



Analytics I – Summer 2023

Sections 1 and 3

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Sections 2 and 4

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Academic Coordinators:

For Praveen Kopalle and Prasad Vana: Geoff Gunning (geoff.gunning@tuck.dartmouth.edu)

For Raghav Singal: Elijah LaPlaca (elijah.j.laplaca@tuck.dartmouth.edu)

For Jim Smith: Jamie Blanford (jamie.a.blanford@tuck.dartmouth.edu)

Course Content and Objectives

Analytics is the rigorous and creative use of data and mathematical models to support decision-making. This course and Analytics II in the Fall term will provide a background in Descriptive, Predictive, and Prescriptive Analytics. Descriptive Analytics is focused on summarizing data visually and statistically to understand what is happening in the data, i.e., how the world works. Based on this understanding, Predictive Analytics uses statistical models to predict what might happen in the future. Prescriptive Analytics uses modeling and optimization techniques to prescribe or recommend actions.

The objectives of this course are (i) to help you become skilled at applying some common analytics techniques, (ii) to help you learn to be an intelligent consumer of data and analytics-based reports in business settings, and (iii) to encourage a more disciplined thinking process in the way you approach decision problems and use data. The goal is to help you become more competent and confident in understanding and using data and in creating analytical models for decision-making, both for other courses at Tuck and on the job.

The two-course Analytics sequence consists of four modules. Analytics I includes i) “Fundamentals of Analytics” (focusing on prescriptive analytics and decision-making under uncertainty) and ii) “Predictive Analytics.” Analytics II includes iii) “Prescriptive Analytics” and iv) “Advanced Analytics.”

Required Readings

The assigned readings will be drawn from the following texts:

- Module 1: “Decision Making Under Uncertainty” from *Practical Management Science: Spreadsheet Modeling and Applications* by Wayne L. Winston and Christian Albright.
- Module 2: *Applied Statistics for Business and Economics: An Essentials Version*, Third Edition, by Allen L. Webster.

Course Requirements

Homework assignments are listed in the day-by-day class schedule below. Assignments and instructions will be available in Canvas. All homework assignments should be uploaded to Canvas before the class session on the due date. Please follow the submission instructions in Canvas; some assignments will be submitted as Excel spreadsheets, while others should be PDFs.

There will be two exams in this course:

- Exam A: The exam will be administered on Saturday, September 9, from 9:00 am to noon. This exam will focus on Module 1 (classes 1–6).
- Exam B: This take-home exam will be available on Thursday, October 5, and will be due on Saturday, October 7, at noon. This will focus on Module 2 (classes 7–16).

Grading

In calculating your final grade, the components of the class will be weighted as follows to determine an overall score:

- Exam A: 30%
- Exam B: 40%
- Homework Assignments: 20%
- Class Participation: 10%

Your final grade will be assigned according to this score, following Tuck guidelines for core classes.

TA Sessions

Sessions with second-year teaching assistants (TAs) will be held from 6:00 to 7:30 pm. All TA sessions are optional. No new material will be introduced, and you should not feel obligated to attend if you do not feel the need. TA sessions will provide you with an opportunity for you to listen to other students' questions as well as give you a chance to ask your own.

The timing and format of the sessions differ between the first and second half of the Summer term:

- For the first six classes (led by Professors Singal and Smith), the TA sessions will be held the evening before each class except class #1. For these sessions, the TAs will be available to answer general questions about the course and assist with homework exercises, usually those due the next day.
- For the remaining classes (led by Professors Kopalle and Vana), the TA sessions will be held

in the evening on the same day as each class. For these sessions, TAs will review that day's material and answer questions.

There will also be the following optional review sessions before the exams:

- Exam A review session with Singal and Smith: Friday, Sept 8, 1:15-2:45 pm
- Exam B review session with Kopalle and Vana: Weds., Oct 4, 3:20-4:50 pm

Finally, there will be an R Tutorial on Tuesday, Sept 13, 1:30-2:30 pm or 3:20-4:20 pm.

All review sessions will be in person (check your calendars for location) and on Zoom: <https://dartmouth.zoom.us/j/95618865908?pwd=THFZNjdkY2hDTnYybFZSODJRemNBUT09> (meeting ID 95618865908 and password chase29).

Studying for the Course

The textbook chapters are easy to read and cover a lot of material. However, some of the topics are not covered in depth. Class discussions, handouts, and other references will fill these gaps. We expect you to read the assigned chapters and familiarize yourself with the content before class. The class discussion will aim to provide a good understanding of the concepts and their application.

Canvas Preparation, Quizzes, and Review

Some classes will be preceded by a custom set of videos and quizzes available on Canvas. The objective of the videos is for students to learn and apply analytics concepts or review class material. The idea is to use classroom time for more value-added learning. Completing these quizzes will count toward your class participation grade.

Software

The course begins with Excel and an Excel Add-in, TreePlan. TreePlan works in Windows and Mac environments and on Tuck's virtual desktop. Later we will introduce R/R Studio. We will provide documentation and videos with instructions on using these software packages.

Attendance

The Tuck educational experience is co-produced by students and instructors. Your preparation, presence, and active participation are important for its success. In Analytics, attendance is an important part of the class participation grade.

If you must miss a class (e.g., for illness or a family emergency), please email your professor and the class scribe before class. The email should include the date and reason for your upcoming absence. In accordance with Tuck's Honor Principle, you are expected to provide forthright, timely, complete, and accurate information about why you need to miss class. If you miss a class, you are responsible for knowing the material covered in that class.

It is Tuck's policy that missing a class for recruiting activities is not considered an excused absence. You are responsible for working with recruiters and career services to avoid these disruptions.

Laptop Policy

We will follow Tuck's laptop policy in this class: students shall not use laptop computers, cellular telephones, or any other electronic communication device in any class session unless the instructor grants explicit permission to do so. When laptops are needed for class, faculty will notify students.

Honor Principle

The Tuck Honor Principle represents a contract among students and instructors about appropriate behaviors in the learning process. This course is structured to promote learning through individual and team assignments. This structure encourages certain group interactions because they enable you to use time efficiently or improve your understanding of the material.

To prepare *Group Assignments*, we encourage collaboration among the entire study team. Your group as a whole will be expected to present the group's analysis in class (if called upon); all group members should be comfortable discussing the results in class.

Your *Individual Assignment* submissions must be your own work. You may consult with your study team members about the material covered in the assignment, but you must generate the homework submission independently, without copying materials (e.g., Excel files or writeups) from others. You are expected to understand all aspects of your submitted work and may be called upon to explain your work in class.

Both exams are open-book, open-notes (yours only), and require individual work without help from other students, the internet, or anybody other than the instructors.

Conversations with second-year students other than the TAs about specific assignments before their due dates are a violation of the Honor Principle. Also, please note that it is a violation of the Honor Principle to use any course materials, such as homework assignments, exams, etc., from previous versions of this course unless the instructors provide them to you.

ChatGPT and other large-language-model-based chatbots present new opportunities for both students and instructors. Our policy for this course is that students *may* consult ChatGPT when completing homework assignments (individual or group assignments) but *may not* consult ChatGPT (or similar tools) on exams. If you consult ChatGPT for a homework assignment, (i) we ask that you indicate that in your submission (e.g., by noting "answer prepared with the assistance of ChatGPT"); (ii) you are still responsible for being able to explain your answers (e.g., if called upon in class); and (iii) you are responsible for your answer, i.e., you will lose points if/when ChatGPT makes errors.

Course materials may not be shared with people other than your classmates without your instructor's permission.

If situations arise where the application of the Honor Principle is unclear, you should seek clarification from your instructor.

Course Schedule (S&S = Singal and Smith; K&V = Kopalle and Vana)

Class	Date and Professors	Topic	Assignments (all homework assignments are <i>individual assignments</i> , except where noted)
Module 1: Fundamentals of Analytics			
1.	8/23 Weds. (S&S)	Introduction, Decision Trees	Reading: Start Winston & Albright, pp. 391-430 Homework: Pre-Course Survey; River Vision
2.	8/24 Thurs. (S&S)	Sensitivity Analysis	Reading: Continue Winston & Albright, pp. 391-430 Homework: Zephtrix exercise
3.	8/28 Mon. (S&S)	Probability and Biases, Value of Perfect Information	Reading: Webster, Chapter 4, pp. 75-89 Homework: Vivia exercise
4.	8/30 Weds. (S&S)	Bayes' Theorem, Value of Information	Reading: Winston & Albright, pp. 430-441, Webster, Chapter 4, pp. 90-99 Homework: Probability and EVPI
5.	9/1 Fri. (S&S)	Utility Theory, Decision Heuristics	Reading: Winston & Albright, pp. 441-455 Homework: Cobalt drilling exercise
6.	9/6 Weds. (S&S)	Summary Statistics, and Simulation	Homework: Gillette vs Energizer (<i>Team Assignment</i>)
Module 2: Predictive Analytics			
7.	9/7 Thurs. (K&V)	Normal Distribution	Reading: Webster, Chapter 5, pp. 121-130 Statistical Analysis Using Excel Introduction to R/R-Studio documents and videos
	9/8 Fri. (S&S)	Exam A Review Session	1:15-2:45 pm
	9/9 Sat. (S&S)	Exam A	9 am-noon
	Due before Session 8	R Review Session	Asynchronous, Content on Canvas
8.	9/13 Weds. (K&V)	Covariance & Correlation, Variance of Sums	Reading: Covariance and Correlation Canvas: Covariance Preparation Quiz
9.	9/14 Thurs. (K&V)	Inference: Confidence Intervals	Reading: Webster, Chapter 6, pp. 141-154, Webster, Chapter 7, Confidence Intervals & Sample Size
10.	9/20 Weds. (K&V)	Inference: p-Values and Hypothesis Testing	Reading: Webster, Chapter 8, pp. 193-200, 206-211 Hypothesis Tests & p-values Homework: Descriptive Statistics, Covariance, and the Normal Distribution
11.	9/21 Thurs. (K&V)	Inference: A/B Testing	Reading: Webster, Chapter 9, pp. 225-229 Testing Differences Between Two Means
12.	9/25 Mon. (K&V)	Introduction and Statistical Inference in Bivariate Regression	Reading: Webster, Chapter 11, pp. 315-326, 332-343 Homework: Confidence intervals and Hypothesis Tests
13.	9/27 Weds. (K&V)	Prediction in Bivariate Regression	Reading: Webster, Chapter 11, pp. 343, 345-349
14.	9/28 Thurs. (K&V)	Multiple Regression and Omitted Variable Bias	Reading: Webster, Chapter 12.1-12.3
	10/1 Sunday		Homework: Simple Regression

Course Schedule, Continued

15.	10/3 Tues. (K&V)	Omitted Variable Bias, Multi-collinearity	Reading: Webster, Chapter 12.4-12.5
16.	10/4 Weds. (K&V)	Multi-collinearity, Course Summary	Homework: Simple and Multiple Regression
	10/4 Weds. (K&V)	Exam B Review Session	3:20 – 4:50 pm
	10/5 Thurs. (K&V)	Exam B	Available 10/5 Thurs. at 12:00 pm; due 10/7 Sat. at 12:00 pm. Take 3 contiguous hours.



Analytics II – Fall 2023

Sections 1 and 3

Professors:	Raghav Singal	Praveen Kopalle
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Scribe:	David Corriveau (david.corriveau@tuck.dartmouth.edu)	

Sections 2 and 4

Professors:	Jim Smith	Prasad Vana
Email:	jim.smith@dartmouth.edu	prasad.vana@tuck.dartmouth.edu
Office:	Tuck 209 (2:30-4pm Mon & Th)	Tuck 204 (1-3pm class days)
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Scribe:	Lydia McCollum (lydia.g.mccollum@tuck.dartmouth.edu)	

Academic Coordinators (ACs)

Main AC contact: Geoff Gunning (geoff.gunning@tuck.dartmouth.edu)
For Praveen Kopalle and Prasad Vana: Geoff Gunning (geoff.gunning@tuck.dartmouth.edu)
For Raghav Singal: Elijah LaPlaca (elijah.j.laplaca@tuck.dartmouth.edu)
For Jim Smith: Jamie Blanford (jamie.a.blanford@tuck.dartmouth.edu)

Course Content and Objectives

Analytics is the rigorous and creative use of data and mathematical models to support decision-making. This course and Analytics I in the Summer term will provide a background in Descriptive, Predictive, and Prescriptive Analytics. Descriptive Analytics is focused on summarizing data visually and statistically to understand what is happening in the data, i.e., how the world works. Based on this understanding, Predictive Analytics uses statistical models to predict what might happen in the future. Prescriptive Analytics uses modeling and optimization techniques to prescribe or recommend actions.

The objectives of this course are (i) to help you become skilled at applying some common analytics techniques, (ii) to help you learn to be an intelligent consumer of data and analytics-based reports in business settings, and (iii) to encourage a more disciplined thinking process in the way you approach decision problems and use data. The goal is to help you become more competent and confident in understanding and using data and in creating analytical models for decision-making, both for other courses at Tuck and on the job.

The two-course Analytics sequence consists of four modules. Analytics I includes i) “Fundamentals of Analytics” (focusing on prescriptive analytics and decision-making under uncertainty) and ii) “Predictive Analytics.” Analytics II includes iii) “Prescriptive Analytics” and iv) “Advanced Analytics.”

Required Readings

The assigned readings will be drawn from the following texts:

- *Applied Statistics for Business and Economics: An Essentials Version*, 3rd edition, by A. L. Webster
- *Business Analytics: The Art of Modeling with Spreadsheets*, 5th edition, by S. Powell and K. Baker
- *Business Analytics: Data Analysis and Decision Making*, 6th edition, by Albright, Winston, and Zappe

Course Requirements

Homework assignments are listed in the day-by-day class schedule below. Assignments and instructions will be available in Canvas. All homework assignments should be uploaded to Canvas before the class session on the due date. Please follow the submission instructions in Canvas; some assignments will be submitted as Excel spreadsheets, while others should be submitted in PDF format.

There will be two exams in this course:

- Exam A: Exam A will be administered on Friday, November 17 from 9am to 12pm. Students can take it from a location of their choice. The exam will focus on material up through Class 8.
- Exam B: Exam B will be a take-home exam. It will be available at 5pm on Friday, December 8, and will be due on Sunday, December 10, at noon. Students should take it in 3 *contiguous* hours. It will focus on material from Classes 9 to 16.

Grading

In calculating your final grade, the components of the class will be weighted as follows:

- Exam A: 35%
- Exam B: 35%
- Homework Assignments: 20%
- Class Participation: 10%

Your final grade will then be assigned according to this score, following Tuck guidelines for core classes.

TA and Review Sessions

Sessions with second-year teaching assistants (TAs) will be held from 6 to 7:30pm in Ankeny. All TA sessions are optional. No new material will be introduced, and you should not feel obliged to attend if you do not feel the need. TA sessions will provide you with an opportunity for you to listen to other students' questions as well as give you a chance to ask your own.

The timing and format of the sessions will differ during Fall:

- For the first 10 classes (led by Professors Singal and Smith), the TA sessions will be held the evening before each class. For these, the TAs will be available to answer general questions about the course and assist with homework exercises, usually those due the next day.
- For the last 6 classes (led by Professors Kopalle and Vana), the TA sessions will be held in the evening on the same day of each class. For these, TAs will review that day's material and answer questions.

There will also be the following optional sessions before the exams:

- Exam A review session (Singal and Smith): Thursday, Nov 16, 3:20 to 4:50pm over Zoom (virtual only).
- Exam B review session (Kopalle and Vana): Friday, Dec 8, 9 to 11am in Cook.

Unless otherwise indicated, all TA and review sessions will be in person and on Zoom:

<https://dartmouth.zoom.us/j/95618865908?pwd=THFZNjdkY2hDTnYybFZSODJRemNBUT09> (meeting ID 95618865908 and password chase29).

Studying for the Course

The textbook chapters are easy to read and cover a lot of material. However, some of the topics are not covered in depth. Class discussions, handouts, and other references will fill these gaps. We expect you to read the assigned chapters and familiarize yourself with the content before class. The class discussion will aim to provide a good understanding of the concepts and their application.

Canvas Preparation, Quizzes, and Review

Some classes will be preceded by a custom set of videos and quizzes that will be available on Canvas. The objective of the videos is for students to learn and apply Analytics concepts or review class material. The idea is to use classroom time for more value-added learning. Completing these quizzes will count toward your class participation grade.

Software

You are assumed to be familiar with Excel and R/RStudio, which were introduced in Analytics I. During Analytics II, we will also be working with three additional Excel Add-ins: *Solver*, *Sensit*, and *Solver Sensitivity*. All three are available for both Windows and Mac as well as on the virtual desktop. We will also be working with Tableau. We will provide documentation and videos with instructions on how to use these software packages.

Attendance

The Tuck educational experience is co-produced by students and instructors. Your preparation, presence, and active participation are important for its success. In Analytics, attendance is an important part of the class participation grade.

If you must miss a class (e.g., for illness or family emergency), please notify your professor and the class scribe by email before class. The email should include the date and reason for your upcoming absence. In accordance with the Tuck Honor Principle, you are expected to provide forthright, timely, complete, and accurate information about why you need to miss class. If you miss a class, you are responsible for knowing the material that was covered in that class.

It is Tuck's policy that missing a class for recruiting activities is not considered an excused absence. It is your responsibility to work with recruiters and career services to avoid these disruptions.

Laptop Policy

We will follow Tuck's laptop policy in this class: students shall not use laptop computers, cellular telephones, or any other electronic communication device in any class session unless explicit permission to do so is granted by that class's faculty member(s). For special cases in which laptops are needed, faculty will notify students.

Honor Principle

The Tuck Honor Principle represents a contract among students and instructors about behaviors that are appropriate in the learning process. This course is structured to promote learning by a combination of individual and team efforts. This structure encourages certain group interactions because they enable you to use time efficiently or because they improve your understanding of the material.

To prepare *Group Assignments*, we encourage collaboration among the entire study team. Your group as a whole will be expected to present the group's analysis in class (if called upon); all members of a group should be comfortable discussing the results in class.

Your *Individual Assignment* submissions must be your own work. You may consult with your study team members about the material covered in the assignment, but you must generate the homework submission independently, without copying materials (e.g., Excel files or writeups) from others. You are expected to understand all aspects of your submitted work and may be called upon to explain your work in class.

Both exams are open-book, open-notes (yours only), and require individual work without help from other students, the internet, or anybody other than the instructors.

Conversations with second-year students other than the TAs about specific assignments before their due dates are a violation of the Honor Principle. Also, please note that it is a violation of the Honor Principle to use any course materials, such as homework assignments, exams, etc., from previous versions of this course unless the instructors provide them to you.

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Course materials may not be shared with people other than your classmates without your instructor’s permission.

If situations arise where the application of the Honor Principle is unclear, you should seek clarification from the instructor.

Course Schedule (K&V = Kopalle and Vana; S&S = Singal and Smith)

Class	Date and Professors	Topic	Assignments (all homework assignments are <i>individual assignments</i> , except where noted)
Module 3: Prescriptive Analytics			
1.	10/18 Weds. (S&S)	Spreadsheet Engineering	Reading: Baker and Powell, Chapters 1 and 3 Homework: Reid's Raisins
2.	10/19 Thurs. (S&S)	Spreadsheet Analysis	Reading: Powell and Baker, Chapter 4 Homework: Reid's Raisins Sensitivity
3.	10/25 Weds. (S&S)	Problem Structuring	Reading: Powell and Baker, Chapter 2.1-2.3 Homework: Influence Diagram Exercises
4.	10/26 Thurs. (S&S)	Introduction to Optimization	Reading: Albright et al., Chapters 13.1-13.3 Homework: Strava (<i>Team Assignment</i>)
5.	11/1 Weds. (S&S)	Optimization Examples	Homework: Valu-Com
6.	11/2 Thurs. (S&S)	Optimization and Sensitivity Analysis	Reading: Albright et al., Chapters 13.4-13.9 Homework: BrightLink
7.	11/8 Weds. (S&S)	Optimization in Revenue Management	Homework: SkyJet
8.	11/9 Thurs. (S&S)	Applications of Optimization	Homework: School Assignment
Module 4: Advanced Analytics			
9.	11/15 Weds. (S&S)	Data Exploration	Homework: Grupo Nogueira (<i>Team Assignment</i>), Tableau Quiz
10.	11/16 Thurs. (S&S)	Data Visualization	Homework: Data Visualization Using Tableau
	11/16 Thurs. (S&S)	Exam A Review Session	3:20 to 4:50pm
	11/17 Fri. (S&S)	Exam A	9am to 12pm
11.	11/20 Mon. (K&V)	Dummy Variables in Multiple Regression	Reading: Webster, Chapter 12.7
12.	11/21 Tues. (K&V)	Dummy Variables in Multiple Regression (contd.)	Reading: Webster, Chapter 12.7
13.	11/29 Wed. (K&V)	Optimization and Regression Modeling	Reading: Webster, Chapter 12.8 Homework: Allocating Shelf Space (<i>Team Assignment</i>)
14.	11/30 Thurs. (K&V)	Unsupervised Machine Learning: Cluster Analysis	Reading: Note on Cluster Analysis Homework: Dummy Variable Regression
	12/4 Mon. (K&V) (Optional)	Guest Speaker: Avi Goldfarb	TBA
15.	12/6 Weds. (K&V)	Supervised Machine Learning: Neural Networks	Homework: Based on k-means analysis
16.	12/7 Thurs. (K&V)	Supervised Machine Learning: Large Language Models	TBA
	12/8 Fri. (K&V)	Exam B Review Session	9 to 11am
	12/8 Fri. (K&V)	Exam B	Available 12/8 Fri. at 5pm; due 12/10 Sun. at 12pm. Take 3 <i>contiguous</i> hours.



Tuck School of Business

CAPITAL MARKETS Fall 2023

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The capital markets play a critical role in the economy: they allow firms to raise cash and manage risks, governments to finance the occasional budget deficit, and individuals to invest and grow their savings. In this course, we study how the capital markets work and how and why they are useful to firms and investors. We'll discuss the basics—how are the bond, stock, and derivatives markets organized? how does trading take place?—as well as more advanced topics including the determinants of interest rates, firm valuation, portfolio selection and risk, the behavior of stock prices, and the pricing and uses of financial derivatives. These topics are important for all managers, entrepreneurs, and investors, not just for CFOs, bankers, and money managers.

Class preparation

Assignment sheets for each class are provided on Canvas. They include a mixture of readings, study questions, and written homework that will be graded. You should prepare the assignments **before class** (including study questions that do not need to be handed in) and be ready to participate actively in the class discussion.

Class slides will be available on Canvas prior to every class (typically by 5pm on the previous day). Hard copies will be distributed in class.

Graded assignments should be completed in your study groups and uploaded to Canvas as **PDF files prior to class (one upload per group)**. Please format your answers to make them easy to read. Much of our discussion in class, and most exam questions, will build directly on the assignments. As such, we encourage you to work on them individually and in groups to ensure you truly understand the answers. Your grade will likely suffer if you do not keep up with the assignments or delegate responsibility to particular group members. Late homework will not be graded.

Attendance

Class attendance is mandatory, and absences for anything except medical reasons and emergencies will impact your final grade.

If you need to miss class, please let your professor and class scribe know ahead of time. You remain responsible for knowing any material you miss and for helping with group assignments that are due on a day you miss. Otherwise, there is nothing to do to 'make up' a missed class.

Financial Market Updates

Each study group is assigned to present a 5-minute ‘FMU’ during the term on a topic related to capital markets. The assignments can be found on Canvas. **Presentations should be a maximum of 5 slides, and your grade depends in part on finishing in the allotted time.** Please upload your slide deck to Canvas by 8:00am and be prepared to present at the start of class. We are happy to review your slides ahead of time if you would like feedback.

Review sessions

We will hold optional Q&A sessions in our usual classrooms on Oct 19, 24, and 31 and Nov 14 and 28. Prof Lewellen’s sessions are 1:30–2:30pm and Prof Hinzen’s sessions are 3:00–4:00pm (except on Oct 31, when both sessions will be 3:15–4:15pm). You may attend either session.

There will also be a midterm review on Nov 9 and a final review on Dec 7. These are scheduled for 1:30–3:00pm for Prof Hinzen and 3:20–4:50pm for Prof Lewellen. Please see Canvas for room assignments. Again, you may attend either session.

Exams

The midterm exam is scheduled for Friday, Nov 10, 9:00am–12:00pm. The final exam is scheduled for Tuesday, Dec 12, 9:00am–12:30pm. The exams will be online and must be taken at the assigned time.

The exams are ‘closed book’ except for the formula sheet and spreadsheets we provide and a 1-page, double-sided, handwritten notes page that you may prepare ahead of time. You may not use any online resources, including ChatGPT or similar systems, during the exams.

Grading

Final grades in Capital Markets are based on class participation (10%), assignments (15%), the midterm exam (30%), and the final exam (45%).

Tuck Honor Code

Needless to say, the faculty take the Honor Code seriously and view it as a critical aspect of the learning environment. The prevalence of group work is consistent with Tuck’s philosophy that your classmates are a key part of your education. At the same time, it is essential for you to master the material on your own. Thus, while assignments should be completed in groups, putting your name on an assignment certifies that you helped in its preparation and understand the answers. The exams must be completed without outside help or the use of online resources. It is a violation of the Honor Code to use homework answers or exams from previous years. It is also a violation of the Honor Code to share course material with outside parties (e.g., posting material to sites like Course Hero).

Course material

All course material—the syllabus, assignment sheets, FMUs, readings, class slides, spreadsheets, review material, HW answers—will be available on Canvas.

The textbook is *Corporate Finance (13th ed., McGraw-Hill)* by Ross, Westerfield, Jaffe, and Jordan. This book will also be used in Corporate Finance in the winter. You may use previous editions of the textbook but please note that page and section numbers will differ slightly.

CAPITAL MARKETS

Schedule

Session	Day	Date	Topic
1	Mon	Oct 16	Introduction to Capital Markets
2	Tues	Oct 17	The Bond Market
3	Thurs	Oct 19	Interest Rate Risk
4	Mon	Oct 23	Term Structure of Interest Rates
5	Tues	Oct 24	Bond Investment Strategies
6	Mon	Oct 30	Stock Valuation
7	Tues	Oct 31	Stock Returns and Volatility
8	Mon	Nov 6	Portfolios
9	Tues	Nov 7	The CAPM
	Fri	Nov 10	Midterm Exam 9:00am – 12:00pm
10	Mon	Nov 13	Cost of Capital
11	Tues	Nov 14	Factor Models
12	Tues	Nov 21	Market Efficiency
13	Mon	Nov 27	Forwards and Futures
14	Tues	Nov 28	Options
15	Mon	Dec 4	Option Pricing
16	Tues	Dec 5	Risk Management
	Tues	Dec 12	Final Exam 9:00am – 12:30pm

Detailed Schedule

Assignment sheets for every class are provided on Canvas. These sheets provide detailed guidance on preparing for class.

Readings marked 'RWJ' refer to chapters in the textbook; readings marked 'Canvas' are available on Canvas.

