's for excellent work;
- 50-70% of students can expect to receive B's for good or very good work;
- 5-15% of students can expect to receive C's or less for adequate or below work.

An average student should expect a grade of B or B+. Note that while instructors use this range as a guide, the actual distribution for this course and your own grade will depend upon how well you actually perform in this course.

Class Participation. You are expected to attend all classes, be prepared for class, and participate in a meaningful and productive manner. Although class attendance remains as valuable and important as ever, you should only attend class in-person if you feel healthy and well that day. Students who are unprepared will have this reflected in their final grade. Interviews are not a valid excuse for missing class so please schedule your interviews so they do not conflict with class time. If you need to miss class, please tell me know as far in advance as possible.

During almost every class session, there will be short, informal quizzes, papers, or exercises. These activities serve as low-stakes learning opportunities for you to check recall of course topics and to gain familiarity with the types of short answer questions you can expect to see on the Exams.

- Class Participation exercises will be graded for completion, not correction.
- Up to three zero participation grades (if applicable) will be dropped for each student, to account for the many reasons for unexcused absences that may crop up during any given semester.
- Excused absences (including school-sanctioned travel, illness verified by the Dean's Office, or personal/family issues verified by the Dean's Office) will not count towards each student's count of three dropped participation grades.

Homework & In-Class Workshops + Participation: You are expected to attend ALL classes, be prepared for class and participate in a meaningful and productive manner. This includes preparing all homework and being prepared for in-class homework reviews. Students who are unprepared during in-class homework review and discussion will have this reflected in their final grade.

- Homework assignments – Canvas Quizzes or a short answer write up will be due before class at 9am.
- To receive full credit, students will be required to submit HW assignments with their best attempts at completing the work before the assigned deadline.
- If you failed to submit a homework assignment before its original due date, you may still take two additional weeks to complete the HW, but will be eligible for half credit only. No assignments will be accepted passed 2 weeks after due date.
- We will also have several interactive Tech workshops, with an assigned exercise to be submitted during class in lieu of or in addition to HW to be completed before class.

Quizzes. There will be three in-class quizzes during the course with duration of 60 minutes. These will be assessments of your understanding of course concepts. The dates for the quizzes are listed in the course schedule at the end of this syllabus. Information about the precise format and content of each quiz will be provided in advance on Canvas.

Final Exam. This exam will provide a final assessment of your comprehension of course concepts. The exam will take place at the time scheduled by the University: **Thursday, Dec. 16, at 4:00 pm.** The exam location will be announced.

Group Project. Throughout the semester, you will form a team (about five members) and leverage concepts learned in class to propose a new, technology-leveraging business. The effort complements the precision demanded by the quizzes/exams with a creative assignment where you leverage what you've learned to come up with novel and valuable products or services. An actual, working prototype does not, of course, need to be demonstrated, however some former students have tried to mock-up what their effort might look like, in order to more clearly illustrate what they propose. Your team will be presenting your project and submitting a report at the end of the semester. Detailed information about the group project will be provided on Canvas.

Software & Web Applications

We will use [Poll Everywhere](#) as a tool to facilitate in-class quizzes and add to the interactivity of our sessions. I will post questions in class and you will be able to respond by text message, web browser, or using the [free mobile app](#). We will discuss set-up in class before using Poll Everywhere.

You will occasionally need access to Microsoft Excel 2019 (or 2016). Students should install Excel on their laptop computers. You may also use the program on computers in O'Neill Library to complete assignments. BC students may download Office 2019 (including Excel) for free at this link: <http://www.bc.edu/software/applications/office.html>

Course Administration and Tips for Success

- Manage your grade proactively. Ask for feedback early on to create opportunities for improvement and to better prepare for future assignments and the final exam. If you disagree about grading on a particular assignment, you should make your case with me or a TA within one week after grades have been posted.
- Always follow instructions and deadlines posted on Canvas. It is your responsibility to submit your work by the designated deadline. Late work will be penalized or possibly not accepted as per assignment instructions posted on Canvas.
- Examine the course schedule alongside your calendar without delay and take action immediately if you cannot make a particular exam date or assignment. Please do not schedule any trips or interviews at times when exams will be held.
- **Please send medical notes and other documented absence information to the Undergraduate Dean's Office.** Only absences certified by the Dean's Office will be accepted as per university policy. The Dean's Office will contact me (and your other instructors) in the case that you have a legitimate excuse to miss class or an assignment. If

something happens that may require you to miss class or an assignment, notify the Undergraduate Dean's Office immediately. If you have an excused absence, it will not be counted as one of your three quiz "zeros" to be dropped. Students with excused absences will also have extra time to make up Excel Exercises or other assignments during the time of their absence.

Communicating with the Instructor and Teaching Assistants

I will have office hours every week. I am also available for meetings by appointment.

I will do my best to reply to all email inquiries within 24 hours. Emails (to both instructor and TAs) that contain any relevant screenshots or links or files (attached with the work you've already attempted) are more likely to receive a quick response. Be aware that we cannot discuss specific grades over email. Students must discuss grades specifics during office hours or by appointment. Likewise, detailed questions regarding course material or assignments are best discussed in person rather than via email.

If you have a clarifying or technical question about an assignment, we encourage you to post your query on Canvas as other students are likely to share your question. Your instructor and TAs will monitor Canvas discussion posts and respond as soon as possible. If another student posts a question on Canvas about which you have insights or an answer, please don't hesitate to share your thoughts. Helping and engaging with your peers on Canvas is a great way to earn class participation credit.