Class 1 (Mon, Oct 16): Introduction to Capital Markets

Reading

- Canvas: Financial Math
- Canvas: Standard & Poor's Guide to Understanding Money & Investing (excerpt)

Topics

- Introduction to the course
- Introduction to the capital markets
- DCF analysis

Class 2 (Tues, Oct 17): The Bond Market

Reading

- Canvas: Bonds
- RWJ Sections 8.1–8.3

Topics

- Overview of the bond market
- U.S. Treasury bonds
- Price and yield to maturity (YTM)
- Accrued interest
- Bond price quotations

Class 3 (Thurs, Oct 19): Interest Rate Risk

Reading

- Canvas: Immunization 101

Topics

- Interest rate risk
- Yields vs. returns
- Macaulay and modified duration
- Immunization

Class 4 (Mon, Oct 23): Term Structure of Interest Rates

Reading

- Canvas: Term Structure of Interest Rates
- RWJ Sections 8.4–8.5

Topics

- Short-term vs. long-term interest rates
- Spot rates vs. yields
- Forward rates
- Expectations Hypothesis

Class 5 (Tues, Oct 24): Bond Investment Strategies

Reading

- Review material from classes 1–4

Topics

- Hedging vs. speculating on interest rates
- Arbitrage and the Law of One Price

Class 6 (Mon, Oct 30): Stock Valuation

Reading

- RWJ Sections 6.2 (skim), 9.1, 9.3, 9.4
- Canvas: Valuing Apple
- Canvas: The truth about what Facebook is really worth
- Canvas: Cantor Fitzgerald Equity Research, Facebook Inc.

Topics

- Dividend discount model
- Free cash flow discount model
- Long-run growth rates and terminal value
- Multiples

Class 7 (Tues, Oct 31): Stock Returns and Volatility

Reading

- RWJ Chapter 10

Topics

- Overview of the stock market
- Total returns, excess returns, nominal returns, real returns
- Historical returns and volatility

Class 8 (Mon, Nov 6): Portfolios

Reading

- RWJ Sections 11.1–11.7

Topics

- Expected return and variance of a portfolio
- Diversification
- Optimal portfolios

Class 9 (Tues, Nov 7): The CAPM

Reading

- RWJ Sections 11.8–11.9

Topics

- Diversifiable vs. nondiversifiable risk
- Beta
- Expected returns

Midterm Exam: Friday, Nov 10, 9:00am – 12:00pm

Class 10 (Mon, Nov 13): Cost of Capital

Reading

- RWJ Sections 13.1–13.3, 13.8–13.10
- Canvas: MedPointe Healthcare

Topics

- Using the CAPM
- Leverage and WACC

Class 11 (Tues, Nov 14): Factor Models

Reading

- Canvas: Understanding Risk and Return
- Canvas: Cap M in Crunch Time

Topics

- CAPM vs. multifactor models
- Mutual fund performance
- Alpha

Class 12 (Tues, Nov 21): Market Efficiency

Reading

- RWJ Sections 14.2–14.7

Topics

- Efficient markets hypothesis
- Anomalies
- Implications and evidence

Class 13 (Mon, Nov 27): Forwards and Futures

Reading

- RWJ Sections 25.1–25.3
- Note on Arbitrage-free Currency Forward Rates

Topics

- Futures vs. forward contracts
- Margin accounts
- Marking to market
- Forward price
- Covered interest parity

Class 14 (Tues, Nov 28): Options

Reading

- RWJ Sections 22.1–22.6

Topics

- Option terminology
- Strike prices, intrinsic values, and moneyness
- Payoffs and returns

Class 15 (Mon, Dec 4): Option Pricing

Reading

- RWJ Section 22.7–22.8

Topics

- Put-call parity
- Binomial option pricing
- Black-Scholes option pricing
- Factors influencing option prices

Class 16 (Tues, Dec 5): Risk Management

Reading

- Review material from classes 13, 14, and 15

Topics:

- Implied volatility
- Managing risk with futures and options
- Hedged vs. unhedged returns
- Costs and benefits of hedging with puts, calls, and futures

Final Exam: Tuesday, Dec 12, 9:00am – 12:30pm



FINANCIAL ACCOUNTING

Summer 2023

Contact Info

Professor: Leslie Robinson

- Office: 114 Buchanan
- Phone: 603-646-4018
- Email: Leslie.A.Robinson@Tuck.Dartmouth.EDU

Academic Coordinator:

- Office: 004 Woodbury
- Phone: 603-646-6992
- Elijah LaPlaca elijah.j.laplaca@tuck.dartmouth.edu

Course Scribe: None (please communicate class absences to Elijah LaPlaca)

T'25 Course Reps:

- Section 1: TBD
- Section 3: TBD

T'24 Teaching Assistants:

- Gabriela Loureiro: Gabriela.Loureiro.TU24@Tuck.Dartmouth.EDU
- Summer Lagambi: Summer.A.Legmbi.TU24@Tuck.Dartmouth.EDU
- Benjamin Jones: Benjamin.F.Jones.TU24@Tuck.Dartmouth.EDU
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- Gagan Makhija: Gagan.Makhija.TU24@Tuck.Dartmouth.EDU

Course Objectives

The core Financial Accounting course at Tuck is managerially oriented and focuses on the most salient aspects of accounting. It is designed to help MBA students learn how to read, analyze, and interpret financial accounting data to make informed business decisions. Students should not expect to become technical experts, but rather to be able to confidently converse with accountants and non-accountants in a future career in business. You will learn the *concepts* that underlie financial statements and develop intuition needed to make connections between accounting and other disciplines such as finance, strategy, marketing and economics. The concepts and applications from this course will benefit any student interested in working in the financial services industry, corporate/strategic development of a business, as well as working in marketing, brand management or operations for a corporation and being responsible for a product or divisional budget, projections and profit/loss statement.

Course Materials

1. Calcbench

You will need to setup an account with Calcbench at <https://www.calcbench.com/dartmouth>. We will use this financial tool to examine accounting disclosures and analyze financial data contained in 10-Ks and 10-Qs throughout the course. If you have any trouble, please email support@calcbench.com.

2. Financial Accounting for MBAs Textbook (Optional eBook)

If you are new to accounting you might find the eBook useful. There are course notes for each topic but the eBook is more extensive and with many examples. Background reading from the eBook, however, will also take more time as the course notes are more condensed. The eBook is **Financial Accounting for MBAs**, 8th Edition, by P. Easton, J. Wild, R. Halsey, and M. McAnally 2021, Cambridge Business Publishers. **If you wish to access the eBook, instructions are below. There is no cost to you.**

1. Go to your course in Canvas.
2. Find and launch any myBusinessCourse assignments.
3. If it is your first time integrating and you do not have an account with myBusinessCourse, one will automatically be created for you. If you already have an account, you will be prompted to login.
4. Enter the following access code in the *Enter Access Code* option:
89pBUtkYCb9gnTKs
5. Select **Submit**

If you have any trouble, please email mbcsupport@cambridgepub.com.

Sharing the access code above with anyone other than T'25s enrolled in Sections 1 and 3 is a violation of the Tuck Academic Honor Principle.

Course Grade

Course grades in Financial Accounting are based on class participation (10%), homework assignments (30%), the midterm (30%), the financial forecast project (10%), and the final exam (20%). Note that there is a mixture of group and individual assignments (i.e., most assignments for the first few weeks are to be completed individually although collaboration is encouraged). The final project has both a group component and an individual component. Exams are strictly individual work.

Class Preparation

Class preparation documents for each class session are provided on Canvas. They include a summary of key concepts covered, suggestions for background reading, class notes and required homework that will be graded. Refer to each homework assignment in Canvas for details regarding what to submit. Note that some assignments (those completed in the first few weeks) are to be completed individually, while later assignments are completed in your assigned study groups.

You should prepare the required homework assignments **before class** (including consideration of study questions that do not need to be handed in) and be ready to participate actively in the class discussion. Homework will be graded based on perceived effort (i.e., 0 = nothing handed in; 1 = poor effort; 2 = good effort). I will drop your two lowest homework grades at the end of the course.

Assignments should be uploaded to Canvas **prior to class (for group assignments, you only need to upload one solution per group)**. Please format your answers to make them easy to read. Much of our discussion in class, as well as exam questions, will build directly on the concepts covered in the assignments. As such, I encourage you to review all assignments individually and in your groups to ensure that you truly understand the key concepts covered in each assignment.

Your grade in the course (not to mention your understanding of financial accounting) will almost certainly suffer if you do not keep up with the assignments or delegate assignments to group members. Late homework will not be graded.

Support Outside of Class Hours

You will find faculty/TA support outside of the classroom in three ways. Note that office hours and optional review sessions will populate your Outlook calendar as part of your normal course Exchange sync. These events will appear as free time.

1. Faculty Office Hours:

<https://dartmouth.zoom.us/my/lesrob>

Professor Robinson will be available to answer clarification questions about upcoming assignments, or to review solutions to past assignments on a first come first serve basis.

Virtual (Zoom): 7:00pm - 8:00pm: Aug. 21, 22, 23, 29, 30, Sep. 5, 6, 12, 13, 19, 20, 26, 27, Oct. 1, 3

2. Teaching Assistant (TA) Office Hours:

Two TAs will be available to answer clarification questions about upcoming assignments, or to review solutions to past assignments on a first come first serve basis.

In-person (Barclay): 7:00pm - 8:00pm: Aug. 21, 22, 23, 29, 30, Sep. 5, 6, 12, 13, 14, 19, 20, 26, 27, Oct. 1, 3, 5

3. Review Session with TAs:

During these optional sessions, you will solve practice problems related to each week's material. Both the problems and solutions are posted in Canvas. You are encouraged to work on these problems regardless of whether you do so during the review session as they are a good way for you to gauge your understanding of the material.

In-person (Rosenwald): 5:00pm - 6:00pm on Aug. 24, 31, Sep. 7, 21, 28

Midterm and Final Exam

The midterm and final exam will be administered *online* and accessed via Canvas as an Assignment. Therefore, all practice midterm and final exams are also available in Canvas as online exams.

Completion of the online practice exams is optional and will not impact your course grade, however, a side benefit to looking at them is that the more familiar you are with the 'look and feel' of online testing the more comfortable you will be on the day of the actual midterm and final. If you actively participate in the learning process, attend all class sessions, and diligently complete all of the homework assignments, you will be prepared to tackle the content of these exams.

MIDTERM

The online midterm exam will be offered on Friday, September 15th from 9am - 12pm.

I will host an optional midterm review on Thursday, September 14th from 3:20pm - 4:50pm in **Georgiopoulos**. We will review key concepts covered during class sessions 1 through 9.

FINAL

The online final exam will be offered on Friday, October 6th from 9am - 12pm.

I will host an optional final review on Thursday, October 5th from 3:20pm - 4:50pm in **Cook**. We will review key concepts covered during class sessions 10 through 14. Expect the final exam to feel cumulative in nature, as content builds throughout the course.

Attendance Policy

Class attendance is mandatory. Absences, except for emergencies, may adversely impact your final class participation grade (missing class for recruiting activities is not an excused absence). If you must miss a class, **please email elijah.j.laplaca@tuck.dartmouth.edu** prior to class, noting the reason for your absence. Of course, you remain responsible for knowing the material and for completing assignments that are due on a day you miss. Otherwise, there is nothing to do to 'make up' a missed class.

Tuck Academic Honor Principle

The Tuck Faculty take the Tuck Academic Honor Principle seriously and view it as a critical aspect of the learning environment.

Tuck's Academic Honor Principle: "Integrity and honesty in the performance of academic activities, both in the classroom and outside, are essential to the educational experience for which the Tuck School has always stood. Each member of the Tuck community accepts the personal responsibility to uphold and defend high ethical standards in all academic endeavors, and to promote an atmosphere in which honest and imaginative academic work may flourish."

The prevalence of group work is consistent with Tuck's philosophy that much of your education will come from each other. At the same time, it is essential for you to master the material on your own and to evidence this mastery on exams taken as individuals. Thus, while group assignments should be completed in groups, putting your name on the assignment certifies that you helped in its preparation and understand essentially all of the answers provided (not just a small component assigned to you).

All exams must be completed without outside help and reflect individual work.

It is also a violation of the Academic Honor Principle to use course materials from previous years without my explicit permission.

Schedule

Session	Day	Date	Topic
1	Tues	Aug 22	Introducing financial accounting
2	Wed	Aug 23	Constructing financial statements
3	Thurs	Aug 24	Accruals and deferrals
4	Wed	Aug 30	Earnings versus cash flow
5	Thurs	Aug 31	Revenue recognition
6	Wed	Sept 6	Cash flow reporting
7	Thurs	Sept 7	Financial analysis
8	Wed	Sept 13	Building a three-statement model
9	Thurs	Sept 14	Using a three-statement model
	Fri	Sept 15	Midterm Exam
10	Wed	Sept 20	Accounts receivable & revenue
11	Thurs	Sept 21	Inventory & cost of goods sold
12	Wed	Sept 27	Long-term assets & depreciation and amortization
13	Thurs	Sept 28	Equity & share issuance and repurchase
14	Wed	Oct 4	Liabilities & interest expense
15	Thur	Oct 5	Final project presentations
	Fri	Oct 6	Final Exam



FINANCIAL ACCOUNTING

Summer Term, 2023

Professor Phillip Stocken
206 Chase Hall
603-646-2843

Course Objectives

The objectives of the Financial Accounting course are to develop your leadership capability by helping you (1) understand the concepts and *measurements* that underlie corporate financial statements, (2) develop the skills needed to *analyze* financial statements effectively, and (3) understand the choices firms make in *reporting* the results of their business activities.

The first portion of the course develops the fundamental concepts and procedures underlying corporate financial statements (including the income statement, balance sheet and statement of cash flows) that are prepared under generally accepted accounting principles. The second portion introduces tools for analyzing profitability and risk and for preparing projected financial statements. The third portion studies the impact on corporate financial statements of alternative accounting choices available under generally accepted accounting principles and explores the faithfulness with which a firm's financial reporting strategy reflects its underlying economic circumstances.

Tuck's mission is to educate wise leaders. It develops the functional skills that business leaders need to make decisions, the tools used to gather and analyze data, and the leadership ability to craft, communicate, and execute a vision for change with and through other people. The three parts of this course contribute to leadership development in the following ways:

- First, a leader recognizes that willingness to change is often essential to the health and growth of the organization. To assess the need for change, a leader should be capable of evaluating the financial health of the organization and assess its health relative to its competitors. Accordingly, the first portion of the course enables a student to understand how a generic firm's activities are reported and to assess the firm's performance and financial position.

- Second, to craft a compelling vision for the future, a leader must understand the firm as a whole since a general manager bears responsibility for the entire organization. A leader must also evaluate how factors external to the firm are changing and devise innovative approaches to address these changes. To effectively guide execution of the vision with and through other people, a leader aligns all aspects of the organization with this strategic vision. The second portion of the course enables a leader to evaluate a generic firm's performance and risk, assess its performance relative to its rivals, and identify ways of improving its performance. This portion of the course emphasizes how key performance indicators must align with the general manager's vision for the future and how the firm's pro forma financial statements and budgets are used to communicate this vision throughout the organization and to capital market participants, such as investors and analysts.
- Third, by carefully examining the accounting policies and procedures that are used to measure and recognize a firm's key activities, the third portion of the course enables a leader to better understand the firm's economics performance and to represent this performance more faithfully to capital market participants and people within the organization. Thus, this portion empowers a leader to better understand the need for change and communicate and guide execution of the leader's vision with and through other people.

Course Materials

All course material is provided in the Canvas portal — the learning management system that Tuck uses. An electronic copy of the *course packet*, which is in Canvas, contains course assignments, practice exams, and the class notes. These notes and relevant cases should be brought to each class session.

If you are seeking an expanded discussion of concepts over and above the course notes, chapter readings and optional problems listed later in the syllabus are provided in the course textbook, *Financial Accounting: An Introduction to Concepts, Methods, and Uses*, by Weil, Schipper and Francis (14th edition). Various electronic and hardcopy options are available at <https://www.cengage.com/c/financial-accounting-an-introduction-to-concepts-methods-and-uses-14e-weil/9781111823450PF/>

Class Preparation and Participation

Class preparation consists of assigned (1) readings (2) asynchronous videos, and (3) problems and cases. You should be prepared to discuss all aspects of an assignment in class.

The most important requirements for this course are thorough preparation and analysis of the class notes and related reading material before each class. In addition, in anticipation of the class session, you should carefully study the asynchronous videos provided in Canvas and analyze the assigned problems and cases, as indicated in the syllabus that follows on page 6 onwards of this syllabus. Thorough preparation before each class session will allow you to actively participate during the class sessions by both asking and responding to questions.

Optional problems are suggested in the syllabus if you find that you need either guidance before preparing the assigned problems or additional practice to reinforce the concepts covered in class. Solutions to all optional problems listed in the syllabus are available in the course folder in Canvas.

You are asked to turn in solutions to assigned problems or cases at the end of each week (thereby allowing you to sequence your workload for the week among your various courses). These problems and cases are denoted by an asterisk in the syllabus. All homework solutions will be handed in electronically in Canvas - instructions for doing so are on page 15 of this syllabus. Homework assignments are meant to be a learning tool and a way to gauge your level of understanding. While you should feel free to discuss these assignments with your learning team or seek assistance with these assignments, you are *individually* responsible for turning in each assignment.

Grading

Your course grade will be based on a mid-term examination, a final examination, submitted assignments, and class participation. The midterm will emphasize material covered in sessions 1 to 9. The final examination will emphasize material covered in sessions 10 to 15. There is a cumulative nature to the material in this course, however, so that some testing of earlier material is inevitable. The exam and related solutions from the prior two offerings of the course are in Canvas. As the exams in this course will be administered via Canvas, the exam content from the prior two years is provided in Canvas to allow you to practice taking an on-line exam.

Each exam will be closed-book and notes. Each student may bring to the exam one page (8.5 × 11) of memory notes that are individually prepared; both sides of the page can be used. You may use your computer or a hand-held calculator in exams for mathematical calculations only.

The following guidelines will be used to evaluate your overall course performance:

Mid-term Exam	35%
Final Exam	35
Class Participation	15
Homework	<u>15</u>
	<u>100%</u>

If a student's mean adjusted score for the Final Exam improves relative to the mean adjusted score for the Midterm Exam, the Midterm Exam will receive a weight of 20% and the Final Exam a weight of 50%.

Assistance with the Course

There are three sources of additional help with the course. First, I am happy to schedule office visit appointments (as social distancing regulations permit). To schedule a visit, please send me an email.

Second, I will host weekly evening office hours as listed on page 14 of this syllabus– see ‘Optional Sessions for Assistance with the Course’. The purpose of these office hours is to reinforce concepts by working through additional problems; no new concepts will be introduced. The problems and solutions will be available in advance in Canvas.

Third, second-year student teaching assistants will hold office hours as listed on page 15 of this syllabus – see ‘Optional Sessions for Assistance with the Course’. The purpose of these office hours is to answer specific questions on a one-on-one basis. There will not be a formal presentation.

Attendance Policy

You are expected to attend all classes in the section to which you are assigned unless an emergency prevents you from doing so. Please notify me and the class scribe in advance of any absences. Failure to attend and participate in classes will adversely affect your course grade and more than three unexcused absences will result in a failing grade.

The class participation grade is affected by general “classroom” behavior. Students will lose points in this category for: being absent without informing your professor ahead of time, not using the video functionality of zoom, arriving late to class, or leaving class early, or exhibiting behavior considered to obstructive to the learning of other students in class.

Tuck Honor Code

The Academic Honor Code is a critical aspect of the learning environment at Tuck. The prevalence of group work is consistent with Tuck’s philosophy that much of your education at Tuck will come from each other, and we encourage you to discuss all assignments within your learning team before class. At the same time, it is essential for you to work through the assignment on your own to master it and to solidify your understanding. A common mistake is to overly rely on others in the learning process.

In this light, the final deliverable for all assignments should be your own *individual* work. The desirable sequence is for you to read and prepare a solution to the assignment on your own before working with your learning team. As a result of discussions within your learning team, you should then go back and revise your solution on your own. There should never be a unique solution that is essentially identical by all members of the learning team as your solution reflects your own thinking.

Discussion of assignments with *second-year* students (except course teaching assistants) before submitting for a grade is a violation of the Honor Code. Once an assignment is turned in, you may discuss it with anyone. Obtaining past course material (e.g., past cases or past exams) not included in the course packet or otherwise made available by the faculty is a violation of the Tuck Honor Code.

During the exams, you may not consult with anyone except Professor Stocken.

The use of ChatGPT and similar systems is expressly forbidden on the midterm exam and the final exam. You are welcome to use ChatGPT to aid in answering your homework assignments.

If you have any questions about how the Honor Code applies to any other aspect of this course, please ask.

Learning Objectives and Assignments

Notations defined:

- * denotes homework assignment to be handed-in to be graded.
- CP denotes cases / reading materials in the Canvas Portal.
- CASE denotes cases subject to cold calls during the on-line class sessions.

I. Financial Measurement

Session 1: Tuesday, August 22

Overview of Business Activities and Principal Financial Statements

Learning Objectives

1. Discuss purpose of financial reporting.
2. Obtain an overview of the principal activities of firms and how the activities relate to the three principal financial statements.
3. Observe the types and limitations of financial statements.

Read: *Overview* course notes (Chapter 1 from textbook).

View: “Overview of Financial Accounting” in Canvas.

Have the extracts from Walmart’s 2023 Annual Report (CP) on hand.

Optional Problems: 1-34, 1-35, 1-38, 1-39 from textbook.

Balance Sheet: Measuring the Financial Position

Learning Objectives

1. Understand that the purpose of the balance sheet is to report the results of a firm’s investing and financing activities at a point in time.
2. Apply the accounting concepts for asset and liability recognition, valuation and disclosure under generally accepted accounting principles (GAAP).

Read: *Balance Sheet* course notes (Chapter 4 from textbook).

Complete: Learning assessment in Canvas.

Optional Problems: 4-22, 4-24, 4-26 from textbook.

Session 2: Wednesday, August 23

Balance Sheet (continued)

Learning Objectives

3. Discuss the key components of owners’ equity.
4. Apply the double-entry recording framework to a series of transactions that results in a balance sheet.

Read: *Balance Sheet* course notes (Chapter 2 from textbook).

Complete: Learning assessment in Canvas.

Prepare: General Enterprises – Part A (in course notes).

Optional Problems: 2-15, 2-18 from textbook, Refresh Inc. (Part A).

I. Financial Measurement (cont.)

Session 3: Thursday, August 24

Income Statement: Measuring Operating Performance over a Period

Learning Objectives

1. Understand that the purpose of the income statement is to report the results of a firm's performance over a fiscal period.
2. Understand the difference between the cash basis and the accrual basis.
3. Apply the accounting concepts for revenue recognition and measurement under the accrual basis.
4. Apply the accounting concepts for expense recognition and measurement under the accrual basis.
5. Discuss the relation between the income statement and balance sheet.

Read: *Income Statement* course notes (Chapter 5 from textbook).

Complete: Learning assessment in Canvas.

Prepare: Top Line CASE (CP).

Optional Problems: 5-11, 5-13, 5-28 from textbook.

Week 1 Homework due Friday, August 25 by 11:59 pm:

Small Beginnings (CP)*

I. Financial Measurement (cont.)

Session 4: Wednesday, August 30

Income Statement (continued)

Learning Objectives

6. Apply the double-entry recording framework to a series of transactions that results in a balance sheet and an income statement.

Read: *Income Statement* course notes (Chapter 3 from textbook).

Complete: Learning assessment in Canvas.

Prepare: WorldCom CASE (CP), General Enterprises – Part B (in course notes).

Optional Problem: 3-24, 3-27, 3-31 from textbook, Mary Lou's, Refresh Inc. (Part B), Tertia

Session 5: Thursday, August 31

Statement of Cash Flows: Measuring the Cash Flow Effects of Operating, Investing, and Financing Activities

Learning Objectives:

1. Discuss the information value of the statement of cash flows.
2. Discuss the relation between the statement of cash flow, income statement, and balance sheet.
3. Develop skills in transforming income statement and balance sheet data to cash flow data.

Read: *Statement of Cash Flows* course notes (Chapter 6 from textbook).

Complete: Learning assessment in Canvas.

Prepare: Steady Company (in course notes).

Optional Problems: 6-33, 6-34, 6-36 from textbook.

Week 2 Homework due Friday, September 1 by 11:59 pm:

Up-and-Running (CP)*

Up and Running: Watch the Cash! (CP)*

I. Financial Measurement (cont.)

Session 6: Wednesday, September 6

Statement of Cash Flows (continued)

Learning Objectives

4. Reinforce skills in transforming income statement and balance sheet data to cash flow data.
5. Consider relations between net income and cash flow from operations and between cash flows from operating, investing, and financing activities for various types of businesses.

Prepare: U.S. Steel Corporation (in course notes).

Complete: Learning assessment in Canvas.

Optional Problems: 6-40, 6-41 from textbook, Psilos, Snow Hut.

II. Financial Analysis

Session 7: Thursday, September 7

Financial Statement Analysis

Learning Objectives:

1. Introduce tools for analyzing a firm's overall profitability (Return on Assets) and examine how profit margin and asset turnover ratios provide information about the strategy of a business.
2. Analyze a firm's Return on Equity and discuss the effect of financial leverage on a firm's Return on Equity.
3. Introduce tools for analyzing a firm's short-term liquidity risk (including its working capital management).
4. Introduce tools for analyzing a firm's long-term solvency risk and identifying constraints on financial leverage.

Read: *Financial Statement Analysis* course notes (Chapter 7, pp. 219-244, from textbook).

Complete: Learning assessment in Canvas.

Prepare: Walmart Profitability and Risk 2021 CASE (CP).

Optional Problems: 7-14, 7-19, 7-21, 7-23 from textbook.

Week 3 Homework due Friday, September 8 by 11:59 pm:

Fast Sails (CP)*

Dehler - Transaction Analysis — see Canvas for the on-line assignment*

II. Financial Analysis (cont.)

Session 8: Monday, September 11

Pro Forma Financial Statements

Learning Objectives

1. Reinforce the relations between the three principal financial statements by preparing pro forma financial statements from a given set of assumptions.
2. Practice designing a financial spreadsheet.

Read: *Pro Forma Financial Statements* course notes (Chapter 7, pp. 245-254, from textbook).

Complete: Learning assessment in Canvas.

Prepare: Walmart Pro Forma 2021 CASE – Part (a) (CP)* - an Excel template with account titles and amounts is available in Canvas. The CASE contains the assumptions required to complete the template.

Workshop preparing Walmart Pro Forma 2021 CASE - Part (a) | Section 2: 3:20 – 4:50 pm and Section 4: 1:30 – 3:00 pm.

Session 9: Wednesday, September 13

Pro Forma Financial Statements (continued)

Learning Objectives

3. Discuss the preparation of pro forma financial statements.
4. Assess sensitivity of the financial statements to variations in pro forma assumptions.
5. Apply Du Pont analysis to predict and evaluate a firm's operating, investing, and financing activities.

Review: Completed Wal-Mart Pro Forma template in Canvas.

Prepare: Walmart Pro Forma 2021 CASE – Part (b) (CP)*. Part (b), which is on page 6 of the case, has two requirements to be answered before class.

Week 4 Homework due Tuesday, September 12 by 11:59 pm:

Walmart Pro Forma 2021 CASE – Part (a) and (b) (CP)*

Thursday, September 14: Optional Exam Review Session in Georgiopoulos Classroom:

1:30-3:00 pm (Sections 2&4)

Prepare: 2022 Financial Accounting Mid-Term Exam (CP).

On-line Mid-Term Exam: Friday, September 15 from 9:00-12 noon.

III. Financial Reporting

Session 10: Wednesday, September 20

Quality of Earnings and Accounting for Current Assets

Learning Objectives

1. Develop an understanding of the concepts of quality of earnings.
2. Discuss the recognition of revenue when the amount of cash to which the firm is entitled from a sale differs from the amount the firm expects to collect.
3. Understand the Allowance Method and Direct Write-off Method for uncollectible accounts.
4. Calculate inventories and cost of sales under the specific identification method and under the FIFO and LIFO cost flow assumptions.
5. Discuss factors causing inventories and cost of sales to differ under the FIFO and LIFO cost flow assumptions.
6. Discuss the valuation of inventory for declines in value below cost.

Read: *Accounts Receivable* course notes (Chapter 8 from textbook).

Inventory course notes (Chapter 9 from textbook).

Complete: Learning assessment in Canvas for Accounts Receivable.

Learning assessment in Canvas for Inventory.

Optional Problems:

Accounts Receivable: 8-13, 8-30, 8-32, 8-41 from textbook, Adams Golf.

Inventory: 9-29, 9-43 (ignore parts c and f), 9-44, 9-46, 9-47 from textbook.

Session 11: Thursday, September 21

Accounting for Current Assets (continued)

Prepare: V.F. Corporation CASE (CP)*

Accounting for Non-Current Assets

Learning Objectives

1. Discuss accounting for tangible assets and intangible assets at acquisition and over their useful lives.
2. Discuss how to treat repairs versus improvements.
3. Discuss the accounting for changes in fair value and the disposal of long-lived assets.
4. Understand the effect of accounting choices for long-lived assets on the quality of earnings and a firm's financial position.

Read: *Long-Lived Assets* course notes (Chapter 10 from textbook).

Complete: Learning assessment in Canvas.

Optional Problems: 10-14, 10-30, 10-33 from textbook, Southwest Airlines.

Week 5 Homework due Friday, September 22 by 11:59 pm:

V.F. Corporation CASE (CP)*

III. Financial Reporting (cont.)

Session 12: Wednesday, September 27

Accounting for Non-Current Assets (Continued)

Prepare: McCormick CASE (CP)*.

Accounting for Liabilities

Learning Objectives

1. Understand the impact of the recognition and valuation of liabilities on assessments of profitability and risk.
2. Calculate the issue price and subsequent market value of bonds with various cash flow patterns using present value techniques.
3. Apply GAAP for long-term bonds at the date of issue, during each subsequent period prior to maturity, and at maturity.
4. Understand the reasons why the book value of bonds under GAAP at any date may differ from the market value of the bonds.

Read: *Liabilities* course notes (Chapter 11 from textbook pages 415-434).

Complete: Learning assessment in Canvas.

Optional Problems: 11-17, 11-19, 11-20, 11-21, 11-23 from textbook, Sysco, FMC.

Session 13: Thursday, September 28

Accounting for Liabilities (continued)

Prepare: Rite Aid CASE (CP)*.

Week 6 Homework due Friday, September 29 by 11:59 pm:

McCormick CASE (CP)*

Rite Aid CASE (CP)*

III. Financial Reporting (cont.)

Session 14: Monday, October 2

Accounting for Shareholders' Equity

Learning Objectives:

1. Understand the most common components of shareholders' equity.
2. Understand the economics events that alter shareholders' (or owners') equity, and how to account for them.
3. Understand the accounting for treasury stock.
4. Discuss the accounting for restricted stock granted to employees.
5. Understand the various elements that affect the value of a stock option and analyze the impact of stock option accounting on reported earnings.

Read: *Shareholders' Equity* course notes (Chapter 15 from textbook).

Complete: Learning assessment in Canvas.

Prepare: Finding Treasure (CP).

Optional Problems: 15-14, 15-16, 15-18, 15-19, 15-25, 15-27, 15-29 from textbook, IBM, Pfizer.

Session 15: Wednesday, October 4

Accounting for Shareholders' Equity (continued)

Prepare: Starbucks Corporation CASE (CP)*.

Synthesis of Financial Reporting

Learning Objectives:

1. Review learning objectives from Sessions 10 through 14.

Prepare: Synthesis CASE (CP)*.

Week 7 Homework due Wednesday, October 4 by 11:59 pm:

Starbucks Corporation CASE (CP)*

Synthesis CASE (CP)*

Thursday, October 5: Optional Exam Review Session – Georgiopoulos Classroom:

1:30-3:00 pm (Section 2&4)

Prepare: 2022 Financial Accounting Final Exam (CP).

On-line Final Exam: Friday, October 6 from 9:00-12:00 noon.

Optional Scheduled Sessions for Assistance with the Course

Faculty Evening Office Hours from 5:00 to 6:00 pm – Barclay Classroom:

Week 1: Thursday, 8/24

Week 2: Thursday, 8/31

Week 3: Thursday, 9/7

Week 4: No Faculty Evening Office Hours - Midterm Exam Review

Week 5: Thursday, 9/21

Week 6: Thursday, 9/28

Week 7: No Faculty Evening Office Hours - Final Exam Review

TA Evening Office Hours from 7:00 to 8:00 pm – General Motors:

Week 1: Tuesday, 8/22 and Wednesday 8/23

Week 2: Wednesday, 8/30

Week 3: Wednesday, 9/6

Week 4: Tuesday, 9/12 and Wednesday, 9/13

Week 5: Wednesday, 9/20

Week 6: Wednesday, 9/27

Week 7: Monday, 10/2 and Wednesday, 10/4

Submitting Homework Solutions to Canvas

Regardless of whether you prepared your homework solution in Word or Excel, prepare a **PDF file** that is to be uploaded to Canvas. Prepare to upload a single PDF file for each assignment. In the first week, you have only one assignment and therefore will upload only one PDF file. For subsequent weeks, however, you typically will have multiple assignments and therefore will upload multiple PDF files. Please name your PDF file(s) with the name of the case – i.e., Case_Name.pdf. Upon uploading the file, Canvas will automatically append your first and last name to the file name that you created so that each student's solution is uniquely identifiable.

Once in *Financial Accounting* on Canvas, to upload an assignment/file, click on 'Assignments'. Then click on the specific assignment for which you wish to upload a solution. On the top right-hand side of your screen, click on 'Start Assignment'. Click on 'Upload File' and attached the PDF file containing your solution to the assignment. If you are handing in multiple assignments, click on '+ Add Another File' and repeat until all solutions for the homework requirement are attached. Finally, click on 'Submit Assignment'

Note that, as a default option in Canvas, you will receive an email notifying you of your grade on every homework assignment. If you do not wish to receive these emails but would prefer to access and view your grades in Canvas from time to time, you can change your notification preferences in Canvas. The settings, however, will apply to all courses, not just *Financial Accounting*.

Managerial Economics

The Tuck School of Business at Dartmouth

Summer Term – 2023

Professors Teresa Fort and Felix Montag

	Professor	Office	Academic Coordinator
Sections 1 & 3:	Prof. Felix Montag	Buchanan 106	Heidi Reynolds, Woodbury 004
Sections 2 & 4:	Prof. Teresa Fort	Buchanan 113	Carol Millay, Chase 208

Objectives

This course covers some of the most important concepts from microeconomics and illustrates how they apply to business analysis and managerial decision-making.

After an introductory, integrative case that illustrates much of what we will be covering – a nice warm-up! – the first section of the course covers principles of economics that help us to understand economic forces at work in markets. We begin with the fundamental forces of demand and supply, but progress quickly to understanding how economic forces play out in more complex market settings, including ones where market competition might lead to inefficient results. We'll be dealing with a variety of real-world industries to illustrate key concepts. You should get a good understanding of essential concepts such as the various measures of economic cost; supply and demand; entry and exit; demand elasticity; externality; and economic efficiency.

We then move from a view of how prices are determined in competitive markets to the pricing decision within a single firm. Topics include basic (monopoly) pricing; price discrimination (segmenting); and the use of advanced pricing strategies such as bundling and versioning to capture value. We will also discuss how these issues intersect with public policy in the form of regulation of monopoly, marketing and pricing tactics.

In our final session we will cover two topics that critically affect many markets – adverse selection and moral hazard. This is a nice follow-on to our work on pricing, in that sophisticated pricing strategies must take into account the nuances of consumer self-selection.

Throughout, the focus of the course will be on understanding the theory and principles sufficiently to apply them to understand real world issues and to make real world decisions. You should expect to leave the course with a firm grip on how economists think about business problems, and the ability to apply tools from the course to a variety of business situations.

Economics is at the core of almost everything in business; you will accordingly see much of what we cover here in other courses and throughout your career. Don't hesitate to come back to us with questions or to tell us about neat applications you have come across – we love to discuss economics in the real world, and your story will likely enrich some future Tuck students.

Class Preparation and Attendance

You are expected to attend class and be prepared each day. Failure to attend class will impact your grade, as will arriving late, departing early, and coming and going during class.

During the course, problems, cases, and other material will be distributed and used as a basis for class discussions. You should review and work through these materials before class. Group discussion is encouraged before and after class. Be advised that material *within each case or problem* should form the basis for any answers to case questions, whether written or oral (i.e., you cannot appeal to what you found on Google as a justification for your case analysis).

Our aim is for you to master the economic concepts we teach in class. While using generative AI tools like ChatGPT are allowed, the answers that you obtain will be incorrect in some (or perhaps many) cases. Since an important skill in the workplace is likely to be effective use of AI, you may use it on your case assignments, but are responsible for any mistakes it produces. Note that material from previous offerings of ManEc should not be used or referenced, except as distributed by the faculty. Using such material is a violation of the Honor Code.

To provide a first-class learning environment, and out of respect for fellow students and visitors, students *shall not use laptop computers or any other electronic communication device* (e.g., phones, tablets, etc.) in any class session unless explicit permission to do so is granted by the faculty. The only exception to this rule is a tablet or similar device that must be used flat on the table with a pencil or other non-typing mechanism. We will distribute physical handouts prior to each class, and post PDF versions to facilitate note taking. The filled-in slides are also posted after class. During class you should never - under any circumstances - use your tablet or any other device to check email, send or receive messages, or surf the net. Such behavior detracts from the classroom experience for all students, particularly those seated nearby.

We will record class sessions for those students who cannot attend in-person (e.g., because of illness) and for those who find it conducive to their learning to rewatch the session after class. This is not a substitute for class attendance. Please email our respective administrative assistants for personal access to a recording. Please do not share this access with others.

Assignments and Honor Code

We will have midterm and final exams. Both are purely individual efforts. Any collaboration on these exams constitutes a clear violation of the honor code and will result in severe disciplinary action. Exams will be open book, open note, and computer use is allowed.

To test your knowledge of the material, the exams are designed such that generative AI may hurt, rather than help you. Indeed, when testing ChatGPT on our exams, we obtained some correct answers, while others were incorrect, with convoluted and erroneous reasoning that could easily confuse students who are still learning the material and developing their intuition. We therefore recommend that students not use AI on exams, though we will not consider its use a violation of the honor code. Students are fully responsible, however, for all incorrect answers and reasoning, regardless of their use of AI or other related tools.

The two case presentations are to be prepared with your study group. If your name appears on the final group product, you must have put significant effort into the process that produced the final product, an effort that is not significantly different from other members of the group.

We take the honor code very seriously and will be guided by the policies set forth in the MBA Student Handbook. If there are any questions about what is expected, please raise them. If you encounter a question when we are not available, note your concern in writing and tell us how you proceeded.

Course Text

We do not have a required text for this course. However, we *highly recommend* Pindyck and Rubinfeld, *Microeconomics, 9th Edition*. Suggested sections from this book are listed with most of our sessions. This text is widely available in both new and used form and can also be rented from various online providers. We have examined previous editions of this text back to the 4th and we believe the differences to be minor, so an earlier edition will work well (and will be much cheaper!) *but it is up to you to verify that the chapters correspond*.

Note that we do not teach out of this or any other textbook, rather we view the recommended text as a good reference and an additional source for information beyond the lectures and online material discussed below. Students with minimal economics background are strongly encouraged to purchase or rent this text, while students with a stronger background can decide for themselves whether they need a text.

Another book that we offer up as an optional (and fun) read that covers much of our course content from a qualitative perspective is *The Undercover Economist* by Tim Harford.

Podcasts on current topics through the lens of economics, such as *The Indicator from Planet Money*, can be a great way to help relate the economic concepts we learn in class to current events.

Asynchronous Content

We use online asynchronous video content and practice problems to enhance classroom learning. The objective of this online material is for students to (i) learn/relearn and apply fundamental concepts, (ii) review class material, and (iii) attempt practice problems. The material has two components: (1) a set of videos that cover basic concepts, tutorials, and class material; and (2) a set of practice problems that apply the underlying concepts and where students receive instant feedback.

The idea behind this content is that the classroom discussion can focus on higher value activities, e.g., more discussion and managerial applications. Further, it ensures that all students are familiar with the basic concepts at the beginning of class and allows for the review of the material after class as well.

This material is designed to be self-paced. You should view the time you invest in working with this content as part of your normal before-class preparation. Note that your performance on the online practice problems will not be a component in your final course grade.

Exam/Case Presentation Schedule and Grading Breakdown

	<u>Type</u>	<u>Due</u>	<u>Weight</u>
Case Presentation I	Due in Class, Group	<i><u>Before class on Tuesday, 9/5</u></i>	15%
Midterm Exam	Individual, Timed	<i>Friday, 9/8, 11:00 AM</i>	15%
Case Presentation II	Due in Class, Group	<i><u>Before class on Monday, 9/25</u></i>	15%
Final Exam	Individual, Timed	<i>Friday, 9/29, noon</i>	45%
Class Contribution	Individual	n/a	10%

Exam Reviews and TA Reviews

Exam review sessions will be run by the faculty. They will be held Wednesday, 9/6, 5:10 to 6:40 pm and Wednesday, 9/27, 3:20 to 4:50 pm.

There will be four problem solving sessions run by teaching assistants. They will be held Friday, 8/25, 10-11am; Thursday, 8/31, 6:30-8:00pm; Wednesday, 9/13, 6:30-8:00pm; and Wednesday, 9/20, 6:30-8:00pm.

Review Problems

Students often want to see problems similar to what will be on the midterm and final exams. We will put some old exams in Canvas, along with solutions.

SUMMARY SCHEDULE

Session	Date	Topics	Assignments
1	Mon, 8/21	Costs, Opportunity Costs, Fixed Costs, Marginal Costs, Pricing, Bidding	PR ¹ : Ch1 (skim); 7.1 Prepare Littleton Bottleworks Case
2	Tue, 8/22	Theory of Competitive Markets, Supply and Demand, Equilibrium and Efficiency	PR: 2.1-2.4; 7.1-7.2; 8.1-8.7; 9.1-9.2, also prepare on-line material
3	Tue, 8/29	Competitive Industry Equilibrium, in the Immediate-, Short- and Long-Run	Same reading as for session 2 Prepare: Competitive Industry Equilibrium
4	Thu, 8/31	Applying the competitive industry model: the oil tanker industry	Prepare: General Maritime Case
5	Fri, 9/1	Externalities, Pollution Taxes, Cap and Trade Systems	PR: 9.1-9.2; 18.1-18.4
6	Tue, 9/5	Applying the competitive industry model: The aluminum industry	Prepare: Alusaf Case Case Write-up #1 Due
7	Mon, 9/11	Marginal Revenue, Marginal Cost, Monopoly Pricing	PR: 4.3-4.4; 10.1-10.4 Prepare: Note on Marginal Revenue and on-line material
8	Tue, 9/12	Price Discrimination	PR: 11.1-11.3 Prepare: Segmenting the Market
9	Mon, 9/18	Two-Part Pricing, Menu Pricing, Self-Selection	PR: 11.4 Prepare: Fun Fair
10	Tue, 9/19	Bundling, Tying, Pricing, Antitrust	PR: 11.5 Prepare: Profits from Scholarship Case
11	Mon, 9/25	Versioning	Prepare: Cambridge Software Case Case Write-up #2 Due
12	Tue, 9/26	Adverse Selection and Moral Hazard	PR: 17.1-17.3 Prepare: Healthcare and Zillow articles

¹ PR = Indicates recommended sections from the 9th edition of the Pindyck and Rubinfeld textbook. Additional detail on the content of these sections is provided in the detailed session plans that follow.

DETAILED SESSION PLANS AND PREPARATION GUIDELINES

Module I. Competitive Markets

Session 1 – Monday, 8/21

Topics: Costs, Opportunity Costs, Fixed Costs, Marginal Costs, Pricing, Bidding

Read before class: Pindyck and Rubinfeld: skim Chapter 1 (Preliminaries), Section 7.1 (Measuring Cost: Which Costs Matter?)

Prepare: *Littleton Bottleworks*, Tuck Case

In this session we will briefly introduce the course and then move on to our first case discussion. Be prepared to answer the following questions for class discussion (nothing is to be handed-in):

1. How would you characterize the structure of this industry? Is it competitive? How do the forces of supply and demand impact pricing in this industry?
2. Build a cost model that portrays the current situation and helps you analyze the impact of different bids for the new business. A template is available in Canvas to assist in your analyses. Use this model to answer: a) what are LBC's variable production costs? b) what are its fixed costs? c) what is its variable margin (i.e., contribution)? d) How does LBC allocate its fixed costs?
3. What do you calculate as the cost of producing the bottles for the new opportunity? In doing this, you can assume that the UBR line will not be shut down for the next two years even if this opportunity is lost. If Littleton won the business at a price equal to your estimated cost, what would Littleton's overall financial situation look like? Should that be acceptable?
4. What price is necessary to achieve the 25% EBITDA target on the new product?
5. What do you think Littleton should bid for the two-year contract of 45 million bottles annually? What will Littleton's financial situation be if your bid is accepted?
6. The corporate finance manager has recommended that the UBR line be shut down if no new business can be secured in the near future. How would you respond to this proposal?

Session 2 – Tuesday, 8/22

Topics: Theory of Competitive Markets, Supply and Demand, and Equilibrium

Read before class: Pindyck and Rubinfeld: Sections 2.1-2.4 (The Basics of Supply and Demand), Sections 7.1-7.2 (Costs in the Short Run); Sections 8.1-8.7 (Profit Maximization and Competitive Supply), and Sections 9.1-9.2 (Surplus and Efficiency). **NOTE:** These chapters are core readings for the next several sessions.

Before class preparation for this session also includes the on-line material titled “Competitive Markets Pre-Class”. All students should review this content before class. Additional on-line content will be posted after class.

In this session we begin our analysis of how markets allocate resources and the economic forces at work in markets. We will work to develop the fundamental economic understanding of how a competitive industry works. This day will be as close to “lecture” as we will get. There are many chapters from the recommended text listed for reading, but they are background reading for the entire first module of the course and indeed the entire course. You should try to do as much of it as possible before this session, so you're somewhat familiar with the general ideas.

Read/investigate after class: “Buttonwood: Trench Fever,” *The Economist*, May 4, 2019; Stephanie Yang, “Chip Shortage Brings Frustration but More Business to Industry’s Middlemen,” *The Wall Street Journal*, June 13, 2021.

For an example of a barrier to entry, after class listen to: “What’s the cure for America’s doctor shortage?” *The Indicator from Planet Money*, March 30, 2023.

Session 3 – Tuesday, 8/29

Topics: Competitive Industry Equilibrium

Read before class: Same as for Session 2.

Prepare: *Competitive Industry Equilibrium*, Tuck Note

In this session, we will finish our discussion of modeling a competitive industry. We will also cover the numerical problem titled *Competitive Industry Equilibrium*. Please prepare your solution to this problem before class, but note that it is not to be handed in. Please be prepared to explain your approach and solution to each of the case questions.

Read/investigate after class: “Lumber Prices Are Soaring. Why Are Tree Growers Miserable?” *The Wall Street Journal*, February 24, 2021

Session 4 – Thursday, 8/31

Topics: Applying the competitive industry model: the oil tanker industry

Prepare: *General Maritime Corporation*, Tuck Case

The purpose of this case is to apply the principles of competitive markets theory to a real industry. We will see how fundamental economic forces determine not only the performance of the industry overall, but also the performance and valuation of an individual firm.

Consider the following questions for class discussion (nothing is to be handed-in):

1. What decisions does the management team of General Maritime face in 2010? How, broadly, should they make these decisions? What information/data do they need?
2. On the continuum from “perfectly competitive” to “monopoly” where does the oil tanker industry lie? Why?
3. What determines oil tanker rates? Be prepared to discuss a framework for thinking of how rates are determined. How does your framework explain the volatility of tanker rates?
4. Why were tanker rates so low in 2009? Were those “equilibrium” prices? What determines how low rates can fall?
5. Are tanker rates in April of 2010 equilibrium prices?
6. Based on case data, can you provide an estimate for the long-run equilibrium daily tanker rate for the Aframax sector of the industry?
7. What would you recommend GenMar do in April of 2010?

Before class preparation also includes the on-line material titled “Elasticity.” All students should review this content before class.

Read/investigate after class: “From Shortage to Glut: Scotts Miracle-Gro is Buried in Fertilizer,” *The Wall Street Journal*, September 2022.

Listen to/investigate after class for a discussion about opportunity costs: “The Fed's radical new bank band-aid,” *The Indicator from Planet Money*, April 10, 2023.

Session 5 – Friday, 9/1

Topics: Externalities, Pollution Taxes, Cap and Trade Systems

Read before class: Pindyck and Rubinfeld: Sections 9.1-9.2 (Surplus and Efficiency); Sections 18.1-18.4 (Externalities)

Before class preparation for this session also includes the on-line material titled “Efficiency” and “Externalities.” All students should review this content before class.

In this session we will return to our model of a competitive industry and supplement it with a pollution externality. We will use carbon emissions as the case in point. A key question we will consider in class: how do carbon taxes differ from a "cap and trade" system?

Read/investigate after class: “The EU’s plan to sell extra carbon permits is bad for the planet,” *The Economist*, May 26, 2022.

Session 6 – Tuesday, 9/5

Topics: Applying the competitive industry model: The aluminum industry

Read before class: *The Aluminum Industry in 1994* (HBS 9-799-129)

Prepare: *Alusaf Hillside Project* (HBS 9-704-458)

The purpose of this case analysis is to get you to apply some economic principles and general analytical thinking to a real-world industry and to an investment decision. The challenge is to apply the principles and problem-solving tools we’ve covered in class to a messy, real-world decision.

This is a group assignment. Each group should come to class with approximately 10 slides, prepared to present for 10 minutes or so, detailing and supporting your analysis and decision. Here are the key issues we expect to see in your presentations:

1. Overview of situation
 - a. What is the nature of competition in the industry?
 - b. What are key factors likely to affect demand and supply?
2. Short-run analysis
 - a. Use the data provided to construct an industry supply curve
 - b. Provide a general sense of demand
 - c. Are we in a short-run equilibrium?
3. Long-run analysis
 - a. How will the industry behave in the long-run?
 - b. What long-run industry equilibrium price do you predict?
 - c. How will the industry transition to the long-run? How long will this take?
4. Investment recommendation
 - a. Should Alusaf make the investment?
 - b. Clarify your key assumptions and any sensitivity analysis

Guidance: In Canvas is a large spreadsheet giving cost information for all the world’s primary aluminum smelters (output is given in thousands of tons per year). Note that there is not enough data available to characterize the shape of a demand curve with confidence, however, a qualitative analysis of its general shape and position may be useful. Assume that aluminum smelters have a 25 year lifetime.

Submit on-line in Canvas a copy of your PowerPoint presentation (with any supporting notes or analysis) submit (one per group). We will likely rely on a combination of volunteers and “involunteers” to present their analysis in class.

Read/investigate after class: Bob Tita, “U.S. Aluminum Producers Support Biden Tariffs on Russian Imports,” *The Wall Street Journal*, February 25, 2023.

Midterm Exam

Distributed: 9:00 AM, Friday, 9/8

Due: 11:00 AM, Friday, 9/8

Module II. Pricing

Session 7 – Monday, 9/11

Topics: Marginal Revenue, Marginal Cost, Monopoly Pricing

Read before class: Pindyck and Rubinfeld: Sections 4.3-4.4 (Market Demand and Consumer Surplus), Sections 10.1-10.4 (Monopoly).

Before class preparation for this session also includes the on-line material titled “Pricing Pre-Class”. All students should review this content before class. Additional on-line content will be posted after class.

Prepare: *Note on Marginal Revenue*, Tuck Note; Read Anne Steele, “Concert Ticket Prices Soar on Consumer Demand, Not Just Inflation”, *The Wall Street Journal*, April 23, 2022.

This session begins the second module of the course: pricing by firms with market power. Read over the textbook chapters and then prepare the *Note on Marginal Revenue*. Note that nothing is to be handed-in.

Read/investigate after class: Peter Thiel, “Competition Is for Losers,” *The Wall Street Journal*, Sept. 12, 2014; De Loecker, Jan and Jan Eeckhout, “Global Market Power,” May 2020, NBER WP 24768.

Session 8 – Tuesday, 9/12

Topic: Price Discrimination

Read before class: Pindyck and Rubinfeld: Sections 11.1-11.3 (Pricing with Market Power).

Before class preparation for this session also includes the on-line material titled “Price Discrimination Pre-Class”. All students should review this content before class.

Prepare: *Segmenting the Market*, Tuck Note

We will continue our initial discussion of pricing by examining a numerical problem, described in the note *Segmenting the Market*. We will go over the problem in class. Please prepare questions (1)-(4) for in-class discussion. Please also be prepared to discuss

approaches for answering parts (5) and (6), which are rather challenging. Nothing is to be handed-in.

Read/investigate after class: Elizabeth Paton, “Luxury’s Gray Market is Emerging From the Shadows,” *The New York Times*, Aug 24, 2021; Josh Sisco, “Pepsi, Coke soda pricing targeted in new federal probe,” *Politico*, Jan 9, 2023.

Session 9 – Monday, 9/18

Topics: Two-Part Pricing, Menu Pricing, Self-Selection

Read before class: Pindyck and Rubinfeld: Section 11.4 (Two-Part Pricing).

Before class preparation for this session also includes the on-line material titled “Two-Part Pricing Pre-Class”. All students should review this content before class. Additional on-line content will be posted after class.

Prepare: *Fun Fair*, Tuck Note

We will move on to additional pricing techniques with the *Fun Fair* case. Please prepare questions (1)-(6) for in-class discussion. Please also be prepared to discuss an approach for answering parts (7) and (8), which are rather challenging. Nothing is to be handed-in.

Read/investigate after class: Baqaee and Farhi, “Aggregate productivity and the rise of mark-ups,” *Vox-EU*, December 2017.

Session 10 – Tuesday, 9/19

Topics: Bundling, Tying, Pricing, Antitrust

Read before class: Pindyck and Rubinfeld: Section 11.5 (Bundling).

Prepare: *Profits from Scholarship: The Case of Academic Journal Pricing*, Tuck Case (Be sure to read the transcription of the speech by the CEO of Elsevier starting on p. 6.) Also review the blog entry about the founding of AirBnB at <https://getpaidforyourpad.com/blog/the-airbnb-founder-story/>

Questions for class discussion:

1. Where do you put the academic journals market on the “competitive/monopolistic” spectrum? Why?
2. What is the ideal pricing structure for journals? From the perspective of Haank? From the perspective of the librarians? From an overall societal perspective?
3. What do you think about bundling? Is it profitable for the publishers? Why or why not? Why don't the libraries like it?
4. What do you think about price discrimination in this setting – charging different libraries different prices?
5. What are the similarities between the cost structure of a journal publisher and AirBnB?