Development of critical thinking skills is an intended benefit for students in this course. All career paths have something in common: the consistent need to identify and use available resources to solve problems and to navigate an ever-changing landscape. When opportunities or crises emerge, you must be able to make sense of the situation with your peers/ colleagues and thus respond strategically. As future managers, you will need to critically assess the changing context and deal with problems before they become problems. Thus, I hope all students in this course will adopt a "proactive, can-do, figure-it-out" attitude; for example, attempting to search for information and checking available resources (e.g., Canvas, the syllabus, your peers, the internet) before you escalate questions to the TAs or instructor. This is not meant to sound harsh or deter you from asking questions. The TAs and I are here to help you succeed in any way that we can. Please do not hesitate to ask questions of any kind or to reach out to us at any time. I underscore the importance of critical thinking and taking control of your own learning because most successful individuals are not necessarily the ones who have "the answers". Much more important is the capacity to identify and find relevant information and to develop working solutions by asking the right questions and seeking out resources accordingly.

Use of Laptops and Mobile Devices

NO ELECTRONIC DEVICES are allowed in the classroom (laptops, cellphones, I-pads, etc.) unless pre-approved by the instructor or required for a particular class session as announced by the instructor or included in the course schedule. Cell phones and tablets should be silenced and set aside except when needed (e.g. for Poll Everywhere). I reserve the right to adjust the class participation grade in response to classroom use of devices that creates a distraction for me or other students.

Academic Integrity

The pursuit of knowledge can proceed only when scholars take responsibility and receive credit for their own work. Recognition of individual contributions to knowledge and of the intellectual property of others builds trust within the University and encourages the sharing of ideas that is essential to scholarship. Similarly, the educational process requires that individuals present their own ideas and insights for evaluation, critique, and eventual reformulation. Presentation of others' work as one's own is not only intellectual dishonesty, but it also undermines the educational process. All students are expected to understand the university's policy about academic integrity; it can be found at: [Undergraduate Academic Integrity Policy and Procedures](#). Any violations of this policy will result in the student receiving penalties as prescribed by the university.

Accommodations for Students

If you are a student with a documented disability seeking reasonable accommodations in this course, please contact Kathy Duggan, (617) 552-8093, dugganka@bc.edu, at the Connors Family Learning Center regarding learning disabilities and ADHD, or Rory Stein, (617) 552-3470, rory.stein@bc.edu, in the Disability Services Office regarding all other types of disabilities, including temporary disabilities. Advance notice and appropriate documentation are required for accommodations. If you are feeling stressed, having challenges managing your time, sleep, or making choices around alcohol and food, the Office of Health Promotion (OHP) offers Individual and Group Health Coaching appointments with a trained Health Coach. Please reach out by going to the Health Promotion website or walk over to Gasson 025 and talk with a staff member. University resources can be found at this link: [Accommodations for Students](#).

Class Recordings

This class will be recorded by the instructor to assist students enrolled in the class who miss any sessions due to an excused absence, such as illness. In addition, the recordings can be a resource for all students who would like to review the material covered in class. All recordings will be stored within the Canvas site and will only be available for viewing by members of this course. Students may not record/stream video or audio, or take photos in the classroom, or share portions of any recorded video or audio of the class with anyone outside the class except with the written permission of the instructor and such other permissions as may be required by law or University policies.

Technology Support

You may call the BC Technology Help Center at (617) 552-HELP (4357), email help.center@bc.edu, live tech support chat, or visit the Technology Help website at www.bc.edu/help. Staff at the BC Help Center are always available to help you. You can get technology help regardless of where you buy your computer.

Tentative Schedule

What follows is a preliminary course schedule. The actual schedule, including a list of assignments and deadlines is available on Canvas and should be consulted regularly.

Date	Topic
Tue Aug 31	Technology & The Modern Enterprise
Thu Sep 2	Case: Zara
Tue Sep 7	Strategy & Technology
Thu Sep 9	Tech Workshop 1: Social Media (Twitter, LinkedIn, Canvas page)
Tue Sep 14	Industry Competitive Analysis
Thu Sep 16	Tech Workshop 2: Automation (IFTTT)
Tue Sep 21	Case: Netflix Act 1
Thu Sep 23	Case: Netflix Act 2
Tue Sep 28	Quiz 1
Thu Sep 30	Tech Workshop 3: A/B Testing (Optimizely)
Tue Oct 5	Moore's Law
Thu Oct 7	Case: Amazon
Thu Oct 14	Tech Workshop 4: Cloud Computing (Amazon Web Services)
Tue Oct 19	Case: Google
Thu Oct 21	Tech Workshop 5: Digital Advertising and Geotargeting (AdWords, IP addresses)
Tue Oct 26	Tech Workshop 6: Third-party cookies (DoubleClick/Lightbeam/AdblockPlus/WOT)
Thu Oct 28	Quiz 2
Tue Nov 2	Tech Workshop 7: Google Sheets and Web Scraping (Python)
Thu Nov 4	Network Effects I
Tue Nov 9	Network Effects II
Thu Nov 11	Revenue Models Case: Dropbox
Tue Nov 16	The Sharing Economy and Collaborative Consumption
Thu Nov 18	Quiz 3
Tue Nov 23	Tech Workshop 8: Financial Modeling (Excel)
Tue Nov 30	Case: Facebook; Tech Workshop 9: API
Thu Dec 2	Final Review
Tue Dec 7	Presentation
Thu Dec 9	Presentation
Thu Dec 16	Final Exam (4:00 p.m.)