6. What do you think a key challenge would be in starting a company like AirBnB?

Read/investigate after class: Tripp Mickle, “Google Earnings Smash Sales Records as Digital Ad Market Booms,” *The Wall Street Journal*, April 27, 2021; “Scientific Publishing: Grand Openings,” *The Economist*, Sept. 267, 2014; “Tech’s New Stars Have It All-Except a Path to High Profits,” *The Economist*, Apr. 17, 2019.

Session 11 – Monday, 9/25

Topics: Versioning

Prepare: *Cambridge Software Corporation* (HBS 9-191-072)

Prepare the *Cambridge Software Corporation* case as a group presentation. You will submit on-line in Canvas a copy of your PowerPoint slides and we will be asking some teams to present, just as with the Alusaf case.

Your task is to recommend which versions of Modeler Cambridge Software should produce and at what prices they should be sold. The focus of your presentation should be both *what* you think they should do and *why*. In particular, please address:

1. What profit could you achieve if you only sell one version at one price? How does this profitability compare across the three versions? (Note: the segment development cost applies for any segments to which you sell.)
2. How would you maximize profits with multiple versions if you could not practice any price discrimination? What would profits be under this scheme?
3. How well could you do if you could practice some price discrimination among the segments? How would you actually practice price discrimination in this setting?

Here are a few tips to guide you:

1. Cambridge uses a sales model in which there is a published feature and price list for all the versions they opt to make available. While price discrimination may be an interesting issue to explore here (see point (3) above) it should not form the core of your analysis.
2. Do not miss the 40% commission for sales of units through the bookstore channel.
3. Take the size of the market segment to be how many units would be sold in that segment, if you priced properly.
4. Any assumptions you make should be noted and justified.
5. There is room here to get creative, but be sure you complete the basic analysis outlined above before you start thinking “outside the box.”

Read/investigate after class: Shapiro and Varian, “Versioning: The Smart Way to Sell Information,” *Harvard Business Review*, Vol. 76(6), 1998. (HBR 4789).

There has been much written recently about consumer choice and limitations of rationality. An interesting summary of this work is provided by Richard Thaler and Cass Sunstein in their book *Nudge* (Penguin Books, 2008); or Thaler's more recent book, *Misbehaving*.

Module III. Information Economics

Session 12 – Tuesday, 9/26

Topics: Adverse Selection and Moral Hazard

Read before class: Pindyck and Rubinfeld: Sections 17.1-17.3 (Markets with Asymmetric Information).

Come to class prepared to engage in an interactive discussion around the issues of adverse selection and moral hazard. Read before class:

Jonathan Gruber, “Health Care Reform is a “Three-Legged Stool,” Center for American Progress, August 2010;

Anna Bahney, “Zillow to exit its home buying business, cut 25% of staff”, *CNN Business*, November 2, 2021.

“When Employees Leave a Company, Others Often Follow,” *The Wallstreet Journal*, June 10 2023.

Friday, 9/29

FINAL EXAM

9:00 AM to NOON

**** THE FINAL EXAM IS CUMULATIVE ****

Course Materials Inventory

1. *Littleton Bottleworks*, Tuck Case 1-0126R
2. “Buttonwood: Trench Fever,” *The Economist*, May 4, 2019
3. Stephanie Yang, “Chip Shortage Brings Frustration but More Business to Industry’s Middlemen,” *The Wall Street Journal*, June 13, 2021
4. *Competitive Industry Equilibrium*, Tuck Note 1-0130
5. “What’s the cure for America’s doctor shortage?,” *The Indicator from Planet Money*, March 30, 2023.
6. “Lumber Prices Are Soaring. Why Are Tree Growers Miserable?,” *The Wall Street Journal*, February 24, 2021
7. *General Maritime Corporation*, Tuck Case 1-0317R
8. “From Shortage to Glut: Scotts Miracle-Gro is Buried in Fertilizer,” *The Wall Street Journal*, September 2022.
9. Listen to/investigate after class: “The Fed’s radical new bank band-aid,” *The Indicator from Planet Money*, April 10, 2023.
10. “The EU’s plan to sell extra carbon permits is bad for the planet,” *The Economist*, May 26, 2022
11. *The Aluminum Industry in 1994* (HBS 9-799-129)
12. *Alusaf Hillside Project* (HBS 9-704-458)
13. “U.S. Aluminum Producers Support Biden Tariffs on Russian Imports,” *The Wall Street Journal*, February 25, 2023.
14. *Note on Marginal Revenue*, Tuck Note 1-0129
15. Anne Steele, “Concert Ticket Prices Soar on Consumer Demand, Not Just Inflation,” *The Wall Street Journal*, April 23, 2022
16. *Segmenting the Market*, Tuck Note 1-0131
17. Peter Thiel, “Competition Is for Losers,” *The Wall Street Journal*, Sept. 12, 2014.
18. “Tech’s New Stars Have It All-Except a Path to High Profits,” *The Economist*, Apr. 17, 2019
19. De Loecker, Jan and Jan Eeckhout, “Global Market Power,” May 2020, NBER WP 24768
20. Elizabeth Paton, “Luxury’s Gray Market is Emerging From the Shadows,” *The New York Times*, Aug 24, 2021
21. Josh Sisco, “Pepsi, Coke soda pricing targeted in new federal probe,” *Politico*, Jan 9, 2023
22. *Fun Fair*, Tuck Note 1-0128
23. Baqaee and Farhi, “Aggregate productivity and the rise of mark-ups,” *Vox-EU*, December 2017
24. *Profits from Scholarship: The Case of Academic Journal Pricing*, Tuck Case 1-0127
25. Tripp Mickle, “Google Earnings Smash Sales Records as Digital Ad Market Booms,” *The Wall Street Journal*, April 27, 2021
26. “Scientific Publishing: Grand Openings,” *The Economist*, Sept. 27, 2014
27. “Tech’s New Stars Have It All-Except a Path to High Profits,” *The Economist*, Apr. 17, 2019
28. *Cambridge Software Corporation* (HBS 9-191-072)
29. Shapiro and Varian, “Versioning: The Smart Way to Sell Information,” *Harvard Business Review*, Vol. 76(6), 1998. (HBR 4789)

30. Jonathan Gruber, "Health Care Reform is a 'Three-Legged Stool'," *Center for American Progress*, August 2010
31. Anna Bahney, "Zillow to exit its home buying business, cut 25% of staff", *CNN Business*, November 2, 2021
32. "When Employees Leave a Company, Others Often Follow," *The Wallstreet Journal*, June 10 2023.



Tuck School of Business

Marketing Fall 2023

Professor Jon W. Kerbs

Section 3: Mon/Tues, 8:30 – 10:00 am, GM
Section 1: Mon/Tues, 10:20 – 11:50 am, GM
(See course schedule for deviations)

Office: Chase 305
Office Hours: Tues 1:00 – 2:30 pm
(Or by appointment)

E-mail: Jon.W.Kerbs@tuck.dartmouth.edu

Academic Coordinator: Laura L. Cota
E-mail: Laura.L.Cota@tuck.dartmouth.edu

Course Scribe: Behishta Sadaat
E-mail: Behishta.Sadaat@tuck.dartmouth.edu

Note: Please note that the times and topics may change based on class discussion progress and semester flow. The syllabus will be updated online on Canvas as soon as a major change occurs.

Course Overview and Objectives

Welcome to the Marketing Core! My name is Jon Kerbs, and I am very happy to have you in my class. Marketing concepts are at the core of every business. The role of marketing is to help managers better understand customer preferences, link that knowledge to designing appropriate products and services for target customers, and determine appropriate methods to create, communicate, and deliver value to their customers. Successful firms are those that strategically pursue objectives, deploy resources, and invest in the future of an organization, to consistently satisfy the needs of customers better than competitors. This requires firms to develop a thorough understanding of the competitive landscape, their target markets, customer relationships, product development capabilities, and competitive advantages and disadvantages. This course is designed to enable you to apply marketing frameworks and tools and think strategically with a marketing orientation. The basic marketing principles apply to both for-profit and not-for-profit organizations.

The course framework is split into four modules covering the marketing fundamentals:

- Module 1. Identifying Market Opportunities
- Module 2. Setting a Marketing Strategy
- Module 3. Formulating the Marketing Mix
- Module 4. Executing a Marketing Strategy

The key objectives of the course are to:

1. Understand the strategic role of marketing in companies and integrate the customer into business planning.
2. Identify and address key marketing issues facing managers.
3. Determine market opportunities, design a strategy, and formulate marketing mix decisions.
4. Apply frameworks and tools—both qualitative and quantitative—for marketing analyses.
5. Develop recommendations and action plans for companies facing difficult marketing decisions through case studies.

Course Materials

1. Required:

- **Course pack:** Electronic versions of course materials will be available on Canvas under the assignments listed for each session (see “Home” view).
- In addition to the materials listed above, the course Canvas site includes announcements, homework assignments, and other supplementary materials. Please check it frequently for updates, as most readings and assignments will be posted on a weekly basis, by Friday before the following week’s class.

2. Optional:

The course pack on Canvas includes the featured reading materials from the textbook below. The full text is available for your reference in the library.

- **Background Textbook:** *Marketing Management* (15th edition), Philip Kotler & Kevin Lane Keller. The course pack includes all the featured reading materials from the textbook. Copies are on reserve at Feldberg Library.

Class Participation

Students and instructors co-produce the Tuck educational experience. Much of this course’s learning occurs in class, as students share experiences, questions, and analyses with each other. Your preparation, presence, and active participation are important for its success. **Attendance is therefore required, and unexcused absences will negatively impact participation grades.** Each class session has a **Session Memo** that is part of the session folder on Canvas. The session memos contain important reading materials and class discussion questions. Please read the relevant materials and think of responses to the questions in the memos before coming to class. Furthermore, there will be class exercises applying the relevant frameworks that you will be expected to perform in class. Therefore, you cannot make up for a missed class by simply reading lecture notes later. To reinforce this expectation, I may randomly select (i.e., cold call) class members to comment on issues, explain concepts, and open case discussions.

It is Tuck policy that missing a class for recruiting activities is not considered an excused absence. It is your responsibility to work with recruiting and career services to avoid these disruptions. Absences may be excused for personal illness, family emergencies, or religious observance. If you are unable to attend class due to one of these reasons, please notify me, academic coordinator Laura Cota (Laura.L.Cota@tuck.dartmouth.edu), and course scribe Behishta Sadaat (Behishta.Sadaat@tuck.dartmouth.edu) by email as soon as possible, preferably a day in advance.

NOTE: Class participation grades are not simply a function of how often you speak in class, but how effectively you contribute to class learning, and how thoughtfully you respond to questions.

Regular class sessions consist of (1) interactive lectures/discussions, (2) case studies, and (3) special guest speaker presentations. In lectures/discussions, we will focus on concepts, theories, and examples. In case studies, we will apply the frameworks and concepts discussed in lectures and readings to real-world business problems. The case method is a highly effective means of sharpening your analytical skills and is usually the staple of management education.

Case Preparation

Cases are descriptions of real-world business situations that provide opportunities to analyze marketing problems and develop marketing strategies. We will cover eight cases across the four modules. Each case has been carefully selected to discuss the fundamentals of marketing as laid out in the course framework. You will need to analyze and prepare each case with your respective study group for class discussion. Please carefully study the case, paying attention to the case preparation questions provided in the session memo. Be sure to pay attention to the exhibits, which often contain important data. Effective case analyses not only draw from the case text, but also make connections to key points found in the exhibits (tables, figures, appendixes). In addition, when answering “Yes/No” questions, or developing a recommendation, strong case analyses not only provide a response, but also a rationale for why the response makes sense (and perhaps also why alternatives do not). Please keep in mind that case analyses are meant to reflect your grasp of the course content; thus, applying concepts and frameworks discussed in class is essential.

Each case provides all the facts that you need to analyze it. The idea is to tackle the case problem from a fresh perspective. You should not find out what happened or bring outside information about the company or the industry beyond what is described in the case. Such information is often irrelevant and counterproductive for your learning. Further, doing so is a violation of the Honor Code and may have a point-deduction penalty.

1. **Case Write-ups:** For three of the cases, each study group will prepare and submit a write-up addressing *all the discussion questions* assigned for that case. The write-up should be contained within 2 single-spaced pages, written in 11 or 12-point standard font (e.g., TNR, Arial, Calibri) with 1” margins. All supporting quantitative analyses should be included in an appendix, restricted to up to 4 pages.

General case write-up guidelines:

- Provide a coherent, well-organized analysis grounded in course framework, not simply a list of arguments for or against a position.
- Be concise and do not spend time rehashing, quoting, or paraphrasing the facts given in the case. Be as direct as you can in answering the discussion questions.
- Draw connections to exhibits, figures, and tables to enrich your responses. When defending a particular point of view, be specific as to why you argue for that view (and not others), using information from the course and/or the case (rather than your intuition) to back up your assertions.
- Nominate a representative from your study group who will upload the write-up on Canvas on behalf of the group.
- Please make sure that the case write-up submission includes the NetIDs of your study group members, and not the names.

Peer Assessment: You will be assessed by your study group based on your contribution towards group case analyses and session memo discussions at the end of the term. Your individual score will incorporate this peer assessment feedback.

2. **In-class Case Discussion:** In class, my role is to facilitate the discussion, while the direction and quality of the case analysis is the collective responsibility of the class. While you work on the cases as a study group, you will need to also analyze your individual perspective of the case. There will be frequent cold-calling during case discussion, and you should be prepared to share your analysis and perspective. Individual preparedness for class discussion will also enable you to participate in case-related exercises that we may perform during case discussions.

A typical request at the end of a case study is: “What is the right answer?” Keep in mind that, in many business situations, there may not be an “optimal” or “perfect” recommendation; however, there can be more than one “viable” action as well as several ill-considered actions. The goal of the case method is not to prescribe a solution to one specific problem but to thoroughly understand a complex issue from multiple angles, which then helps you construct a sound framework to tackle similar problems in the future.

Guest Speakers

Guest speaker presentations are an integral part of this course. There will be two guest speakers during the term (**Sessions 6 and 13**; any updates or changes will be posted in Canvas). Each speaker is invited to present on a given course topic and to answer your questions based on their professional experience. Attending guest speaker presentations is mandatory. For each guest speaker session, please review the speaker bio in the session memo and prepare questions that you may want to ask during the student interaction time.

Course Assistance

If you need assistance with the course, I will hold office hours on Tuesdays at 1:00 – 2:30 pm. There will also be two review sessions during the term (see Course Schedule at the end for details). And I am happy to meet with you by appointment. In addition, our class will be supported by several colleagues working as second-year Teaching Assistants, who will assist me with grading. Each study group will also be assigned a TA mentor as indicated in the list below.

TA	Email	Study Groups
Allen, Kathleen	Kathleen.E.Allen.TU24@tuck.dartmouth.edu	1, 2, 3
Chua, Edward Mikhail (Miki)	Edward.Mikhail.M.Chua.TU24@tuck.dartmouth.edu	
DeFalco, Carolyn	Carolyn.M.DeFalco.TU24@tuck.dartmouth.edu	4, 5, 6
Heneveld, Adrian	Adrian.L.Heneveld.TU24@tuck.dartmouth.edu	7, 8, 9
Jacobson, Gregory (Greg)	Gregory.D.Jacobson.TU24@tuck.dartmouth.edu	10, 11
Legambi, Summer	Summer.A.Legambi.TU24@tuck.dartmouth.edu	12, 25, 26
Mooney, Ryan	Ryan.P.Mooney.TU24@tuck.dartmouth.edu	27, 28, 29
Matthews, Hope	Hope.E.Matthews.TU24@tuck.dartmouth.edu	30, 31
Sohail, Amna	Amna.Sohail.TU24@tuck.dartmouth.edu	32, 33, 34
Weis, Emily	Emily.E.Weis.TU24@tuck.dartmouth.edu	35, 36

You are encouraged to reach out to your study group’s TA mentor for course related topics and questions. There are no formal TA sessions, however you are recommended to catch up with your assigned mentors freely and informally as and when needed.

Mid-term Home Assignment

The mid-term home assignment is an open-book, open-notes, individually-completed assignment that will be available on Canvas **on Monday, October 30, 6:00 pm and must be completed by Tuesday, November 7, 6:00 pm**. Please submit the assignment on Canvas. *Please note that you may have access to course materials while working on the assignment as some questions may utilize this material.* Late assignments will have points deducted. Do not discuss the contents of the assignment with any current or former students once it has been activated until after the assignment due date. Doing so would be a violation of the Tuck Academic Honor Code.

Final Exam

The final exam is an open-book, open-notes, individually-completed exam that will be available on Castalia **on Wednesday, December 6 at 6:00 pm and must be completed by Sunday, December 10, 12:00 pm noon**. You can take the final exam during any three-hour time block during this time. **Once you begin the exam, you must complete it during one sitting within three hours. Do not begin the exam until you are ready to take it.** *Please note that you may have access to course materials while working on the exam as some questions may utilize this material.* Late exams will have points deducted. Do not discuss the contents of the exam with any current or former students once it has been activated until after the exam due date. Doing so would be a violation of the Tuck Academic Honor Code.

General Course Expectations and Etiquette

To ensure the best possible learning environment for you and your classmates, please observe the following expectations and etiquette:

1. Please be punctual and ready to engage.
2. Laptops and iPads are to be used only to follow class session material. Please do not use the devices for internet navigation or other purposes during class. Please silence and put away your cell phones for the full duration of class.
3. Adhere to all aspects of the Tuck Academic Honor Code. Please consult your professor with any questions about how the Honor Code applies in a specific situation.
4. Complete group work with your group and do not consult with students in other groups or from previous years' groups. Consulting with previous years' students for any deliverable, and consulting with current or previous years' students for individual deliverables (mid-term assignment or exam), is a Tuck Honor Code violation. Complete individual work on your own.
5. Do not use any recording devices during class sessions. If you have a specific need to do so, talk with your professor at the end of the first class.

Generative AI policy

The use of ChatGPT and similar systems is not allowed in the preparation of the case write-ups, the mid-term assignment, or the final project. Feeding these tools the course materials (syllabus, articles, chapters, cases, case questions, assignment, exam, instructions) is not allowed either. AI tools are still in early stages, and you might explore how they can aid your comprehension of the course material. But be careful, ChatGPT and similar tools “speak” with great confidence, even when their outputs are incomplete, wrong, or completely fabricated. If you use them in any portion of the course (where it is not forbidden), please acknowledge doing so, attribute proper credit, and include the prompts.

Grading and Evaluation

<i>Individual</i>		
	Class Participation (attendance and quality participation)	20%
	Mid-term Assignment	20%
	Final Exam	25%
<i>Group</i>		
	Case Write-ups	35%
<i>Total</i>		100%

Please note that re-grades will not be permitted unless there is a calculation error. If a calculation error has occurred in the grading of an assignment or exam, or in other exceptional cases, please email me as soon as possible. Please include documentation in support of your position (e.g., a scanned page from the readings with relevant information highlighted). You will have one week after an assignment has been returned to bring a calculation error to my attention.

Course Structure and Learning Objectives

Module 1: Identifying Market Opportunities

Session 1: Introduction to Marketing and 3 Cs Framework

- *Readings:* Session Memo; “Marketing Myopia” article; Customer Lifetime Value (Kotler/Keller: Chapter 5, pp. 138-142).
- *Learning objectives:*
 - i. What is marketing and how does it work?
 - ii. How does marketing myopia hurt businesses?
 - iii. Developing marketing fundamentals via the 3 Cs framework.
 - iv. Customer Lifetime Value (CLV) Model to assess the value of customers to the firm.
- *Due:* Complete pre-class survey by 10/14 6pm (individual)

Session 2: Customer Centricity and Intelligence

- *Readings:* Session Memo; AATR Model Note.
- *Case:* Jaguar Land-Rover: Towards a Customer-Centric Organisation.
- *Learning objectives:*
 - i. The stages of the customer decision making journey.
 - ii. Marketing insight and possible data sources to generate insight.
 - iii. Awareness-Availability-Trial-Repeat (AATR) Model to assess potential market size.

Module 2: Setting a Marketing Strategy

Session 3: Segmentation, Targeting and Positioning I

- *Readings:* Session Memo; “A Note on Market Definition, Segmentation, and Targeting” and “Positioning: The Essence of Marketing Strategy” articles; Points-of-Difference and Points-of-Parity (Kotler/Keller: Chapter 10 pp. 278-281); Cluster Analysis Note.
- *Learning objectives:*
 - i. Market segmentation strategy and criteria.
 - ii. Cluster Analysis Tool for market segmentation.
 - iii. Strategic and tactical considerations in targeting.
 - iv. Components of brand positioning and the role of 3 Cs.

Session 4: Segmentation, Targeting and Positioning II

- *Readings:* Session Memo; Quantitative and Case Analyses in Marketing Note.
- *Case:* Chase Sapphire: Creating a Millennial Cult Brand.
- *Learning objectives:*
 - i. Tools to determine, assess, and change brand positioning.
 - ii. How do you select the right target market for your new product offering and create a distinctive value proposition?
- *Submission due:* Chase Sapphire Case write-up before class (group).

Session 5: Branding

- *Readings:* Session Memo; Brand Resonance Model (Kotler/Keller: Chapter 11, pp. 307-308).
- *Case:* The Black & Decker Corporation: Power Tools Division.
- *Learning objectives:*
 - i. The meaning and value of brands to customers and organizations.
 - ii. Building brand resonance and equity.
 - iii. Devising brand strategy for new products.

Session 6: Guest Speaker

- Deirdre Findlay. Read speaker bio in Session Memo and come prepared to ask a question.

Module 3: Formulating the Market Mix

Session 7: Product I

- *Readings:* Session Memo; “Eager Sellers Stony Buyers” article; Concept Testing and Conjoint Analysis (Kotler/Keller: Chapter 15 pp. 445-8); Conjoint Analysis Note.
- *Learning objectives:*
 - i. Understanding product benefits.
 - ii. Unpacking the new product development process: from ideation to adoption.
 - iii. Concept Test Tool to evaluate product concepts.
 - iv. Conjoint Analysis Tool to help build better products.

Session 8: Place I

- *Readings:* Session Memo.
- *Case:* Away: Scaling a DTC Brand.
- *Learning objectives:*
 - i. Distribution channels and routes to market.
 - ii. Multichannel distribution and omni-channel retail.
 - iii. Evaluating direct-to-consumer brands’ appeal and success factors.
- *Submission due:* Mid-term Home Assignment by 11/7 6 pm (individual).

Session 9: Product and Place II

- *Readings:* Session Memo.
- *Case:* Apex Ski Boots.
- *Learning objectives:*
 - i. The role of consumer behavior in product adoption.
 - ii. Channels’ strategic role beyond mere point-of-sale.
 - iii. Evaluating channel challenges and channel-focused actions to be taken.
- *Submission due:* Apex Ski Boots Case write-up before class (group).

Session 10: Price

- *Readings:* Session Memo; Price Elasticity & Breakeven Cannibalization Rate Note.
- *Learning objectives:*
 - i. Selecting the pricing strategy and structure.
 - ii. Pricing new products.
 - iii. Assessing price sensitivity (elasticity).
 - iv. Understanding the psychology of pricing.
 - v. Monitoring price policy (breakeven cannibalization rate).

Session 11: Promotion

- *Readings:* Session Memo; “A Refresher on Marketing ROI” article.
- *Case:* Can 3G Capital Make Burger King Cool Again?
- *Learning objectives:*
 - i. Planning and executing marketing communications.
 - ii. Designing and evaluating a creative brief.
 - iii. Evaluating communication performance.
 - iv. Assessing ROI of marketing campaigns.

Module 4: Executing a Marketing Strategy

Session 12: Marketing for a Better World

- *Reading:* Session Memo.
- *Case:* The Pepsi Refresh Project: A Thirst for Change.
- *Learning objectives:*
 - i. The role of marketing in promoting sustainability and consumer wellbeing.
 - ii. Barriers to sustainable consumption and potential solutions.
 - iii. Assessing and designing effective cause-related marketing programs.

Session 13: Guest Speaker

- Jillian McVicar Nelson. Read speaker bio in Session Memo and come prepared to ask a question.

Session 14: Marketing Across Borders

- *Reading:* Session Memo.
- *Case:* Unilever in Brazil: Marketing Strategies for Low-Income Consumers.
- *Learning objectives:*
 - i. Global vs. local marketing in international markets.
 - ii. Adapting marketing strategy (STP) and mix (4 Ps).
 - iii. Marketing in emerging markets.
- *Submission due:* Unilever in Brazil case write-up before class (group).

Session 15: Course Wrap

- *Learning objectives:*
 - i. Applying marketing principles on the job market.
 - ii. Review of the course framework and modules.
 - iii. Preparation for the final exam.
- *Submission due:* Peer assessment before last class (individual).
- *Submission due:* Final Exam by 12/10 12 pm noon (individual).

COURSE SCHEDULE & ASSIGNMENTS DUE

See Session Memos for readings, numerical problems, and discussion questions to address before class.

#	DATE	TOPIC	DELIVERABLES & COMMENTS
Module 1: Identifying Market Opportunities			
1	10/16 M	<i>Topic:</i> Introduction to Marketing and 3 Cs Framework	<ul style="list-style-type: none"> ➤ <u>Complete pre-class survey by 10/14 Sat 6 pm</u> ➤ <u>Read Course Syllabus</u> ➤ <u>Read materials listed under “Readings”</u>
2	10/23 M	<i>Topic:</i> Customer Centricity and Intelligence <i>Case:</i> Jaguar Land-Rover: Towards a Customer-Centric Organisation	<ul style="list-style-type: none"> ➤ <u>Read materials listed under “Readings”</u> ➤ <u>Read Jaguar case for class discussion</u> ➤ <u>Review & Solve Session Memo numerical problems before class (no submission required)</u>
Module 2: Setting a Marketing Strategy			
3	10/24 Tue	<i>Topic:</i> Segmentation, Targeting, and Positioning I	<ul style="list-style-type: none"> ➤ <u>Read materials listed under “Readings”</u>
4	10/30 M	<i>Topic:</i> Segmentation, Targeting, and Positioning II <i>Case:</i> Chase Sapphire: Creating a Millennial Cult Brand	<ul style="list-style-type: none"> ➤ <u>Submit Chase case write-up before class</u> ➤ <u>Read materials listed under “Readings”</u> ➤ <u>Mid-term Home Assignment posted on Canvas at 6pm. Due before 11/7 Tue 6pm</u>
5	10/31 Tu	<i>Topic:</i> Branding <i>Case:</i> The Black & Decker Corporation: Power Tools Division	<ul style="list-style-type: none"> ➤ <u>Read materials listed under “Readings”</u> ➤ <u>Read Black & Decker case for class discussion</u> ➤ <u>Modules 1 & 2 Review: 1:30 – 3:00 pm, Cook</u> ➤ <u>Extended Office Hours: 3:00 – 5:00 pm</u>
6	11/2 Th 1:15-2:45pm	<i>Guest Speaker:</i> Deirdre Findlay Attendance required.	<ul style="list-style-type: none"> ➤ <u>Come prepared with a question for guest speaker 1:15 – 2:45 pm, Cook</u>
	11/6 M	Extended Office Hours 12:30 – 2:30 pm	
Module 3: Formulating the Marketing Mix			
7	11/6 M	<i>Topic:</i> Product I	<ul style="list-style-type: none"> ➤ <u>Read materials listed under “Readings”</u>
8	11/7 Tu	<i>Topic:</i> Place I <i>Case:</i> Away: Scaling a DTC Brand	<ul style="list-style-type: none"> ➤ <u>Submit Mid-term Home Assignment by 6 pm</u> ➤ <u>Read materials listed under “Readings”</u> ➤ <u>Read Away case for class discussion</u>
9	11/13 M	<i>Topic:</i> Product and Place II <i>Case:</i> Apex Ski Boots	<ul style="list-style-type: none"> ➤ <u>Submit Apex Ski Boots case write-up before class</u> ➤ <u>Read materials listed under “Readings”</u>
10	11/14 T	<i>Topic:</i> Price	<ul style="list-style-type: none"> ➤ <u>Read materials listed under “Readings”</u> ➤ <u>Review & Solve Session Memo numerical problems before class (no submission required)</u>
11	11/20 M 1:30-3:00 pm 3:20-4:50 pm	<i>Topic:</i> Promotion <i>Case:</i> Can 3G Capital Make Burger King Cool Again?	<ul style="list-style-type: none"> ➤ <u>Read materials listed under “Readings”</u> ➤ <u>Read Burger King case for class discussion</u>
Module 4: Executing a Marketing Strategy			
12	11/27 M	<i>Topic:</i> Marketing for a Better World <i>Case:</i> The Pepsi Refresh Project: A Thirst for Change	<ul style="list-style-type: none"> ➤ <u>Read materials listed under “Readings”</u> ➤ <u>Read Pepsi Refresh case for class discussion</u>
13	11/28 T	<i>Guest Speaker:</i> Jillian McVicar Nelson Attendance required.	<ul style="list-style-type: none"> ➤ <u>Come prepared with a question for guest speaker Georgiopoulos</u>
14	12/4 M	<i>Topic:</i> Marketing Across Borders <i>Case:</i> Unilever in Brazil	<ul style="list-style-type: none"> ➤ <u>Submit Unilever in Brazil case write-up before class</u>
15	12/5 T	<i>Topic:</i> Course Wrap	<ul style="list-style-type: none"> ➤ <u>Peer assessment due before class</u> ➤ <u>Modules 3 & 4 Review: 1:30 – 3:00 pm, Cook</u> ➤ <u>Extended Office Hours: 3:00 – 5:00 pm</u>
	12/6 W	Extended Office Hours 1:00 – 4:00 pm	
	12/6 W	Final Exam	<ul style="list-style-type: none"> ➤ <u>Final Exam posted on Castalia at 6:00 pm</u> ➤ <u>Submit Final Exam by Sunday 12/10 @ 12 Noon</u>



Tuck School of Business

Marketing **Fall 2023**

Professor Nailya Ordabayeva
(Professor O)

Section 4: Mon/Tues, 8:30 – 10:00 am, Rosenwald
Section 2: Mon/Tues, 10:20 – 11:50 am, Rosenwald
(See course schedule for deviations)

Office: Tuck 204 A
Office Hours: Tues 1:00 – 2:30 pm
(Or by appointment)

E-mail: Nailya.Ordabayeva@tuck.dartmouth.edu

Academic Coordinator: Kimberlee A. Poirier
E-mail: Kimberlee.A.Poirier@tuck.dartmouth.edu; Phone: (603) 646 4002

Course Scribe: Frederick V. Lee
E-mail: Frederick.V.Lee@tuck.dartmouth.edu

Note: Please note that the times and topics may change based on class discussion progress and semester flow. The syllabus will be updated online on Canvas as soon as a major change occurs.

Course Overview and Objectives

Welcome to the Marketing Core! My name is Nailya Ordabayeva, and I am very happy to have you in my class. Marketing concepts are at the core of every business. The role of marketing is to help managers better understand customer preferences, link that knowledge to designing appropriate products and services for target customers, and determine appropriate methods to create, communicate, and deliver value to their customers. Successful firms are those that strategically pursue objectives, deploy resources, and invest in the future of an organization, to consistently satisfy the needs of customers better than competitors. This requires firms to develop a thorough understanding of the competitive landscape, their target markets, customer relationships, product development capabilities, and competitive advantages and disadvantages. This course is designed to enable you to apply marketing frameworks and tools and think strategically with a marketing orientation. The basic marketing principles apply to both for-profit and not-for-profit organizations.

The course framework is split into four modules covering the marketing fundamentals:

- Module 1. Identifying Market Opportunities
- Module 2. Setting a Marketing Strategy
- Module 3. Formulating the Marketing Mix
- Module 4. Executing a Marketing Strategy

The key objectives of the course are to:

1. Understand the strategic role of marketing in companies and integrate the customer into business planning.
2. Identify and address key marketing issues facing managers.
3. Determine market opportunities, design a strategy, and formulate marketing mix decisions.
4. Apply frameworks and tools—both qualitative and quantitative—for marketing analyses.
5. Develop recommendations and action plans for companies facing difficult marketing decisions through case studies.

Course Materials

1. Required:

- **Course pack:** Electronic versions of course materials will be available on Canvas under the assignments listed for each session (see “Home” view).
- In addition to the materials listed above, the course Canvas site includes announcements, homework assignments, and other supplementary materials. Please check it frequently for updates, as most readings and assignments will be posted on a weekly basis, by Friday before the following week’s class.

2. Optional:

The course pack on Canvas includes the featured reading materials from the textbook below. The full text is available for your reference in the library.

- **Background Textbook:** *Marketing Management* (15th edition), Philip Kotler & Kevin Lane Keller. The course pack includes all the featured reading materials from the textbook. Copies are on reserve at Feldberg Library.

Class Participation

Students and instructors co-produce the Tuck educational experience. Much of this course’s learning occurs in class, as students share experiences, questions, and analyses with each other. Your preparation, presence, and active participation are important for its success. **Attendance is therefore required, and unexcused absences will negatively impact participation grades.** Each class session has a **Session Memo** that is part of the session folder on Canvas. The session memos contain important reading materials and class discussion questions. Please read the relevant materials and think of responses to the questions in the memos before coming to class. Furthermore, there will be class exercises applying the relevant frameworks that you will be expected to perform in class. Therefore, you cannot make up for a missed class by simply reading lecture notes later. To reinforce this expectation, I may randomly select (i.e., cold call) class members to comment on issues, explain concepts, and open case discussions.

It is Tuck policy that missing a class for recruiting activities is not considered an excused absence. It is your responsibility to work with recruiting and career services to avoid these disruptions. Absences may be excused for personal illness, family emergencies, or religious observance. If you are unable to attend class due to one of these reasons, please notify me, academic coordinator Kimberlee Poirier (Kimberlee.A.Poirier@tuck.dartmouth.edu), and course scribe Frederick Lee (Frederick.V.Lee@tuck.dartmouth.edu) by email as soon as possible, preferably **a day in advance.**

NOTE: Class participation grades are not simply a function of how often you speak in class, but how effectively you contribute to class learning, and how thoughtfully you respond to questions.

Regular class sessions consist of (1) interactive lectures/discussions, (2) case studies, and (3) special guest speaker presentations. In lectures/discussions, we will focus on concepts, theories, and examples. In case studies, we will apply the frameworks and concepts discussed in lectures and readings to real-world business problems. The case method is a highly effective means of sharpening your analytical skills and is usually the staple of management education.

Case Preparation

Cases are descriptions of real-world business situations that provide opportunities to analyze marketing problems and develop marketing strategies. We will cover eight cases across the four modules. Each case has been carefully selected to discuss the fundamentals of marketing as laid out in the course framework. You will need to analyze and prepare each case with your respective study group for class discussion. Please carefully study the case, paying attention to the case preparation questions provided in the session memo. Be sure to pay attention to the exhibits, which often contain important data. Effective case analyses not only draw from the case text, but also make connections to key points found in the exhibits (tables, figures, appendixes). In addition, when answering “Yes/No” questions, or developing a recommendation, strong case analyses not only provide a response, but also a rationale for why the response makes sense (and perhaps also why alternatives do not). Please keep in mind that case analyses are meant to reflect your grasp of the course content; thus, applying concepts and frameworks discussed in class is essential.

Each case provides all the facts that you need to analyze it. The idea is to tackle the case problem from a fresh perspective. You should not find out what happened or bring outside information about the company or the industry beyond what is described in the case. Such information is often irrelevant and counterproductive for your learning. Further, doing so is a violation of the Honor Code and may have a point-deduction penalty.

1. **Case Write-ups:** For three of the cases, each study group will prepare and submit a write-up addressing *all the discussion questions* assigned for that case. The write-up should be contained within 2 single-spaced pages, written in 11 or 12-point standard font (e.g., TNR, Arial, Calibri) with 1” margins. All supporting quantitative analyses should be included in an appendix, restricted to up to 4 pages.

General case write-up guidelines:

- Provide a coherent, well-organized analysis grounded in course framework, not simply a list of arguments for or against a position.
- Be concise and do not spend time rehashing, quoting, or paraphrasing the facts given in the case. Be as direct as you can in answering the discussion questions.
- Draw connections to exhibits, figures, and tables to enrich your responses. When defending a particular point of view, be specific as to why you argue for that view (and not others), using information from the course and/or the case (rather than your intuition) to back up your assertions.
- Nominate a representative from your study group who will upload the write-up on Canvas on behalf of the group.
- Please make sure that the case write-up submission includes the NetIDs of your study group members, and not the names.

Peer Assessment: You will be assessed by your study group based on your contribution towards group case analyses and session memo discussions at the end of the term. Your individual score will incorporate this peer assessment feedback.

2. **In-class Case Discussion:** In class, my role is to facilitate the discussion, while the direction and quality of the case analysis is the collective responsibility of the class. While you work on the cases as a study group, you will need to also analyze your individual perspective of the case. There will be frequent cold-calling during case discussion, and you should be prepared to share your analysis and perspective. Individual preparedness for class discussion will also enable you to participate in case-related exercises that we may perform during case discussions.

A typical request at the end of a case study is: “What is the right answer?” Keep in mind that, in many business situations, there may not be an “optimal” or “perfect” recommendation; however, there can be more than one “viable” action as well as several ill-considered actions. The goal of the case method is not to prescribe a solution to one specific problem but to thoroughly understand a complex issue from multiple angles, which then helps you construct a sound framework to tackle similar problems in the future.

Guest Speakers

Guest speaker presentations are an integral part of this course. There will be two guest speakers during the term (**Sessions 6 and 13**; any updates or changes will be posted in Canvas). Each speaker is invited to present on a given course topic and to answer your questions based on their professional experience. Attending guest speaker presentations is mandatory. For each guest speaker session, please review the speaker bio in the session memo and prepare questions that you may want to ask during the student interaction time.

Course Assistance

If you need assistance with the course, I will hold office hours on Tuesdays at 1:00 – 2:30 pm. There will also be two review sessions during the term (see Course Schedule at the end for details). And I am happy to meet with you by appointment. In addition, our class will be supported by several colleagues working as second-year Teaching Assistants, who will assist me with grading. Each study group will also be assigned a TA mentor as indicated in the list below.

TA	Email	Study Groups
Betten, Laura	Laura.M.Betten.TU24@Tuck.Dartmouth.EDU	13, 14
Bowen, Fiona	Fiona.Bowen.TU24@Tuck.Dartmouth.EDU	15, 16
Martin, Eric	Eric.S.Martin.TU24@Tuck.Dartmouth.EDU	17, 18, 19
Olson, Zoe	Zoe.Olson.TU24@Tuck.Dartmouth.EDU	20, 21
Ong, Edmund	Edmund.Z.Ong.TU24@Tuck.Dartmouth.EDU	22, 23
Prairie, Andrew	Andrew.M.Prairie.TU24@Tuck.Dartmouth.EDU	24, 37
Sherman, Samuel	Samuel.S.Sherman.TU24@Tuck.Dartmouth.EDU	38, 39, 40
Shoff, Madeline	Madeline.R.Shoff.TU24@Tuck.Dartmouth.EDU	41, 42
Soutter, Madeline	Madeline.Soutter.TU24@Tuck.Dartmouth.EDU	43, 44, 45
Woody, Megan	Megan.R.Woody.TU24@Tuck.Dartmouth.EDU	46, 47, 48

You are encouraged to reach out to your study group’s TA mentor for course related topics and questions. There are no formal TA sessions, however you are recommended to catch up with your assigned mentors freely and informally as and when needed.

Mid-term Home Assignment

The mid-term home assignment is an open-book, open-notes, individually-completed assignment that will be available on Canvas **on Monday, October 30, 6:00 pm and must be completed by Tuesday, November 7, 6:00 pm**. Please submit the assignment on Canvas. *Please note that you may have access to course materials while working on the assignment as some questions may utilize this material.* Late assignments will have points deducted. Do not discuss the contents of the assignment with any current or former students once it has been activated until after the assignment due date. Doing so would be a violation of the Tuck Academic Honor Code.

Final Exam

The final exam is an open-book, open-notes, individually-completed exam that will be available on Castalia **on Wednesday, December 6 at 6:00 pm and must be completed by Sunday, December 10, 12:00 pm noon**. You can take the final exam during any three-hour time block during this time. **Once you begin the exam, you must complete it during one sitting within three hours. Do not begin the exam until you are ready to take it.** *Please note that you may have access to course materials while working on the exam as some questions may utilize this material.* Late exams will have points deducted. Do not discuss the contents of the exam with any current or former students once it has been activated until after the exam due date. Doing so would be a violation of the Tuck Academic Honor Code.

General Course Expectations and Etiquette

To ensure the best possible learning environment for you and your classmates, please observe the following expectations and etiquette:

1. Please be punctual and ready to engage.
2. Laptops and iPads are to be used only to follow class session material. Please do not use the devices for internet navigation or other purposes during class. Please silence and put away your cell phones for the full duration of class.
3. Adhere to all aspects of the Tuck Academic Honor Code. Please consult your professor with any questions about how the Honor Code applies in a specific situation.
4. Complete group work with your group and do not consult with students in other groups or from previous years' groups. Consulting with previous years' students for any deliverable, and consulting with current or previous years' students for individual deliverables (mid-term assignment or exam), is a Tuck Honor Code violation. Complete individual work on your own.
5. Do not use any recording devices during class sessions. If you have a specific need to do so, talk with your professor at the end of the first class.

Generative AI policy

The use of ChatGPT and similar systems is not allowed in the preparation of the case write-ups, the mid-term assignment, or the final project. Feeding these tools the course materials (syllabus, articles, chapters, cases, case questions, assignment, exam, instructions) is not allowed either. AI tools are still in early stages, and you might explore how they can aid your comprehension of the course material. But be careful, ChatGPT and similar tools “speak” with great confidence, even when their outputs are incomplete, wrong, or completely fabricated. If you use them in any portion of the course (where it is not forbidden), please acknowledge doing so, attribute proper credit, and include the prompts.

Grading and Evaluation

<i>Individual</i>		
	Class Participation (attendance and quality participation)	20%
	Mid-term Assignment	20%
	Final Exam	25%
<i>Group</i>		
	Case Write-ups	35%
<i>Total</i>		100%

Please note that re-grades will not be permitted unless there is a calculation error. If a calculation error has occurred in the grading of an assignment or exam, or in other exceptional cases, please email me as soon as possible. Please include documentation in support of your position (e.g., a scanned page from the readings with relevant information highlighted). You will have one week after an assignment has been returned to bring a calculation error to my attention.

Course Structure and Learning Objectives

Module 1: Identifying Market Opportunities

Session 1: Introduction to Marketing and 3 Cs Framework

- *Readings:* Session Memo; “Marketing Myopia” article; Customer Lifetime Value (Kotler/Keller: Chapter 5, pp. 138-142).
- *Learning objectives:*
 - i. What is marketing and how does it work?
 - ii. How does marketing myopia hurt businesses?
 - iii. Developing marketing fundamentals via the 3 Cs framework.
 - iv. Customer Lifetime Value (CLV) Model to assess the value of customers to the firm.
- *Due:* Complete pre-class survey by 10/14 6pm (individual)

Session 2: Customer Centricity and Intelligence

- *Readings:* Session Memo; AATR Model Note.
- *Case:* Jaguar Land-Rover: Towards a Customer-Centric Organisation.
- *Learning objectives:*
 - i. The stages of the customer decision making journey.
 - ii. Marketing insight and possible data sources to generate insight.
 - iii. Awareness-Availability-Trial-Repeat (AATR) Model to assess potential market size.

Module 2: Setting a Marketing Strategy

Session 3: Segmentation, Targeting and Positioning I

- *Readings:* Session Memo; “A Note on Market Definition, Segmentation, and Targeting” and “Positioning: The Essence of Marketing Strategy” articles; Points-of-Difference and Points-of-Parity (Kotler/Keller: Chapter 10 pp. 278-281); Cluster Analysis Note.
- *Learning objectives:*
 - i. Market segmentation strategy and criteria.
 - ii. Cluster Analysis Tool for market segmentation.
 - iii. Strategic and tactical considerations in targeting.
 - iv. Components of brand positioning and the role of 3 Cs.

Session 4: Segmentation, Targeting and Positioning II

- *Readings:* Session Memo; Quantitative and Case Analyses in Marketing Note.
- *Case:* Chase Sapphire: Creating a Millennial Cult Brand.
- *Learning objectives:*
 - i. Tools to determine, assess, and change brand positioning.
 - ii. How do you select the right target market for your new product offering and create a distinctive value proposition?
- *Submission due:* Chase Sapphire Case write-up before class (group).

Session 5: Branding

- *Readings:* Session Memo; Brand Resonance Model (Kotler/Keller: Chapter 11, pp. 307-308).
- *Case:* The Black & Decker Corporation: Power Tools Division.
- *Learning objectives:*
 - i. The meaning and value of brands to customers and organizations.
 - ii. Building brand resonance and equity.
 - iii. Devising brand strategy for new products.

Session 6: Guest Speaker

- Deirdre Findlay. Read speaker bio in Session Memo and come prepared to ask a question.

Module 3: Formulating the Market Mix

Session 7: Product I

- *Readings:* Session Memo; “Eager Sellers Stony Buyers” article; Concept Testing and Conjoint Analysis (Kotler/Keller: Chapter 15 pp. 445-8); Conjoint Analysis Note.
- *Learning objectives:*
 - i. Understanding product benefits.
 - ii. Unpacking the new product development process: from ideation to adoption.
 - iii. Concept Test Tool to evaluate product concepts.
 - iv. Conjoint Analysis Tool to help build better products.

Session 8: Place I

- *Readings:* Session Memo.
- *Case:* Away: Scaling a DTC Brand.
- *Learning objectives:*
 - i. Distribution channels and routes to market.
 - ii. Multichannel distribution and omni-channel retail.
 - iii. Evaluating direct-to-consumer brands’ appeal and success factors.
- *Submission due:* Mid-term Home Assignment by 11/7 6 pm (individual).

Session 9: Product and Place II

- *Readings:* Session Memo.
- *Case:* Apex Ski Boots.
- *Learning objectives:*
 - i. The role of consumer behavior in product adoption.
 - ii. Channels’ strategic role beyond mere point-of-sale.
 - iii. Evaluating channel challenges and channel-focused actions to be taken.
- *Submission due:* Apex Ski Boots Case write-up before class (group).

Session 10: Price

- *Readings:* Session Memo; Price Elasticity & Breakeven Cannibalization Rate Note.
- *Learning objectives:*
 - i. Selecting the pricing strategy and structure.
 - ii. Pricing new products.
 - iii. Assessing price sensitivity (elasticity).
 - iv. Understanding the psychology of pricing.
 - v. Monitoring price policy (breakeven cannibalization rate).

Session 11: Promotion

- *Readings:* Session Memo; “A Refresher on Marketing ROI” article.
- *Case:* Can 3G Capital Make Burger King Cool Again?
- *Learning objectives:*
 - i. Planning and executing marketing communications.
 - ii. Designing and evaluating a creative brief.
 - iii. Evaluating communication performance.
 - iv. Assessing ROI of marketing campaigns.

Module 4: Executing a Marketing Strategy

Session 12: Marketing for a Better World

- *Reading:* Session Memo.
- *Case:* The Pepsi Refresh Project: A Thirst for Change.
- *Learning objectives:*
 - i. The role of marketing in promoting sustainability and consumer wellbeing.
 - ii. Barriers to sustainable consumption and potential solutions.
 - iii. Assessing and designing effective cause-related marketing programs.

Session 13: Guest Speaker

- Jillian McVicar Nelson. Read speaker bio in Session Memo and come prepared to ask a question.

Session 14: Marketing Across Borders

- *Reading:* Session Memo.
- *Case:* Unilever in Brazil: Marketing Strategies for Low-Income Consumers.
- *Learning objectives:*
 - i. Global vs. local marketing in international markets.
 - ii. Adapting marketing strategy (STP) and mix (4 Ps).
 - iii. Marketing in emerging markets.
- *Submission due:* Unilever in Brazil case write-up before class (group).

Session 15: Course Wrap

- *Learning objectives:*
 - i. Applying marketing principles on the job market.
 - ii. Review of the course framework and modules.
 - iii. Preparation for the final exam.
- *Submission due:* Peer assessment before last class (individual).
- *Submission due:* Final Exam by 12/10 12 pm noon (individual).

COURSE SCHEDULE & ASSIGNMENTS DUE

See Session Memos for readings, numerical problems, and discussion questions to address before class.

#	DATE	TOPIC	DELIVERABLES & COMMENTS
Module 1: Identifying Market Opportunities			
1	10/16 M	<i>Topic:</i> Introduction to Marketing and 3 Cs Framework	<ul style="list-style-type: none"> ➤ <u>Complete pre-class survey by 10/14 Sat 6 pm</u> ➤ <u>Read Course Syllabus</u> ➤ <u>Read materials listed under “Readings”</u>
2	10/23 M	<i>Topic:</i> Customer Centricity and Intelligence <i>Case:</i> Jaguar Land-Rover: Towards a Customer-Centric Organisation	<ul style="list-style-type: none"> ➤ <u>Read materials listed under “Readings”</u> ➤ <u>Read Jaguar case for class discussion</u> ➤ <u>Review & Solve Session Memo numerical problems before class (no submission required)</u>
Module 2: Setting a Marketing Strategy			
3	10/24 Tue	<i>Topic:</i> Segmentation, Targeting, and Positioning I	<ul style="list-style-type: none"> ➤ <u>Read materials listed under “Readings”</u>
4	10/30 M	<i>Topic:</i> Segmentation, Targeting, and Positioning II <i>Case:</i> Chase Sapphire: Creating a Millennial Cult Brand	<ul style="list-style-type: none"> ➤ <u>Submit Chase case write-up before class</u> ➤ <u>Read materials listed under “Readings”</u> ➤ <u>Mid-term Home Assignment posted on Canvas at 6pm. Due before 11/7 Tue 6pm</u>
5	10/31 Tu	<i>Topic:</i> Branding <i>Case:</i> The Black & Decker Corporation: Power Tools Division	<ul style="list-style-type: none"> ➤ <u>Read materials listed under “Readings”</u> ➤ <u>Read Black & Decker case for class discussion</u> ➤ <u>Modules 1 & 2 Review: 1:30 – 3:00 pm, Cook</u> ➤ <u>Extended Office Hours: 3:00 – 5:00 pm</u>
6	11/2 Th 1:15-2:45pm	<i>Guest Speaker:</i> Deirdre Findlay Attendance required.	<ul style="list-style-type: none"> ➤ <u>Come prepared with a question for guest speaker 1:15 – 2:45 pm, Cook</u>
	11/6 M	Extended Office Hours 12:30 – 2:30 pm	
Module 3: Formulating the Marketing Mix			
7	11/6 M	<i>Topic:</i> Product I	<ul style="list-style-type: none"> ➤ <u>Read materials listed under “Readings”</u>
8	11/7 Tu	<i>Topic:</i> Place I <i>Case:</i> Away: Scaling a DTC Brand	<ul style="list-style-type: none"> ➤ <u>Submit Mid-term Home Assignment by 6 pm</u> ➤ <u>Read materials listed under “Readings”</u> ➤ <u>Read Away case for class discussion</u>
9	11/13 M	<i>Topic:</i> Product and Place II <i>Case:</i> Apex Ski Boots	<ul style="list-style-type: none"> ➤ <u>Submit Apex Ski Boots case write-up before class</u> ➤ <u>Read materials listed under “Readings”</u>
10	11/14 T	<i>Topic:</i> Price	<ul style="list-style-type: none"> ➤ <u>Read materials listed under “Readings”</u> ➤ <u>Review & Solve Session Memo numerical problems before class (no submission required)</u>
11	11/20 M 1:30-3:00 pm 3:20-4:50 pm	<i>Topic:</i> Promotion <i>Case:</i> Can 3G Capital Make Burger King Cool Again?	<ul style="list-style-type: none"> ➤ <u>Read materials listed under “Readings”</u> ➤ <u>Read Burger King case for class discussion</u>
Module 4: Executing a Marketing Strategy			
12	11/27 M	<i>Topic:</i> Marketing for a Better World <i>Case:</i> The Pepsi Refresh Project: A Thirst for Change	<ul style="list-style-type: none"> ➤ <u>Read materials listed under “Readings”</u> ➤ <u>Read Pepsi Refresh case for class discussion</u>
13	11/28 T	<i>Guest Speaker:</i> Jillian McVicar Nelson Attendance required.	<ul style="list-style-type: none"> ➤ <u>Come prepared with a question for guest speaker Georgiopoulos</u>
14	12/4 M	<i>Topic:</i> Marketing Across Borders <i>Case:</i> Unilever in Brazil	<ul style="list-style-type: none"> ➤ <u>Submit Unilever in Brazil case write-up before class</u>
15	12/5 T	<i>Topic:</i> Course Wrap	<ul style="list-style-type: none"> ➤ <u>Peer assessment due before class</u> ➤ <u>Modules 3 & 4 Review: 1:30 – 3:00 pm, Cook</u> ➤ <u>Extended Office Hours: 3:00 – 5:00 pm</u>
	12/6 W	Extended Office Hours 1:00 – 4:00 pm	
	12/6 W	Final Exam	<ul style="list-style-type: none"> ➤ <u>Final Exam posted on Castalia at 6:00 pm</u> ➤ <u>Submit Final Exam by Sunday 12/10 @ 12 Noon</u>

Core Strategy

Fall 2023

Section 1 & 3

Professor Giovanni Gavetti

Office: Tuck 205D, 646-9262

Academic Coordinator: Carol Millay

Office: Chase 208, 646-2002

Classroom: General Motors

Scribe: Catherine LaTouche

Midterm Exam: (via Canvas) available Friday, November 10th at 12:00pm, due by Sunday, November 12th at 5:00pm

Final Exam: (via Canvas) Monday, December 11th, 9:00am-11:30am

I. Overview

This is a foundational class on business strategy. We will get you acquainted with a series of principles that every strategist should fully grasp. The goal is to develop a ‘strategic mindset’ that allows you to:

- (1) properly understand the broad competitive game companies play;
- (2) grasp how companies can attain and sustain competitive advantage;
- (3) anticipate and react to disruptions to a company’s business;
- (4) understand the relevance of synergies across different businesses and how to manage them.

We also want you to be familiar with some of the latest trends and discussions around business strategy, such as issues related to ESG objectives. Anyone who is interested in business, not only for those interested in strategy roles, should find this course useful.

II. Our Strategy to teach you Strategy

Unfortunately, there is no formula to develop or implement successful business strategies. There is, however, a vast pool of knowledge that documents the conditions that are necessary for a company to attain a competitive advantage and consistently outperform its rivals. Similarly, over the years, we have also learned a great deal about common ‘strategic mistakes’ that get companies into trouble. We have distilled existing knowledge for you and outlined a series of principles that are essential for the crafting of business strategy.

Without deep understanding, the basic principles of strategy may seem trite. It is only after one takes a series of deep dives into situations that embody these principles that one begins to appreciate their relevance. We have therefore selected a series of cases that showcase these principles and facilitate the type of immersion that is needed to grasp them fully. We have also assembled a ‘toolkit’ or a series of frameworks aimed at helping the strategist to organize the information that is available to understand what is going on in specific situations. We will introduce you to such frameworks, discuss them in class, and provide an opportunity for you to apply them.

The pedagogical tool of this class is the ‘case method’. Cases contain a great deal of information and require you to use logic and frameworks to identify what are the critical issues in a situation. The issues showcased in each case illustrate the workings of basic principles. Rather than just define and explain strategy principles, we want you to experience how such principles manifest themselves in real-life situations. It is therefore critical that you prepare the case before class and be ready to engage in an in-depth discussion during class. In-class, case-based discussions constitute this course’s foundation.

In addition to in-class discussions, throughout the term, you will work with your study group on applying your learnings to a ‘real case’. We call this the Strategy Exercise’. To do this, you will apply the principles and tools covered in class to come up with a new business for an established company. Such business must leverage the new generation of AI technologies recently introduced. The details of the project can be found [here](#).

We cannot stress the following more our job is to get you to think like a great business strategist. This implies getting you out of your comfort zone to ensure that you reflect deeply about the material covered in the course. If you feel lost at times, do not worry. Feeling lost at times is a feature of the class. We will connect the dots every so often to make sure no one falls behind. However, we want to create an environment in which the big ‘ahas!’ come as the product of your own reflections.

III. Grades

Like all other core courses, you will be graded on a curve. Final grades are calculated as a weighted average of the following components:

- **Class Participation (40%):** We care a lot about your engagement in class discussion. This is why 40% of your grade is accounted for by class participation. The ‘quality’ rather than the ‘quantity’ of comments is what matters. If speaking-up on the fly is not your thing, please come talk to us and we can devise a strategy to get you engaged.
- **Strategy Exercise (30%):** This is a term-long project that implies working on a ‘live case’ with your study group.
- **Mid-term and Final Exam (30%):** The final has more weight than the midterm. We view the midterm more as an opportunity for you to establish if you’re up to speed, or if you need to revisit concepts, we covered in the first part of the course.

IV. Rules of Engagement

Missing Class: We know that you are very busy during the Fall term. It is also our duty to make sure that you learn. Our rule for absences is simple: we cannot give you credit if you miss more than three sessions. Exceptions apply for chronic health problems or other emergencies. If you need to miss class, please send an email to me and the scribe with a brief explanation.

Timeliness: We both come from countries where folks come late to meetings. This is the main reason why we no longer live in our native countries (well, this is a bit of an overstatement). We start on time; we end on time, and we really, really, hate when students are late (this is not an overstatement).

Ethics (academic and personal): We live and die by Tuck's Ethics and Honor Code. Do not do stuff that you know will get you into trouble. If in doubt, ask us first.

V. Course Outline

Day 1 (10/17): Introduction and Competitive Landscape (2 Hour Class)

Objective: Discuss industry structure and the competitive game Case: Cola Wars Continue: Coke and Pepsi in 2010 (HBS)

Study Questions:

- 1. There are several industries featured in the case. Two are particularly central: concentrate producers (such as Coca Cola and Pepsi) and bottlers. Historically, return over invested capital has been around 37% for the average concentrate producer and around 11.7% for the average bottler. Why do you think this has been the case?*
- 2. Why has Coca Cola made so much money for so long? Think about it, they sell brown 'sugar water'! There is a bunch of other companies in the soft drink industry, why are those other companies not as profitable as Coca Cola?*
- 3. Why did Coca Cola sell its bottling plants? Why did Coca Cola re-acquire its bottling plants? Why did Coca Cola sell (again) its bottling operations? Is there something about this back-and-forth or is this just Coca Cola's M&A department justifying their payroll?*

Day 2 (10/18): What is Strategy? Key Concepts and Preview of the Course

Objectives: Introduce key concepts; overviews what will be covered during the course; discuss milestones (midterm, final exam, and group project) & calendar; and lay out the rules for engagement.

Day 3 (10/25): Competitive Landscape II

Objective: Deepen our understanding of the competitive landscape and how companies can play the competitive game.

Case: The Global Videogame Industry (Tuck – adaptation)

Study Questions:

There are four important moments in this case (G = generation). First, Atari's boom-bust (2G). Second, Nintendo bringing back the industry (3G). Third, Sega's challenge to Nintendo (4G). Sony's challenge to Nintendo/Sega (5G). As you read the case, make (mental) notes about the following:

- 1. What do you like/dislike about Atari's strategy?*
- 2. What do you like/dislike about Nintendo's strategy?*
- 3. What do you like/dislike about Sega's strategy?*

From a scale from 1 to 10, how would you rate the strategies of these companies? (10 excellent, 1 poor). Think about the entire time-period –i.e., do not anchor your judgments on times that the company did particularly well or particularly bad.

Day 4 (10/26): Competitive Advantage I

Objective: First cut at understanding how competitive advantage can be created

Case: Edward Jones (HBS)

Day 5 (11/1): Competitive Advantage II

Objective: Second cut at competitive advantage

Case: Toyota – Launching Prius (HBS)

Day 6 (11/2): Ecosystems

Objective: What is the strategy of one of the most successful companies in history

Case: Apple Inc. in 2015 (HBS)

Day 7 (11/8): Practicum (2 Hour Class)

Objective: Let us apply what we have learned so far to a real-life situation.

Case: The case will be handed out at the end of Class 5

Day 8 (11/9): Dynamics of Competition I

Objective: Understanding radical change from the perspective of a new entrant.

Case: Minerva Project (Tuck)

Day 9 (11/15) Dynamics of Competition II

Objective: Understanding radical change from the perspective of an established company.

Case: Kodak (A) HBS

Study Questions:

MID-TERM EXAM – Read: How to prepare for Strategy Final Exam

Day 10 (11/16): Dynamics of Competition III

Objective: Discuss the role of the CEO of an established company in persuading the organization to embrace change and other implementation challenges.

Day 11: From Business to Corporate Strategy (11/20)

Details to be provided before class.

Day 12: Corporate Strategy I (11/29)

Objectives: Introduce fundamental principles of corporate strategy

Case: Walt Disney Co.: The Entertainment King (HBS)

Day 13: Corporate Strategy II (11/30)

Objectives: A foundational discussion of corporate strategy in emerging markets

Case: House of Tata--1995: The Next Generation (A)

Day 14 (12/6): Strategy and Gender

Objective: Discuss how companies can leverage social objectives to attain a competitive advantage.

Case: Patagonia's unique talent strategy Download Patagonia's unique talent strategy(Tuck Case)

Day 16 (12/7): Student Presentations (2.5 hour class)

You run the show. You and your study group only have to be present.

SEE Strategy Exercise for more details

FINAL EXAM – Read: How to prepare for Strategy Final Exam

Core Strategy

Fall 2023

Section 2 & 4

Professor Ramon Torras

Office: Tuck 205B, 646-6433

Academic Coordinator: Rick Rielly

Office: Woodbury 304, 646-0163

Classroom: Rosenwald

Scribe: Chris Weinmann

Midterm Exam: (via Canvas) available Friday, November 10th at 12:00pm, due by Sunday, November 12th at 5:00pm

Final Exam: (via Canvas) Monday, December 11th, 9:00am-11:30am

I. Overview

This is a foundational class on business strategy. We will get you acquainted with a series of principles that every strategist should fully grasp. The goal is to develop a ‘strategic mindset’ that allows you to:

- (1) properly understand the broad competitive game companies play;
- (2) grasp how companies can attain and sustain competitive advantage;
- (3) anticipate and react to disruptions to a company’s business;
- (4) understand the relevance of synergies across different businesses and how to manage them.

We also want you to be familiar with some of the latest trends and discussions around business strategy, such as issues related to ESG objectives. Anyone who is interested in business, not only for those interested in strategy roles, should find this course useful.

II. Our Strategy to teach you Strategy

Unfortunately, there is no formula to develop or implement successful business strategies. There is, however, a vast pool of knowledge that documents the conditions that are necessary for a company to attain a competitive advantage and consistently outperform its rivals. Similarly, over the years, we have also learned a great deal about common ‘strategic mistakes’ that get companies into trouble. We have distilled existing knowledge for you and outlined a series of principles that are essential for the crafting of business strategy.

Without deep understanding, the basic principles of strategy may seem trite. It is only after one takes a series of deep dives into situations that embody these principles that one begins to appreciate their relevance. We have therefore selected a series of cases that showcase these principles and facilitate the type of immersion that is needed to grasp them fully. We have also assembled a ‘toolkit’ or a series of frameworks aimed at helping the strategist to organize the information that is available to understand what is going on in specific situations. We will introduce you to such frameworks, discuss them in class, and provide an opportunity for you to apply them.

The pedagogical tool of this class is the ‘case method’. Cases contain a great deal of information and require you to use logic and frameworks to identify what are the critical issues in a situation. The issues showcased in each case illustrate the workings of basic principles. Rather than just define and explain strategy principles, we want you to experience how such principles manifest themselves in real-life situations. It is therefore critical that you prepare the case before class and be ready to engage in an in-depth discussion during class. In-class, case-based discussions constitute this course’s foundation.

In addition to in-class discussions, throughout the term, you will work with your study group on applying your learnings to a ‘real case’. We call this the Strategy Exercise’. To do this, you will apply the principles and tools covered in class to come up with a new business for an established company. Such business must leverage the new generation of AI technologies recently introduced. The details of the project can be found [here](#).

We cannot stress the following more our job is to get you to think like a great business strategist. This implies getting you out of your comfort zone to ensure that you reflect deeply about the material covered in the course. If you feel lost at times, do not worry. Feeling lost at times is a feature of the class. We will connect the dots every so often to make sure no one falls behind. However, we want to create an environment in which the big ‘ahas!’ come as the product of your own reflections.

III. Grades

Like all other core courses, you will be graded on a curve. Final grades are calculated as a weighted average of the following components:

- **Class Participation (40%):** We care a lot about your engagement in class discussion. This is why 40% of your grade is accounted for by class participation. The ‘quality’ rather than the ‘quantity’ of comments is what matters. If speaking-up on the fly is not your thing, please come talk to us and we can devise a strategy to get you engaged.
- **Strategy Exercise (30%):** This is a term-long project that implies working on a ‘live case’ with your study group.
- **Mid-term and Final Exam (30%):** The final has more weight than the midterm. We view the midterm more as an opportunity for you to establish if you’re up to speed, or if you need to revisit concepts, we covered in the first part of the course.

IV. Rules of Engagement

Missing Class: We know that you are very busy during the Fall term. It is also our duty to make sure that you learn. Our rule for absences is simple: we cannot give you credit if you miss more than three sessions. Exceptions apply for chronic health problems or other emergencies. If you need to miss class, please send an email to me and the scribe with a brief explanation.

Timeliness: We both come from countries where folks come late to meetings. This is the main reason why we no longer live in our native countries (well, this is a bit of an overstatement). We start on time; we end on time, and we really, really, hate when students are late (this is not an overstatement).

Ethics (academic and personal): We live and die by Tuck's Ethics and Honor Code. Do not do stuff that you know will get you into trouble. If in doubt, ask us first.

V. Course Outline

Day 1 (10/17): Introduction and Competitive Landscape (2 Hour Class)

Objective: Discuss industry structure and the competitive game Case: Cola Wars Continue: Coke and Pepsi in 2010 (HBS)

Study Questions:

- 1. There are several industries featured in the case. Two are particularly central: concentrate producers (such as Coca Cola and Pepsi) and bottlers. Historically, return over invested capital has been around 37% for the average concentrate producer and around 11.7% for the average bottler. Why do you think this has been the case?*
- 2. Why has Coca Cola made so much money for so long? Think about it, they sell brown 'sugar water'! There is a bunch of other companies in the soft drink industry, why are those other companies not as profitable as Coca Cola?*
- 3. Why did Coca Cola sell its bottling plants? Why did Coca Cola re-acquire its bottling plants? Why did Coca Cola sell (again) its bottling operations? Is there something about this back-and-forth or is this just Coca Cola's M&A department justifying their payroll?*

Day 2 (10/18): What is Strategy? Key Concepts and Preview of the Course

Objectives: Introduce key concepts; overviews what will be covered during the course; discuss milestones (midterm, final exam, and group project) & calendar; and lay out the rules for engagement.

Day 3 (10/25): Competitive Landscape II

Objective: Deepen our understanding of the competitive landscape and how companies can play the competitive game.

Case: The Global Videogame Industry (Tuck – adaptation)

Study Questions:

There are four important moments in this case (G = generation). First, Atari's boom-bust (2G). Second, Nintendo bringing back the industry (3G). Third, Sega's challenge to Nintendo (4G). Sony's challenge to Nintendo/Sega (5G). As you read the case, make (mental) notes about the following:

- 1. What do you like/dislike about Atari's strategy?*
- 2. What do you like/dislike about Nintendo's strategy?*
- 3. What do you like/dislike about Sega's strategy?*

From a scale from 1 to 10, how would you rate the strategies of these companies? (10 excellent, 1 poor). Think about the entire time-period –i.e., do not anchor your judgments on times that the company did particularly well or particularly bad.

Day 4 (10/26): Competitive Advantage I

Objective: First cut at understanding how competitive advantage can be created

Case: Edward Jones (HBS)

Study Questions:

You are preparing a meeting with the CEO of Edward Jones and pondering about the following:

- 1. What can EJ do to compete with financial intermediaries such as BOFAMerrill, Robinhood or E*TRADE?*
- 2. How can EJ grow its revenues/profits? For example, EJ does not carry structured financial products that offer high yields for brokers. Also, it seems that EJ's investment banking (IB) business is way below its capacity. IB offers good margins.*
- 3. How can EJ reduce its costs? For example, why not have multiple brokers in one office instead of having one per office.*

Day 5 (11/1): Competitive Advantage II

Objective: Second cut at competitive advantage

Case: Toyota – Launching Prius (HBS)

Study Questions:

- 1. How attractive is the traditional automobile industry? Does the hybrid powertrain technology make the industry attractive? Explain why.*
- 2. What is the value created by the hybrid powertrain as implemented in Prius?*
- 3. Why is Toyota pursuing the Prius project? What factors are important to make this project a success?*
- 4. What is similar and what is different between the hybrid car industry and the electric car industry? Do you think that companies like Toyota can re-deploy their assets/capabilities from hybrid to electric?*

Day 6 (11/2): Practicum (2 Hour Class)

Objective: Let us apply what we have learned so far to a real-life situation.

Case: The case will be handed out at the end of Class 5

Day 7 (11/8): Ecosystems

Objective: What is the strategy of one of the most successful companies in history

Case: Apple Inc. in 2015 (HBS)

Study Questions:

- 1. What, historically, have been Apple's competitive advantages?*
- 2. Analyze the personal computer industry. Why did Apple struggle in PCs throughout most of the nineties?*
- 3. What is your interpretation of Apple's successes starting with the iPod all the way to the iPhone and iPad? Is there a strategic secret, or were these basically lucky draws?*
- 4. What do you think is the next 'big thing' for Apple? Videogames, automotive, wearables? Base your answer on what we have learned so far (i.e. how can Apple's sources of competitive advantage in the markets it is in "travel" to another market).*

Day 8 (11/9): Dynamics of Competition I

Objective: Understanding radical change from the perspective of a new entrant.

Case: Minerva Project (Tuck)

Study Questions:

- 1. Can Minerva be successful in disrupting higher education?*
- 2. Will established players (e.g. Ivy League Schools) suffer from Minerva's attack? If so, how?*

Day 9 (11/15) Dynamics of Competition II

Objective: Understanding radical change from the perspective of an established company.

Case: Kodak (A) HBS

Study Questions:

- 1. Why was Kodak so successful in traditional photography?*
- 2. Is digital imaging a disruptive technology?*
- 3. Evaluate Kodak's response to Sony's introduction to Mavica in 1981. Was it appropriate?*
- 4. How would you assess Fisher's attempt to transform Kodak? Why did it fail?*
- 5. What is Kodak's current position in digital imaging? Would Kodak's position be different had the company adopted a different digital imaging strategy in the eighties and nineties? Evaluate Kodak's strategy from the mid-1980s onward.*

MID-TERM EXAM – Read: How to prepare for Strategy Final Exam

Day 10 (11/16): Dynamics of Competition III

Objective: Discuss the role of the CEO of an established company in persuading the organization to embrace change and other implementation challenges.

Study Questions:

Think about a situation in which somebody in your previous job tried to change your mind or the way you do things:

- How did you feel and what did you think about it?*
- How did you react to it?*
- What did you think about the person who tried to change your mind?*

Think about a situation in which you tried to change somebody else's mind:

- *How did you approach this task? Can you articulate the assumptions you made or the approach you took, and write them on a piece of paper?*
- *Were you effective?*
- *Why?*

Day 11: From Business to Corporate Strategy (11/20)

Details to be provided before class.

Day 12: Corporate Strategy I (11/29)

Objectives: Introduce fundamental principles of corporate strategy

Case: Walt Disney Co.: The Entertainment King (HBS)

Study Questions:

1. *Why has Disney been successful for so long?*
2. *What did Michael Eisner do to rejuvenate Disney? Specifically, how did he increase net income in the first four years of his tenure?*

Day 13: Corporate Strategy II (11/30)

Objectives: A foundational discussion of corporate strategy in emerging markets

Here are the steps to prepare for class:

STEP 1: Think about large corporations based the United States, such as Amazon, Apple, Danaher, and Disney. Think about the composition of the businesses that are part of these corporations (i.e., how strong are the synergies between these businesses).

STEP 2: Read the Case: House of Tata--1995: The Next Generation (A)

STEP 3: Think about the following questions:

1. *The businesses that are part of the Tata Group have not changed much since the case was written. What strikes you as different between the composition of the businesses that are part of a U.S.-based corporation and Tata's?*
2. *Tata has a series of peculiar policies: A) a Group Brand; B) equity interlocks among the Tata companies; and C) Tata Administrative Services. What do you think about these policies?*
3. *What do you think about critics that suggest that Tata should focus on a set of 'core' businesses and shed its unrelated businesses? Would you agree?*

Day 14 (12/6): Strategy and Gender

Objective: Discuss how companies can leverage social objectives to attain a competitive advantage.

Case: Patagonia's unique talent strategy Download Patagonia's unique talent strategy(Tuck Case)

Study Questions:

Dean Carter (Patagonia's head of HR) believes that the Great Pacific Child Development Center (GPCDC) is the “secret sauce” of Patagonia (i.e. a source of sustainable competitive advantage).

1. Do you agree with his assessment? Why (or why not)?

2. Do you think GPCDC could serve as a model for other companies to change their practices (as Walmart did with environmental practices)? Or are policies like GPCDC harder to implement relative to the adoption of environmental practices?

Day 16 (12/7): Student Presentations (2.5 hour class)

You run the show. You and your study group only have to be present.

SEE Strategy Exercise for more details

FINAL EXAM – Read: How to prepare for Strategy Final Exam



**Tuck School of Business
at Dartmouth**

Corporate Finance
Syllabus - Winter Term 2023
Class Days: Monday & Tuesday

Felipe Severino
203A Tuck
Felipe.severino@tuck.dartmouth.edu
Office Hours: by appointment

Sections 1 & 3
General Motors

Katharina Lewellen
107 Buchanan
k.lewellen@dartmouth.edu
Office Hours: by appointment

Sections 2 & 4
Rosenwald

Objectives

This course develops basic principles of corporate finance and provides practical tools for financial decision making and valuation. The course focuses on two broad topics:

1. **Financial Policy:** In Part I, we will learn how to forecast a company's need for external financing, be it debt or equity. We will then consider different sources of financing, analyze their potential costs and benefits, and learn how to think about the best financing mix for a firm.
2. **Valuation:** In Part II, we will develop the tools needed for valuing investment projects, including the estimation of relevant project cash flows, estimating the cost of capital (discount rate), and dealing with risk. We will then use these tools as a basis for selecting investment projects and valuing companies.

Teaching Methods

We will develop the main insights of corporate finance theory but emphasize the application of the theory to real business decisions. Each session will involve class discussion. In some instances, discussion will be centered on lectures; in others it will be centered on a business case. Students are expected to read and prepare all cases, come to class, and participate in class discussion. Student participation is critical to the success of the course.

Prerequisites

Students must be familiar with the material covered in Accounting and Capital Markets, including pro-forma statements, the CAPM, and basic option pricing theory.

Academic Coordinators

Marisue Valentine, marisue.b.valentine@tuck.dartmouth.edu 646-0795 (Professor Lewellen)

Geoff Gunning, geoff.gunning@tuck.dartmouth.edu, 646-9283 (Professor Severino)

Review Sessions

There will be a midterm review session on Thursday, February 2, 5:10-6:40pm. Final review sessions will be divided by sections, with Sections 2&4 on Tuesday, February 28, 5:10-6:40pm, and Sections 1&3 on Thursday, March 2nd, 5:10-6:40pm. Additional review sessions will be scheduled as needed with times and locations posted on Canvas.

Readings/Books

Material for the course—the syllabus, case and article readings, class slides, spreadsheets, etc.—will be available on the Corporate Finance page in Canvas.

The **required** textbook is: *Corporate Finance*, Ross, Stephen A., Randolph W. Westerfield and Jeffrey Jaffe, 12th edition, Irwin/McGraw-Hill (RWJ). Students should already have this textbook, as it was previously used in the Capital Markets course. This textbook will also be on reserve at Feldberg Library.

There is also an **optional** textbook: *Analysis for Financial Management*, Robert C. Higgins, 12th edition, Irwin/McGraw-Hill (RH). This book provides a more basic treatment of the course topics than RWJ. One copy will be on reserve in Feldberg Library.

Students unfamiliar with Corporate Finance may consider buying a dictionary such as: *Dictionary of Finance and Investment Terms (Barron's Financial Guides)*, Downes, John, Jordan Elliot Goodman, Barrons Educational Series. Campbell R. Harvey's "Hypertextual Finance Glossary" (<http://www.duke.edu/~charvey/Courses/wpg/glossary.htm>) is also a very valuable resource.

Requirements/Grading

There will be a **midterm exam on Friday, February 3. You will have 1.5 continuous hours to complete this exam, between 8am and midnight.** There will also be a **final exam on Friday, March 3. You will have 2 continuous hours to complete this exam, between 8am and midnight.**

Your grade for the course will be computed based on the following weighting:

- Case write-ups: 15%
- Class participation: 15%
- Midterm exam: 30%
- Final exam: 40%

Case Write-ups

For each business case, you will be required to provide written answers to a set of guideline questions. Students should work with members of their regular study group and submit a two-page memorandum with answers to the guideline questions. *Each student is expected to be familiar with the case, to*

understand his or her group's analysis and conclusions, and be ready to answer questions when cold-called.

Figuring out how to “crack” the case may take you some time. The process of figuring out what the relevant information is and which of the many ideas discussed in class or in the textbook are applicable to the case is an essential component of learning through the case method. You will get better with practice. Please don't be discouraged if your answers to the guideline questions are wrong or if class discussion moves beyond the study questions.

The memorandums should be typed and double-spaced. They should be written as if you were making a presentation to your business colleagues. Even though you will probably use Excel to work up most of your calculations, your memorandums should be written in a way that does not require the reader to have access to your Excel file to understand your analysis of the case. The two-page limit is for text only. You may attach as many numerical calculations as you wish. Each write-up is due at the beginning of class on the day to which it is assigned. Each student should retain a copy for reference during class. Case memorandums will not be accepted after class has met.

Pre-class Tutorials

There will be four pre-class tutorials that consist of a short video and one or more diagnostic questions. The goal of the tutorials is to help you learn the material efficiently at your own pace. If you do not have a background in corporate finance, please watch the video before attempting to answer the questions. If you do have a corporate finance background, feel free to answer the questions without watching the video if desired. Regardless of your background, please complete the tutorials prior to the associated class session. We will not go over the material presented in the tutorials directly, but our class discussions will build on the tutorial material.

Practice Problems

For every topic, we will post a set of practice problems on Canvas. These problems will not be graded, but students are encouraged to work through them on their own to reinforce the main concepts of the course. Additional practice problems from the RWJ textbook are listed in [OPTIONAL_HOMEWORK_PROBLEMS.pdf](#) posted on Canvas. Solutions for these problems are available in the RWJ Solutions Manual that will be on reserve in Feldberg library.

Class Participation

Class participation is 15% of your grade. You are required to attend the course section to which you are assigned. Any unexcused absence will result in a failing class-participation grade for that day. You should come to each class on time and be prepared to discuss that day's case assignment or pre-class tutorial questions. **There will be cold calling on a daily basis.** If you are unprepared to speak when called upon, it is better to “pass” than to sidetrack class discussion with an uninformed answer.

Winter Core Course Absence Policy

Each of the winter courses weights class participation differently, but the following policies are consistent across both of your winter core classes.

Class Absences. We know that this is a stressful time because of both recruiting and the challenges that remain from the pandemic. That said, we expect you to provide forthright, timely, complete, and accurate information in the event that you need to miss class. Please keep in mind that any information that you send your professors about your absence is subject to the Tuck Academic Honor Principle.

1. **Absences for Interviews.** It is Tuck School policy that missing a class for on-campus or virtual interviews is NOT excused. It is your responsibility to work with recruiters and career services to avoid these disruptions. However, we appreciate the importance of your job search and recognize that in some cases conflict with *off-campus* recruiting is unavoidable.

If you foresee an unavoidable conflict with on-campus or virtual interviews, or if you must miss a class session for an off-campus interview, then it is your responsibility to notify your professor, AC, and scribe by e-mail in advance of the class you will be missing with exact details of the interview time, location, and interviewer contact information.

2. **Illness and emergency.** In the event of illness (including covid) or family emergency, it is again your responsibility to notify your professor, AC, and scribe as soon as possible. Failure to do so will result in an unexcused absence.

Our expectation is that you will be **in-person in the classroom**, in order to be counted as present for a class session.

Students with two unexcused absences will receive an automatic grade reduction for the course. Students with more than two unexcused absences will receive a failing grade for the course.

Midterm and Final Exams

Documented evidence that you were ill or had a serious emergency at the scheduled time of an exam is the only valid excuse for missing an exam.

Both the midterm and final exams are closed book, but students may use a set of formula sheets, which the instructors will prepare in advance and make available one week prior to each test. Students may use hand-held calculators or laptop computers while taking exams, but laptop computers may be used for making calculations only.

Honor Code

In every aspect of the course, students are required to adhere to the standards of conduct as stated in the Tuck School Academic Honor Principle. Note that some of the cases and homework assignments used in this class may have been used before at Tuck or other institutions. You may not consult with students previously enrolled in this class, or use their class notes or other materials that were otherwise provided in the past. Moreover, you may not use material or solutions from other institutions (e.g. posted on the Internet), unless otherwise instructed in class for a particular assignment.

Re-Grades

If you believe there was a mistake in the grading of your exam, *within one week* following the return of the exam, submit the original exam and a separate *written explanation* of the points of contention. If the re-grade request is made after one week or without an accompanying written explanation, no re-grade will be given. There are no exceptions to this rule. All re-grade decisions are final. The professor reserves the right to correct all mistakes made grading an exam submitted for a re-grade.

COURSE OUTLINE IN BRIEF

(Subject to small adjustments) Changes to this calendar will be available on Canvas.

Week	Date	Topic	Assignment (due 8:00 pm day before class)	Tutorial
1	Mon., Jan 9	Introduction		
	Tue., Jan 10	Case: Gilbert Lumber	Gilbert*	
2	Tue., Jan 17	Capital Structure 1: MM Theorem		MM
	Wed., Jan 18	Capital Structure 2: Taxes & Distress		Taxes
3	Mon., Jan 23	Case: A New Financial Policy at Swedish Match	Swedish Match	
	Tue., Jan 24	Case: Paramount and current examples	Paramount**	
4	Mon., Jan 30	Guest Speaker: Timothy Koller, McKinsey		
	Tue., Jan 31	Capital Structure 3: Signaling		
	Fri., Feb 3	Midterm Exam		
5	Mon., Feb 6	Free Cash Flows		
	Tue., Feb 7	Case: Diamond Chemicals	Diamond	
6	Mon., Feb 13	Case: Cost of Capital at Ally	Ally	
	Tue., Feb. 14	WACC & APV		WACC
7	Mon., Feb 20	Case: Tottenham Hotspur Plc	Tottenham	
	Tue., Feb 21	Real Options		Options
8	Mon., Feb 27	Case: Interco	Interco	
	Tue., Feb 28	Mini case and review	Explora	
	Fri., Mar 3	Final Exam		

* Gilbert case due 8:30 am on the day of class.

** Discussion of recent bankruptcies: two volunteer study groups.

COURSE OUTLINE

I: FINANCIAL POLICY

Monday, January 9

Session 1: *Introduction*

Tuesday, January 10

Session 2: *Case on Financial Planning*

Case:

Gilbert Lumber Co., Rogers, Steven and Kenneth Cooper. Boston, MA: Harvard Business School Publishing, 2015. Case No. 9-315-137.

Required Reading:

1. RWJ, "Financial Statements Analysis and Financial Models," Chapter 3, pages 42-74.
2. RWJ, "Short-Term Finance and Planning," Chapter 26 (sections 1-2), pages 795-804.

Optional Reading:

1. RH, "Evaluating Financial Performance," Chapter 2, pages 35-83.
2. RH, "Financial Forecasting," Chapter 3, pages 85-118.
3. RH, "Managing Growth," Chapter 4, pages 120-145.

Tuesday, January 17

Session 3: *Capital Structure 1: Modigliani-Miller Theorem*

Required:

RWJ, "Capital Structure: Basic Concepts," Chapter 16 (1-4), pages 487-503.
Tutorial on Modigliani-Miller

Background Reading:

RWJ, "Long Term Financing: An Introduction," Chapter 15, pages 468-483.

Optional Reading:

RH, Chapter 6: "The Financing Decision," pages 191-223.

Wednesday, January 18

Session 4: *Capital Structure 2: Taxes & Distress*

Required:

RWJ, "Capital Structure: Basic Concepts," Chapter 16 (section 5 up to Fig. 16.5), pages 503-507 and "Capital Structure: Limits to the Use of Debt," Chapter 17 (sections 1-4), pages 519-531.

Tutorial on Taxes and Capital Structure

Monday, January 23

Session 5: *Case on taxes*

Case:

A New Financial Policy at Swedish Match, Becker, Bo and Michael Norris. Boston, MA: Harvard Business School Publishing, 2013. Case No. 9-212-017.

Tuesday, January 24

Session 6: *Case on financial distress and current examples*

Case:

Paramount Equipment, Inc., Carliss Baldwin, Harvard Business School Publishing, 2013. Brief Case No. 9-914-557.

Monday, January 30

Session 7: **Guest Speaker:** Tim Koller, McKinsey (class will be held in Georgiopoulos and will be combined sections at 8:30am and then at 10:20am)

Tuesday, January 31

Session 7: *Capital Structure 3: Signaling*

Required Reading:

RWJ, "Capital Structure: Limits to the Use of Debt," Chapter 17 (sections 5-7), pages 531-539.

Friday, February 3

MIDTERM EXAM: to be completed on Canvas within a 1.5-hour window (open at 8:00 am)

II: VALUATION

Monday February 6

Session 8: *Free Cash Flow*

Required Reading:

RWJ, "Making Capital Investment Decisions," Chapter 6 (sections 1-4), pages 169-187.

Review Reading:

RWJ, "Discounted Cash Flow Valuation," Chapter 4, pages 85-119.

Tuesday, February 7

Session 9: *Case on Free Cash Flows*

Case:

Diamond Chemicals PLC (A): The Merseyside Project, Bruner, Robert. Charlottesville, VA: University of Virginia Darden Business Publishing, 2001. Case No. UVA-F-1351.

Required Reading:

RWJ, "Net Present Value and Other Investment Rules," Chapter 5, pages 133-157.

Monday, February 13

Session 10: *Case on Cost of Capital*

Case:

Cost of Capital at Ally

Required Reading:

RWJ, "Risk, Cost of Capital, and Valuation," Chapter 13, (sections 1-5), pages 393-406.

Background Reading:

RWJ, "Return and Risk: The Capital-Asset-Pricing Model (CAPM)," Chapter 11, pages 328-360.

Tuesday, February 14

Session 11: *WACC and APV*

Required:

RWJ, "Valuation and Capital Budgeting for the Levered Firm," Chapter 18, pages 551-566.

Tutorial on WACC

RWJ, "Risk, Cost of Capital and Valuation," Chapter 13, (sections 6-10) pages 406-417.

Optional Reading:

RH, "Discounted Cash Flow Techniques," Chapter 7, pages 231-265.

Monday, February 20

Session 12: *Case on WACC and APV*

Case:

Tottenham Hotspur Plc, Cohen, Lauren, H., Joshua Coval and Christopher Malloy. Boston, MA: Harvard Business School Publishing, 2008. Case No 9-209-059.

Tuesday, February 21

Session 14: *Real Options*

Required Reading:

RWJ, Risk Analysis, Real Options, and Capital Budgeting, Chapter 7, pages 205-213 and 218-224.

Tutorial on Options

Monday, February 27

Session 15: *Valuing a Company: Special Issues*

Case:

Interco, Roth, Susan L. and Scott P. Mason. Boston MA: Harvard Business School Publishing, 1991. Case No 9-291-033

Tuesday, February 28

Session 16: Mini case and review (case to be distributed at a later date)

Friday, March 3

FINAL EXAM: to be completed on Canvas within a 2-hour window (open at 8:00 am)

Tuck School of Business at Dartmouth
Global Economics for Managers
Winter Term 2023

Professor Andrew Bernard
108 Buchanan, 6-0302

Academic Coordinator:
Rick Rielly
304 Woodbury, 6-0163

Professor Davin Chor
101 Buchanan, 6-9835

Academic Coordinator:
Jamie Blanford
309B Tuck, 6-3745

Office Hours:

Typically on Tuesdays from 3:00-4:00p.m.

Head Teaching Assistant:

Bharati Manandhar T'23

Course Objectives

Global Economics for Managers will expand your knowledge of economics in two directions. First, we expand the scope of inquiry to cover the economics of the nation in a global economy. This portion of the course will cover international economics and macroeconomics. We will study the larger economic forces that shape production, trade flows, capital flows, interest rates, exchange rates, and other variables that create the global economic landscape. Second, we will analyze firm decisions in the face of these global forces, i.e., international microeconomics. This part of the course will apply the tools of microeconomics and international economics to illustrate how globalization influences performance, strategy, and policy within firms. The ultimate objective is to help you develop a framework for analyzing both opportunities and risks in a global economic environment.

Course Grading

Dates of your graded assignments and their contribution to your overall grade are shown below.

<u>Activity</u>	<u>Due Date</u>	<u>Weight</u>
Midterm (due by 8:00AM)	Friday, Jan 27	20%
(Available in Canvas Wednesday, Jan 25 beginning at 1:00PM.)		
Group Case Write-Up #1	Tuesday, Feb 7	10%
Group Case Write-Up #2	Monday, Feb 27	10%
Final Exam (due by 3:00PM)	Thursday, Mar 2	50%
(Available in Canvas Tuesday, Feb 28 beginning at 1:30PM.)		
Class Engagement		10%

Required Text

The Choice: A Fable of Free Trade and Protectionism, Russell D. Roberts, Prentice-Hall, revised and updated Third Edition, 2006.

Attendance and Class Participation

Class participation is 10% of your grade. You are **required** to attend the course section to which you are assigned. Attendance is a basic pre-requisite for positive class engagement, and students who acquire more than two unexcused absences will receive a failing grade for the course (see the syllabus section on “Absence Policy”). Further information on how class engagement will be scored will be provided on the first day of class.

You should come to each class on time and prepared to discuss that day’s assigned discussion questions, which are based on each day’s readings. There will be cold calling on a daily basis. If you are unprepared to speak when called upon, it is better to “pass” than to sidetrack class discussion with an uninformed answer.

Winter Core Course Absence Policy

Each of the winter courses weights class participation differently, but the following policies are consistent across both of your winter core classes.

Class Absences. We know that this is a stressful time because of both recruiting and the challenges that remain from the pandemic. That said, we expect you to provide forthright, timely, complete, and accurate information in the event that you need to miss class. Please keep in mind that any information that you send your professors about your absence is subject to the Tuck Academic Honor Principle.

1. **Absences for Interviews.** It is Tuck School policy that missing a class for on-campus or virtual interviews is NOT excused. It is your responsibility to work with recruiters and career services to avoid these disruptions. However, we appreciate the importance of your job search and recognize that in some cases conflict with *off-campus* recruiting is unavoidable.

If you foresee an unavoidable conflict with on-campus or virtual interviews, or if you must miss a class session for an off-campus interview, then it is your responsibility to notify your professor, AC, and scribe by e-mail in advance of the class you will be missing with exact details of the interview time, location, and interviewer contact information.

2. **Illness and emergency.** In the event of illness (including covid) or family emergency, it is again your responsibility to notify your professor, AC, and scribe as soon as possible. Failure to do so will result in an unexcused absence.

Our expectation is that you will be **in-person in the classroom**, in order to be counted as present for a class session.

Students with two unexcused absences will receive an automatic grade reduction for the course. Students with more than two unexcused absences will receive a failing grade for the course.

Weekly Memos, Course Structure, and Course Outline

In advance of each week (typically by Thursday afternoon), the *weekly memo* for the course will be posted in Canvas. Each weekly memo will provide a guide to the upcoming week’s topics, discussion questions, and assignments. *These weekly memos should be considered the “official record” of what is covered in GEM.*

The *course outline* below provides a guide to the topics covered in the course meetings. Preparation for each topic includes articles to **read** and discussion questions to **answer** before the live class session begins. You should prepare responses to the discussion questions (which will be posted in the weekly memos) with your study groups *in advance* of the live class session. We have also included (optional) pre-recorded videos which will be made available to you after class; you may watch these to reinforce key concepts. In the list of readings below, the numbered “BBCKS” chapters refer to the draft chapters of the “textbook”, *Global Economics for Managers* (by Andrew Bernard, Emily Blanchard, Davin Chor, Michael Knetter, and Matthew Slaughter). All chapters will be posted in Canvas.

Weekly Question-and-Answer, Problem-Solving Sessions

Most Monday evenings, a pair of TAs will be available for a one-hour window to assist students with problem sets that address basic concepts for the class. On Tuesday evenings, our head teaching assistant, Bharati Manandhar T’23, will conduct a one-hour question-and-answer session covering all material from the course thus far. All of these sessions are optional, not required. The exact days, times, and location of these sessions are subject to change and will be finalized later in coordination with the TAs. Final guidance on these and all other GEM scheduling matters will appear in the weekly memos and will be highlighted as needed at the start of class each day.

The Academic Honor Principle

We take the Tuck Academic Honor Principle seriously and we have very clear policies for GEM.

- In preparing for class or exams, you should not use materials from any previous offering of this course. This restriction extends to case-related information obtained from other sources. Because the class meets in multiple sections, there should be no communication among sections until all sections have met. After that, of course, full flow of ideas is encouraged.
- *Midterm and Final Exams.* You must do your own work on each of these exams. You may use only materials that have been explicitly authorized in advance. If you wish to use group assignments during the final exam, you must have your own copy in advance. *During both exams, no sharing or discussion of any material is permitted.* Failure to turn in either exam on time will result in a failing grade for the course.
- *Cases.* You should work in your assigned study groups and when required, hand in a single set of answers as a group. Only those who contribute approximately equally to the preparation of a group homework assignment may take credit for it. This does not mean that everyone’s ideas must be included. It means that everyone should contribute about equally to the overall process. In all case assignments, you should not go beyond the case in your quest for information. The case provides all the information that should be used. Your group’s case write-ups (one per group) must be turned in at the start of your section’s assigned class time on February 7 and February 27.
- *Class Discussion.* You should prepare for each day and class discussion with your study group, but you must answer independently in class.
- *If You Are Unsure.* Finally and most importantly, you should recognize that the principal ingredient in the success of the Academic Honor Principle is good faith among all parties. From time to time, situations are bound to arise in which the application of the Honor Principle is unclear. In such cases, please contact your professor for clarification.

1. Globalization and the Closed-Economy Benchmark (Monday, January 9)

Key Topics: economic integration; economic paradigm; production possibilities; community indifference curve; opportunity cost; equilibrium; labor productivity; relative price

Daily Briefing: US Jobless Claims (Released January 12)

Readings:

1. BBCKS, Chapter 2: Resource Allocation in a Closed Economy.
2. Paul Krugman, "The Accidental Theorist," *Slate* (on-line magazine), January 23, 1997.

Watch: (optional) The Closed Economy Benchmark

2. International Trade: The Basic Intuition and Theory (Tuesday, January 10)

Key Topics: absolute advantage; comparative advantage; gains from trade

Daily Briefing: US Employment situation (Released February 3)

Readings:

1. BBCKS, Chapter 3: International Trade in Goods and Services.
2. "Outsource Your Way to Success," *The New York Times*, November 5, 2013
3. "Not So Absolutely Fabulous," *The Economist*, November 4, 1995.
4. "The Pandemic Isn't Bringing Back Factory Jobs; at Least, Not Yet," *The New York Times*, July 22, 2020

Watch: (optional) International Trade I: Basic Intuition and Theory
(optional) [BBC The Community That Trades by Barter Instead of Money](#)

3. International Trade: Is Free Trade the Best Policy? (Tuesday, January 17) (*Note DAY*)

Key Topics: protectionism; national security; infant-industry protection; strategic industry; antidumping; fair trade

Daily Briefing: Michigan Consumer Sentiment (Released January 27)

Readings:

1. *The Choice: A Fable of Free Trade and Protectionism*. Russell D. Roberts, Prentice-Hall, revised and updated Third Edition, 2006.

Watch: No Video for Today

4. International Trade: Trade Deficits and Trade Over Time (Wednesday, January 18)
(Note DAY)

Key Topics: GNP, GDP, and their components; current-account and capital-account balances; balance of payments; national savings; real interest rate

Daily Briefing: Japan Industrial Production (Released January 31)

Readings:

1. *The Choice: A Fable of Free Trade and Protectionism*. Russell D. Roberts, Prentice-Hall, revised and updated Third Edition, 2006.

Watch: (optional) International Trade II: The Two-Period Open Economy Model

5. Are Current-Account Deficits and Global Imbalances a Problem? (Monday, January 23)

Key Topics: Trade over time; current account; capital account, the global capital-markets crisis

Daily Briefing: US GDP (Released January 26)

Readings:

1. BBCKS, Chapter 4: International Trade in Capital.
2. “Surprising Truths about Trade Deficits,” *The New York Times*, 5 October 2018.
3. “Sustaining the Unsustainable,” *The Economist*, March 15, 2007.
4. “Global Imbalances: Recent Developments and Prospects,” transcript of speech by Federal Reserve Chairman Ben S. Bernanke, at the Bundesbank Lecture, September 11, 2007.

Watch: (optional) The OEIS Identity

6. Money, Prices, Interest Rates, and Exchange Rates in the Long Run (Tuesday, January 24)

Key Topics: inflation; nominal interest rate; real interest rate; money supply; money demand; purchasing power parity

Daily Briefing: US Consumer Price Index (released February 14)

Readings:

1. BBCKS, Chapter 5: The Role of Money in the Long Run.
2. “How Fast Are Prices Skyrocketing in Venezuela? See Exhibit A: The Egg,” *The Wall Street Journal*, February 25, 2018
3. “How does America Calculate Inflation?” *The Economist*, February 10, 2022.
4. “Dollar-Euro Parity May Be Justified. But the Yen Looks Cheap as Chips,” *The Economist*, July 21, 2022. Optional interactive tool: <http://www.economist.com/content/big-mac-index>

Watch: (optional) The Quantity Theory of Money; PPP (Yeah You Know Me)

MIDTERM due by 8.00am Friday, January 27
(Exam available on Canvas starting at 1pm on Wednesday, January 25)

**** EXAM MAY NOT BE TAKEN DURING ANY OTHER CLASS TIME ****

7. Economic Growth and Business Cycles (Monday, January 30)

Key Topics: productivity; capital accumulation; labor-force growth; aggregate demand

Daily Briefing: U.S. Productivity (Released February 2)

Readings:

1. BBCKS, Chapter 6: Economic Growth in the Long Run, Sections 6.1-6.3
2. BBCKS, Chapter 7: The Short Run Behavior of Output, Sections 7.1, 7.2
3. "A Productivity Primer," *The Economist*, November 4, 2004.
4. P. Krugman, "How Fast Can the Economy Grow?" *Harvard Business Review*, July/Aug, 1997.
5. "U.S. Productivity Falls for Second Straight Quarter," *The Wall Street Journal*, August 9, 2022.

Watch: No Video for Today

8. Monetary Policy (Tuesday, January 31)

Key Topics: money supply; interest rates; unemployment/inflation tradeoffs; central-bank independence and policy goals

Daily Briefing: U.S. Federal Reserve Open Market Committee Meeting (Released January 31 – February 2)

Readings:

1. BBCKS, Chapter 8: Monetary Policy.
2. "The Federal Reserve Balance Sheet: An Update," transcript of speech by Federal Reserve Chairman Ben S. Bernanke, at the Federal Reserve Board Conference on Key Developments in Monetary Policy, October 8, 2009.
3. "Federal Reserve Hikes by 0.75 Point, Signals Slower Increases but Ultimately Higher Rates," *Wall Street Journal*, November 2, 2022.

Watch: (optional) Monetary Policy Basics

(optional) "[Why do Central Banks Raise Interest Rates?](#)" *The Economist Films*

9. Fiscal Policy (Monday, February 6)

Key Topics: taxes, spending, intertemporal government budget constraint, crowding out, real interest rates

Daily Briefing: Bank of England Monetary Policy Committee (Released March 23)

Readings:

1. BBCKS, Chapter 9: Fiscal Policy
2. “As Japan’s Abe Leaves, Abenomics Will Remain, for Good or Ill,” *New York Times*, August 31, 2020
3. “Federal Borrowing Amid Pandemic Puts US Debt on Path to Exceed World War II,” *New York Times*, September 2, 2020

Watch: (optional) Fiscal Policy Basics

10. Case: Germany in the 1990s: Managing Reunification (Tuesday, February 7)

Key Topics: constraints on domestic policy, economic integration, fiscal and monetary interaction, international policy coordination

Readings:

1. Harvard Business School Case 793-033, “Germany in the 1990s: Managing Reunification.”
2. “How Mr. Soros Made a Billion by Betting Against the Pound,” *The Times*, October 26, 1992.
3. “Black Wednesday at the Bundesbank,” Helmut Schlesinger, September 17, 2017 [excerpt from foreword in Six Days in September (2017) OMFIF Press]

Watch: No Video Today!

11. Exchange Rates in the Short Run (Monday, February 13)

Key topics: arbitrage; purchasing power parity; covered and uncovered interest-rate parity; foreign exchange market equilibrium; exchange-rate expectation; overshooting

Daily Briefing: India Ministry of Commerce & Industry Monthly Inflation (Released March 14)

Readings:

1. BBCKS - Chapter 10: The Economics of Currency Markets
2. “Ben Bernanke: Currency Manipulator,” *The Wall Street Journal*, October 30, 2012.
3. “Brexit Worries Reassert Hold Over British Pound,” *Wall Street Journal*, September 9, 2020
4. “Turkey’s Unexpected Rate Rise Gives Lira a Lift,” *Wall Street Journal*, September 24, 2020

Watch: (optional) IRP (Yeah You Know Me)

12. Fixed Exchange Rates and Capital Controls (Tuesday, February 14)

Key Topics: floating exchange rates; fixed exchange rates; foreign-exchange intervention; capital flight; moral hazard; capital controls; monetary union

Daily Briefing: S&P CoreLogic Case Shiller Home Price Index (Released February 28)

Readings:

1. BBCKS - Chapter 11: Fixed Exchange Rates and Their Implications.
2. "Fear of Floating," *The Economist*, July 10, 2003.
3. "The Trilemma of International Finance," *The New York Times*, July 9, 2010.
4. "Argentina Running Low on Dollars, Faces Fresh Economic Turmoil," *The Wall Street Journal*, October 15, 2020.
5. "Why Japan Stands Virtually Alone in Keeping Interest Rates Ultralow," *New York Times*, October 21, 2022

Watch: (optional) Fixed Exchange Rate Mechanics

13. Firms and Exchange Rates I (Monday, February 20)

Key Topics: monopoly pricing; market segmentation and price discrimination; pricing to market; net present value; exposure to currency risk

Daily Briefing: Chinese retail sales (Released mid-March)

Reading:

1. BBCKS - Chapter 12: Competing in International Markets
2. "Perils of Haven Status Haunt Rebounding Swiss Economy," *Financial Times*, August 16, 2018
3. "Companies Brace for Profit Hit from Euro Rally," *Wall Street Journal*, September 7, 2020
4. "Businesses Brace for Currency Chaos in Asia, a Region with a History of Crisis," *New York Times*, October 6, 2022

Watch: (optional) Single-Price Monopoly Pricing Review

14. Firms and Exchange Rates II (Tuesday, February 21)

Key Topics: exposure to currency risk; net present value; hedging

Daily Briefing: Canadian Monetary Policy (released March 8)

Reading:

1. BBCKS - Chapter 12: Competing in International Markets
2. Froot, Scharfstein, and Stein, "A Framework for Risk Management," *Harvard Business Review*, November-December, 1994, reprint 94604.
3. "Brazilian Real Rally Hits Bearish Positions on Coffee and Sugar," *The Financial Times*, October 15, 2018
4. "In Coronavirus Selloff, Far Flung Local Currency Bonds Whip Back on Investors," *Wall Street Journal*, April 8, 2020

Watch: No Video Today!

15. Case: Jaguar plc, 1984 (Monday, February 27)

Key Topics: international pricing; exposure to currency risk; foreign-currency hedging

Readings:

1. Harvard Business School Case 9-290-005, "Jaguar plc., 1984."

Watch: No Video Today!

16. Case: COVID-19: The Global Shutdown (Tuesday, February 28)

Key Topics: supply shock; demand shock; expectations; global linkages; trade policy; fiscal policy; monetary policy; firms and exchange rates

Readings:

1. Harvard Business School Case 9-320-108, "COVID-19: The Global Shutdown"
2. "Is the World Economy Entering a Wage-Price Spiral?" *The Economist*, 16 October 2021

Watch: No Video Today!

FINAL due by 3.00pm Thursday, March 2
(Exam available on Canvas starting at 1:30pm on Tuesday, February 28)

**** EXAM MAY NOT BE TAKEN DURING ANY OTHER CLASS TIME ****

**Tuck School of Business Administration
Dartmouth College
Hanover, New Hampshire 03755**

**OPERATIONS MANAGEMENT
Spring 2023**

COURSE INFORMATION

Professor Laurens Debo
Office: 212 Tuck, 646-1832

Overview

Operations Management is the systematic direction and control of the processes that transform inputs into finished goods or services. Operations is one of the primary functions of a firm. While marketing induces the demand for products and finance provides the capital, operations *produces and delivers* the products and services.

This course provides an introduction to the concepts and analytic methods that are useful in understanding the management of a firm's operations. Our aim is to (1) familiarize you with the problems and issues confronting operations managers, and (2) provide you with language, concepts, insights and tools to deal with these issues in order to gain competitive advantage through operations. Because the course deals with the management of "processes," it applies to both service and manufacturing companies, to both for-profit and non-profit organizations, and to virtually any functional area or industry.

Time and Place

Refer to the first year Spring Term schedule for time, date and location of classes.

Materials

All cases and readings are available on the course website (Canvas). Certain readings will appear on Canvas after class as specified in the detailed session description in this syllabus.

There is no required textbook. Some recommended *optional* texts are on reserve in Feldberg Library:

Cachon, G., & Terwiesch, C. *Matching Supply with Demand: An Introduction to Operations Management, 3rd Edition*. New York: McGraw-Hill Irwin.

Hopp, W. J., & Spearman, M. L. *Factory Physics: Foundations of Manufacturing Management, 3rd Edition*. Burr Ridge, IL: Irwin Professional Publishing.

Preparation, Participation, and Attendance

Everyone is expected to attend and to prepare fully for each day. Failure to attend class, as well as arriving late or departing early, will affect your grade. If you must *plan* on missing a class, let your instructor know *in advance* in writing.

If you are unprepared for class, let the instructor know *before* class begins.

We will follow the general Tuck policy regarding the in-class use of laptop computers, cell phones, and all other electronic communication devices: “students shall not use laptop computers, cellular telephones, or any other electronic communication device in any class session unless explicit permission to do so is granted.” Notice will be given for those sessions in which laptop usage is required.

Grading

Your grade will be decided as a weighted average with the following weights:

- 15% Class Contribution
- 20% Written Assignments
- 10% Littlefield Simulation
- 20% Midterm Examination
- 35% Final Examination

We will judge class contribution on the extent to which you appear prepared, the relevance and depth of your comments, and the degree to which you listen carefully and respond to your peers.

Exams are open-book and open-note (by which we mean you may use any materials from the current offering of Operations Management), and may require the use of spreadsheets and associated tools.

Assignments

Assignments involving case studies, readings, and problems are described in the next section—Daily Plan and Preparation Guidelines.

For written assignments, state your assumptions clearly. If you need to make an assumption regarding something central to the problem at hand, justify it. For numerical problems, show your work. Your “answer” alone is not sufficient; your supporting argument should be concise and convincing.

All assignments, except the Littlefield Technologies Simulation, should be completed individually but can be discussed in groups of no more than two. Littlefield should be done in your study group team. Written assignments should be uploaded in a pdf format to Canvas before the beginning of class on assigned due dates. Late homework will not be accepted.

Honor Principle

Only those who contribute approximately equally to the preparation of a group homework assignment may take full credit for it. This does not mean that everyone’s ideas must be included. It means that everyone should contribute about equally to the overall process.

In preparing for class, exams, and all homeworks you may not use notes or any other materials from any previous offering of this, or a similar, course or discuss the material with students who have already taken the course. This restriction extends to case-related information obtained from other sources.

Posting of course materials to shared repositories outside of our internal Canvas system will be considered a violation of the Tuck Honor Principle.

If you wish to use them during the exams, keep a copy of all assignments. Sharing of such material during the exams is not permitted.

ChatGPT Policy: The use of ChatGPT and similar systems is expressly forbidden on assignments, the midterm exam and the final exam

COURSE CALENDAR

Class	Subject	Date	Before Class	Hand-Ins
1	Introduction and Operations Strategy	Tues 3/21	Prepare Menu Innovation and the Evolution of McDonald's Operating Model	
2	Process Flow Analysis	Wed 3/22	Prepare Kristen's Cookie Company (A)	Submit Q1- Q3 from the Kristen's Cookie assignment
3	Understanding Different Production Processes	Mon 3/27	Prepare Wriston Manufacturing	
4	Factory Physics	Tues 3/28		Submit Concept Check #1
5	Quality Management	Mon 4/3	Prepare Steinway & Sons	
6	Service Science	Tues 4/4		Submit Concept Check #2
7	Back-Office Operations	Mon 4/10	Prepare Hindustan National Bank	
8	Sales and Operations Planning Simulation	Tues 4/11	Prepare B's Wax	Submit Concept Check #3

OPTIONAL MIDTERM EXAM Q&A SESSION (Zoom)

Wednesday, April 12, 5:15pm – 6:45pm

MIDTERM EXAM

This is a two hour exam. Access will open at 6pm on Thursday, April 13 and close at 11am on Friday, April 14.

Class	Subject	Date	Before Class	Hand-Ins
9	Planning and Control	Mon 4/17		
10	Toyota Production System	Tue 4/18	Prepare Toyota Motor Manufacturing – USA	
11	Inventory Management	Mon 4/24		Submit Concept Check #4
12	Supply Chains for Short Life Cycle Products	Tue 4/25	Prepare Sport Obermeyer	
	Littlefield Simulation Starts 5:00 PM	Tues 4/25		
13	Project Management	Mon 5/1	Read “Project Management”	Submit Concept Check #5
	Littlefield Simulation Ends 5:00 PM	Mon 5/1		
14	Littlefield Debrief	Tues 5/2		Littlefield Write-Up Due
15	Guest Speaker: Micah Goldstein T’02	Mon 5/8	Read background material and preparation questions	
16	Building a Service Strategy	Tues 5/9	Prepare Enhancing Service at Southwest	Submit Concept Check #6

OPTIONAL FINAL EXAM Q&A SESSION (Zoom)

Wednesday, May 10, 5:15pm – 6:45pm

FINAL EXAM

This is a three hour exam. Access will open at 6am on Friday, May 12 and close at noon on Friday, May 12.

DAILY PLAN AND PREPARATION GUIDELINES

CLASS 1. 21 MARCH

INTRODUCTION AND OPERATIONS STRATEGY

Preparation

Prepare the case *Menu Innovation and the Evolution of McDonald's Operating Model* for discussion.

1. What are the major operational differences between the traditional McDonald's way and Burger King way?
2. How did these differences relate to each company's competitive positioning in the fast food marketplace?
3. As discussed in the case, McDonalds moved away from its traditional approach; first with the "Made For You" operating concept and then with its "Create Your Taste" experiment. What is the key difference as compared to the traditional approach? What customer-experience aspect is McDonalds trying to improve? What aspect will be hurt with this change?
4. Would you recommend McDonald's resume the all day breakfast offering?

After Class

Read the notes titled *A Framework for Operations Strategy* and *Process Mapping*. Both notes will be uploaded to the course website after class.

CLASS 2. 22 MARCH

PROCESS FLOW ANALYSIS

Preparation

Prepare the *Kristen's Cookie Company (A)* case for discussion. (Note that the questions below differ slightly from those on p. 3 of the case. You do not need to prepare the "Problems for Further Thought" on p. 3 of the case.)

1. Draw a process flow diagram for Kristen's Cookies. Do this at an "intermediate level of detail" as in Figure 4 of the *Process Mapping* note.
2. How long does it take (i.e., how much time) to fill an order for one dozen cookies following the standard process as defined in the case?
3. How many orders can you fill in a night, assuming you are open four hours each night?
4. How much of your own and your roommate's valuable time will it take to fill each order?
5. Because your baking trays can hold exactly one dozen cookies, you will produce and sell cookies by the dozen. Should you give any discount for people who order two-dozen cookies, three-dozen cookies, or more?
6. Are there any changes you can make in your production plans that will allow you to make better cookies or more cookies in less time or at lower cost?

Due Before Class

Upload your answers (in a pdf format) to Preparation Questions 1 through 3 in the Syllabus.

After Class

Read *Kristen's Cookie Company (A2)*. This reading will be uploaded to the course website after class. We will also upload a set of process analysis practice problems after class.

CLASS 3. 27 MARCH
UNDERSTANDING DIFFERENT PRODUCTION PROCESSES

Preparation

Prepare *Wriston Manufacturing Company* for a case discussion. Richard Sullivan is considering three options for the Detroit plant:

1. Close the plant as soon as possible and transfer its products to other plants.
2. Invest in plant tooling in an attempt to develop a viable operation for the next 5-10 years.
3. Build a new plant.

Based on your analysis of the case, choose one of these three options and be prepared to defend it. We do not expect in-depth numerical analysis of the accounting data in the exhibits.

CLASS 4. 28 MARCH
FACTORY PHYSICS

Preparation

There is no preparation for this class. We will discuss a number of fundamental concepts governing manufacturing operations.

Due Before Class

Upload your answers (in a pdf format) to Concept Check #1.

After Class

Read the note titled *Factory Physics (with Practice Problems)*. This note will be uploaded to the course website after class.

CLASS 5. 3 APRIL

QUALITY MANAGEMENT

Preparation

Prepare *Steinway & Sons* for case discussion.

1. Consider the data in Exhibit 7 (available as an Excel file on the course website). Is the second approach (Sample 2) an improvement over the first approach (Sample 1)? Is the machine capable of producing high quality parts?
2. What accounts for Steinway's reputation as a manufacturer of high-quality pianos?
3. Yamaha, based in Japan, is one of Steinway's major global competitors. Contrast Yamaha's and Steinway's operations. What are the implications for quality?
4. Is the adoption of automated technology, like the new CNC shaping equipment, consistent with Steinway's quality strategy?

After Class

Optional: Read Hall, J. M. and Johnson, M. E. (2009). When Should a Process Be Art, Not Science? *Harvard Business Review* (March). This reading will be uploaded to the course website after class.

CLASS 6. 4 APRIL

SERVICE SCIENCE

Preparation

In this class we will discuss tools, techniques and insights that apply to services. There is no preparation required.

Due Before Class

Upload your answers (in a pdf format) to Concept Check #2.

After Class

Read the note titled *Queueing (with Practice Problems)*. This note will be uploaded to the course website after class.

CLASS 7. 10 APRIL
BACK-OFFICE OPERATIONS

Preparation

Prepare *Hindustan National Bank* for case discussion.

1. In Appendix B, Pavan Verma writes: “Based just on processing time, we ought to be able to turn around a Standard in less than two business days, and a New in less than three days. However, as the previous analysis showed, this just isn’t the case.” What explains the difference?
2. Please calculate the utilization for each step of the process (by team) using the available data for the first quarter. You may find the definition “utilization = (time busy) / (time available)” to be useful in this setting.
3. Based on your analysis for question (2), what do you propose that Anjali Kashyap do to improve the performance of the Karimnagar district branch?

After Class

Read the after-class note (with practice problems) that will be uploaded to the course website after class.

CLASS 8. 11 APRIL
SALES AND OPERATIONS PLANNING SIMULATION

Preparation

Prepare *B’s Wax Candle Co.* Preparation instructions are in the case. You will play this virtual simulation game in your FYP teams. Further instructions will be made available on Canvas as the date approaches.

Due Before Class

Upload your answers (in a pdf format) to Concept Check #3.

MIDTERM EXAMINATION:

This is a two hour exam. Access will open at 6pm on Thursday, April 13 and close at 11am on Friday, April 14.

The exam must be taken in one continuous 2-hour sitting during that access window. You must complete the exam before 11am.

CLASS 9. 17 APRIL
PLANNING AND CONTROL

There is nothing to prepare for this session.

After Class

Read the note titled *An Introduction to MRP (with Practice Problems)*. This note will be uploaded to the course website after class.

CLASS 10. 18 APRIL
TOYOTA PRODUCTION SYSTEM

Preparation

Prepare *Toyota Motor Manufacturing* for case discussion. Think about the following question:

As Doug Friesen, what would you do to address the seat problem? Where would you focus your attention and solution efforts?

After Class

There are two optional after-class readings that will be uploaded to the course website after class:

Gryta, T., T. Mann and C. Lombardo (2021). Larry Culp Rewired GE. Then He Unwound It *Wall Street Journal* (November 13).

Shih, W. (2019) Conducting a Kaizen. *Harvard Business School Note*.

CLASS 11. 24 APRIL INVENTORY MANAGEMENT

You must register your Littlefield simulation team before this class session. The link for team registration can be found in the Littlefield Technologies note made available previously.

Assignment: Each FYP team must register for the Littlefield simulation team before this class session. Please note that team name must consist only of lower-case letters (no punctuation). One person on the team registers for the team and shares the team name and password with the rest of the team. The link for team registration is here. The access code is "tuck" (without the quotes). Please include your correct section number when you register your team. Please also enter your chosen team name and password in the text box provided.

Due Before Class

Upload your answers (in a pdf format) to Concept Check #4.

After Class

Read the note titled *Inventory Management (with Practice Problems)*. This note will be uploaded to the course website after class.

CLASS 12. 25 APRIL SUPPLY CHAINS FOR SHORT LIFE CYCLE PRODUCTS

Preparation

Prepare *Sport Obermeyer* for case discussion.

Questions:

1. Using the forecast data given in the case Exhibit 6 (available as an Excel file on the course website), make a recommendation for how many units of each style Obermeyer should order during the initial phase of production. For this question, assume there is only a single opportunity to submit your production order (thinking about how your answer will change if there is a second opportunity to order is the subject of Question 2 below).
 - a. First, assume that there are no constraints on the total production commitment or on any individual style. How many units should Obermeyer order during the initial production phase?
 - b. Now assume that Obermeyer's initial production commitment cannot exceed 22,500 units. How many units should Obermeyer order during the initial production phase?
2. Conceptually, how should Obermeyer plan the initial phase of production if a second production run is feasible later?
3. What operational changes would you recommend to Obermeyer to improve performance?

**25 APRIL 5:00 PM
LITTLEFIELD SIMULATION BEGINS**

CLASS 13. 1 MAY
PROJECT MANAGEMENT

Preparation

Read the note titled *Project Management Background*.

Due Before Class

Upload your answers (in a pdf format) to Concept Check #5.

After Class

Read the note titled *Project Management (with Practice Problems)*. This note will be uploaded to the course website after class.

1 MAY 5:00PM
LITTLEFIELD SIMULATION ENDS

CLASS 14. 2 MAY
LITTLEFIELD SIMULATION DEBRIEF

In this class we will discuss key learnings from the Littlefield simulation.

Turn in Before Class

Submit a pdf of your team's Littlefield write-up (one per team). As described in the Littlefield Technologies Note: Your team should submit a summary of what actions you took during the time that you had access to the factory, an explanation of why you took those actions, and a retrospective view on whether you think you did the right thing. Show analysis to justify your conclusions. Your team's grade will be partially based on your performance, but mainly based on your summary. The summary should consist of two pages of text, with up to two more pages of supporting analyses in an attached appendix. **Important: Your report should include your team name, the names of each team member, your final cash balance, and a screenshot of your "History" as an attachment (History does not count towards page limit).**

CLASS 15. 8 MAY
GUEST SPEAKER

Our guest speaker today will be Micah Goldstein T'02. Preparation for this class session will require some background reading and that will be distributed several days prior to class

CLASS 16. 9 MAY
BUILDING A SERVICE STRATEGY

Preparation

Prepare *Enhancing Service at Southwest* for case discussion. Time allowing, we will also briefly discuss the December 2022 Southwest network failure.

Questions:

1. How do Southwest's operations support its strategy?
2. Discuss how competitors with a hub-and-spoke system could benefit/not benefit from copying Southwest's approach. Which is cheaper to run, a hub-and-spoke system or a point-to-point system?
3. What are the benefits of quick airplane turnaround? What is the financial impact?
4. Consider the questions facing Kelly (premium beverages, international partners, serving Hawaii). Are these service enhancements consistent with Southwest operations strategy?

Due Before Class

Upload your answers (in a pdf format) to Concept Check #6.

FINAL EXAMINATION:

This is a three hour exam. Access will open at 6am on Friday, May 12 and close at noon on Friday, May 12.

The exam must be taken in one continuous 3-hour sitting during that access window. You must complete the exam before noon.

**Tuck School of Business Administration
Dartmouth College
Hanover, New Hampshire 03755**

**OPERATIONS MANAGEMENT
Spring 2023**

COURSE INFORMATION

Professor Joe Hall
Office: 108C Tuck, 646-0778

Professor Brian Tomlin
Office: 108G Tuck, 646-2136

Overview

Operations Management is the systematic direction and control of the processes that transform inputs into finished goods or services. Operations is one of the primary functions of a firm. While marketing induces the demand for products and finance provides the capital, operations *produces and delivers* the products and services.

This course provides an introduction to the concepts and analytic methods that are useful in understanding the management of a firm's operations. Our aim is to (1) familiarize you with the problems and issues confronting operations managers, and (2) provide you with language, concepts, insights and tools to deal with these issues in order to gain competitive advantage through operations. Because the course deals with the management of "processes," it applies to both service and manufacturing companies, to both for-profit and non-profit organizations, and to virtually any functional area or industry.

Time and Place

Refer to the first year Spring Term schedule for time, date and location of classes.

Materials

All cases and readings are available on the course website (Canvas). Certain readings will appear on Canvas after class as specified in the detailed session description in this syllabus.

There is no required textbook. Some recommended *optional* texts are on reserve in Feldberg Library:

Cachon, G., & Terwiesch, C. *Matching Supply with Demand: An Introduction to Operations Management, 3rd Edition*. New York: McGraw-Hill Irwin.

Hopp, W. J., & Spearman, M. L. *Factory Physics: Foundations of Manufacturing Management, 3rd Edition*. Burr Ridge, IL: Irwin Professional Publishing.

Preparation, Participation, and Attendance

Everyone is expected to attend and to prepare fully for each day. Failure to attend class, as well as arriving late or departing early, will affect your grade. If you must *plan* on missing a class, let your instructor know *in advance* in writing.

If you are unprepared for class, let the instructor know *before* class begins.

We will follow the general Tuck policy regarding the in-class use of laptop computers, cell phones, and all other electronic communication devices: “students shall not use laptop computers, cellular telephones, or any other electronic communication device in any class session unless explicit permission to do so is granted.” Notice will be given for those sessions in which laptop usage is required.

Grading

Your grade will be decided as a weighted average with the following weights:

- 15% Class Contribution
- 20% Written Assignments
- 10% Littlefield Simulation
- 20% Midterm Examination
- 35% Final Examination

We will judge class contribution on the extent to which you appear prepared, the relevance and depth of your comments, and the degree to which you listen carefully and respond to your peers.

Exams are open-book and open-note (by which we mean you may use any materials from the current offering of Operations Management), and may require the use of spreadsheets and associated tools.

Assignments

Assignments involving case studies, readings, and problems are described in the next section—Daily Plan and Preparation Guidelines.

For written assignments, state your assumptions clearly. If you need to make an assumption regarding something central to the problem at hand, justify it. For numerical problems, show your work. Your “answer” alone is not sufficient; your supporting argument should be concise and convincing.

All assignments, except the Littlefield Technologies Simulation, should be completed individually but can be discussed in groups of no more than two. Littlefield should be done in your study group team. Written assignments should be uploaded in a pdf format to Canvas before the beginning of class on assigned due dates. Late homework will not be accepted.

Honor Principle

Only those who contribute approximately equally to the preparation of a group homework assignment may take full credit for it. This does not mean that everyone’s ideas must be included. It means that everyone should contribute about equally to the overall process.

In preparing for class, exams, and all homeworks you may not use notes or any other materials from any previous offering of this, or a similar, course or discuss the material with students who have already taken the course. This restriction extends to case-related information obtained from other sources.

Posting of course materials to shared repositories outside of our internal Canvas system will be considered a violation of the Tuck Honor Principle.

If you wish to use them during the exams, keep a copy of all assignments. Sharing of such material during the exams is not permitted.

ChatGPT Policy: The use of ChatGPT and similar systems is expressly forbidden on assignments, the midterm exam and the final exam

COURSE CALENDAR

Class	Subject	Date	Before Class	Hand-Ins
1	Introduction and Operations Strategy	Tues 3/21	Prepare Menu Innovation and the Evolution of McDonald's Operating Model	
2	Process Flow Analysis	Wed 3/22	Prepare Kristen's Cookie Company (A)	Submit Q1- Q3 from the Kristen's Cookie assignment
3	Understanding Different Production Processes	Mon 3/27	Prepare SpaceX case	
4	Factory Physics	Tues 3/28		Submit Concept Check #1
5	Quality Management	Mon 4/3	Prepare Steinway & Sons	
6	Service Science	Tues 4/4		Submit Concept Check #2
7	Back-Office Operations	Mon 4/10	Prepare Hindustan National Bank	
8	Sales and Operations Planning Simulation	Tues 4/11	Prepare B's Wax	Submit Concept Check #3

OPTIONAL MIDTERM EXAM Q&A SESSION (Zoom)

Wednesday, April 12, 5:15pm – 6:45pm

MIDTERM EXAM

This is a two hour exam. Access will open at 6pm on Thursday, April 13 and close at 11am on Friday, April 14.

Class	Subject	Date	Before Class	Hand-Ins
9	Planning and Control	Mon 4/17		
10	Toyota Production System	Tue 4/18	Prepare Toyota Motor Manufacturing – USA	
11	Inventory Management	Mon 4/24		Submit Concept Check #4
12	Supply Chains for Short Life Cycle Products	Tue 4/25	Prepare Sport Obermeyer	
	Littlefield Simulation Starts 5:00 PM	Tues 4/25		
13	Project Management	Mon 5/1	Read “Project Management”	Submit Concept Check #5
	Littlefield Simulation Ends 5:00 PM	Mon 5/1		
14	Littlefield Debrief	Tues 5/2		Littlefield Write-Up Due
15	Guest Speaker: Micah Goldstein T’02	Mon 5/8	Read background material and preparation questions	
16	Building a Service Strategy	Tues 5/9	Prepare Enhancing Service at Southwest	Submit Concept Check #6

OPTIONAL FINAL EXAM Q&A SESSION (Zoom)

Wednesday, May 10, 5:15pm – 6:45pm

FINAL EXAM

This is a three hour exam. Access will open at 6am on Friday, May 12 and close at noon on Friday, May 12.

DAILY PLAN AND PREPARATION GUIDELINES

CLASS 1. 21 MARCH

INTRODUCTION AND OPERATIONS STRATEGY

Preparation

Prepare the case *Menu Innovation and the Evolution of McDonald's Operating Model* for discussion.

1. What are the major operational differences between the traditional McDonald's way and Burger King way?
2. How did these differences relate to each company's competitive positioning in the fast food marketplace?
3. As discussed in the case, McDonalds moved away from its traditional approach; first with the "Made For You" operating concept and then with its "Create Your Taste" experiment. What is the key difference as compared to the traditional approach? What customer-experience aspect is McDonalds trying to improve? What aspect will be hurt with this change?
4. Would you recommend McDonald's resume the all day breakfast offering?

After Class

Read the notes titled *A Framework for Operations Strategy* and *Process Mapping*. Both notes will be uploaded to the course website after class.

CLASS 2. 22 MARCH

PROCESS FLOW ANALYSIS

Preparation

Prepare the *Kristen's Cookie Company (A)* case for discussion. (Note that the questions below differ slightly from those on p. 3 of the case. You do not need to prepare the "Problems for Further Thought" on p. 3 of the case.)

1. Draw a process flow diagram for Kristen's Cookies. Do this at an "intermediate level of detail" as in Figure 4 of the *Process Mapping* note.
2. How long does it take (i.e., how much time) to fill an order for one dozen cookies following the standard process as defined in the case?
3. How many orders can you fill in a night, assuming you are open four hours each night?
4. How much of your own and your roommate's valuable time will it take to fill each order?
5. Because your baking trays can hold exactly one dozen cookies, you will produce and sell cookies by the dozen. Should you give any discount for people who order two-dozen cookies, three-dozen cookies, or more?
6. Are there any changes you can make in your production plans that will allow you to make better cookies or more cookies in less time or at lower cost?

Due Before Class

Upload your answers (in a pdf format) to Preparation Questions 1 through 3 in the Syllabus.

After Class

Read *Kristen's Cookie Company (A2)*. This reading will be uploaded to the course website after class. We will also upload a set of process analysis practice problems after class.

CLASS 3. 27 MARCH
UNDERSTANDING DIFFERENT PRODUCTION PROCESSES

Preparation

Please read the *SpaceX* case. Although there are no pre-assigned questions, we will be posing questions for thought and discussion during class, and so it will be important to have read the case in advance.

CLASS 4. 28 MARCH
FACTORY PHYSICS

Preparation

There is no preparation for this class. We will discuss a number of fundamental concepts governing manufacturing operations.

Due Before Class

Upload your answers (in a pdf format) to Concept Check #1.

After Class

Read the note titled *Factory Physics (with Practice Problems)*. This note will be uploaded to the course website after class.

CLASS 5. 3 APRIL

QUALITY MANAGEMENT

Preparation

Prepare *Steinway & Sons* for case discussion.

1. Consider the data in Exhibit 7 (available as an Excel file on the course website). Is the second approach (Sample 2) an improvement over the first approach (Sample 1)? Is the machine capable of producing high quality parts?
2. What accounts for Steinway's reputation as a manufacturer of high-quality pianos?
3. Yamaha, based in Japan, is one of Steinway's major global competitors. Contrast Yamaha's and Steinway's operations. What are the implications for quality?
4. Is the adoption of automated technology, like the new CNC shaping equipment, consistent with Steinway's quality strategy?

After Class

Optional: Read Hall, J. M. and Johnson, M. E. (2009). When Should a Process Be Art, Not Science? *Harvard Business Review* (March). This reading will be uploaded to the course website after class.

CLASS 6. 4 APRIL

SERVICE SCIENCE

Preparation

In this class we will discuss tools, techniques and insights that apply to services. There is no preparation required.

Due Before Class

Upload your answers (in a pdf format) to Concept Check #2.

After Class

Read the note titled *Queueing (with Practice Problems)*. This note will be uploaded to the course website after class.

CLASS 7. 10 APRIL
BACK-OFFICE OPERATIONS

Preparation

Prepare *Hindustan National Bank* for case discussion.

1. In Appendix B, Pavan Verma writes: “Based just on processing time, we ought to be able to turn around a Standard in less than two business days, and a New in less than three days. However, as the previous analysis showed, this just isn’t the case.” What explains the difference?
2. Please calculate the utilization for each step of the process (by team) using the available data for the first quarter. You may find the definition “utilization = (time busy) / (time available)” to be useful in this setting.
3. Based on your analysis for question (2), what do you propose that Anjali Kashyap do to improve the performance of the Karimnagar district branch?

After Class

Read the after-class note (with practice problems) that will be uploaded to the course website after class.

CLASS 8. 11 APRIL
SALES AND OPERATIONS PLANNING SIMULATION

Preparation

Prepare *B’s Wax Candle Co.* Preparation instructions are in the case. You will play this virtual simulation game in your FYP teams. Further instructions will be made available on Canvas as the date approaches.

Due Before Class

Upload your answers (in a pdf format) to Concept Check #3.

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CLASS 9. 17 APRIL
PLANNING AND CONTROL

There is nothing to prepare for this session.

After Class

Read the note titled *An Introduction to MRP (with Practice Problems)*. This note will be uploaded to the course website after class.

CLASS 10. 18 APRIL
TOYOTA PRODUCTION SYSTEM**Preparation**

Prepare *Toyota Motor Manufacturing* for case discussion.

1. As Doug Friesen, what would you do to address the seat problem? Where would you focus your attention and solution efforts?
2. What is the cause of the seat problem?
3. Where, if at all, does the current routine for handling defective seats deviate from the principles of the Toyota Production System?
4. What is the real problem facing Doug Friesen?

After Class

There are two optional after-class readings that will be uploaded to the course website after class:

Gryta, T., T. Mann and C. Lombardo (2021). Larry Culp Rewired GE. Then He Unwound It *Wall Street Journal* (November 13).

Shih, W. (2019) Conducting a Kaizen. *Harvard Business School Note*.

CLASS 11. 24 APRIL INVENTORY MANAGEMENT

You must register your Littlefield simulation team before this class session. The link for team registration can be found in the Littlefield Technologies note made available previously.

Assignment: Each FYP team must register for the Littlefield simulation team before this class session. Please note that team name must consist only of lower-case letters (no punctuation). One person on the team registers for the team and shares the team name and password with the rest of the team. The link for team registration is here. The access code is "tuck" (without the quotes). Please include your correct section number when you register your team. Please also enter your chosen team name and password in the text box provided.

Due Before Class

Upload your answers (in a pdf format) to Concept Check #4.

After Class

Read the note titled *Inventory Management (with Practice Problems)*. This note will be uploaded to the course website after class.

CLASS 12. 25 APRIL SUPPLY CHAINS FOR SHORT LIFE CYCLE PRODUCTS

Preparation

Prepare *Sport Obermeyer* for case discussion.

Questions:

1. Using the forecast data given in the case Exhibit 6 (available as an Excel file on the course website), make a recommendation for how many units of each style Obermeyer should order during the initial phase of production. For this question, assume there is only a single opportunity to submit your production order (thinking about how your answer will change if there is a second opportunity to order is the subject of Question 2 below).
 - a. First, assume that there are no constraints on the total production commitment or on any individual style. How many units should Obermeyer order during the initial production phase?
 - b. Now assume that Obermeyer's initial production commitment cannot exceed 22,500 units. How many units should Obermeyer order during the initial production phase?
2. Conceptually, how should Obermeyer plan the initial phase of production if a second production run is feasible later?
3. What operational changes would you recommend to Obermeyer to improve performance?

**25 APRIL 5:00 PM
LITTLEFIELD SIMULATION BEGINS**

CLASS 13. 1 MAY
PROJECT MANAGEMENT

Preparation

Read the note titled *Project Management Background*.

Due Before Class

Upload your answers (in a pdf format) to Concept Check #5.

After Class

Read the note titled *Project Management (with Practice Problems)*. This note will be uploaded to the course website after class.

1 MAY 5:00PM
LITTLEFIELD SIMULATION ENDS

CLASS 14. 2 MAY
LITTLEFIELD SIMULATION DEBRIEF

In this class we will discuss key learnings from the Littlefield simulation.

Turn in Before Class

Submit a pdf of your team's Littlefield write-up (one per team). As described in the Littlefield Technologies Note: Your team should submit a summary of what actions you took during the time that you had access to the factory, an explanation of why you took those actions, and a retrospective view on whether you think you did the right thing. Show analysis to justify your conclusions. Your team's grade will be partially based on your performance, but mainly based on your summary. The summary should consist of two pages of text, with up to two more pages of supporting analyses in an attached appendix. **Important: Your report should include your team name, the names of each team member, your final cash balance, and a screenshot of your "History" as an attachment (History does not count towards page limit).**

CLASS 15. 8 MAY
GUEST SPEAKER

Our guest speaker today will be Micah Goldstein T'02. Preparation for this class session will require some background reading and that will be distributed several days prior to class

CLASS 16. 9 MAY
BUILDING A SERVICE STRATEGY

Preparation

Prepare *Enhancing Service at Southwest* for case discussion. Time allowing, we will also briefly discuss the December 2022 Southwest network failure.

Questions:

1. How do Southwest's operations support its strategy?
2. Discuss how competitors with a hub-and-spoke system could benefit/not benefit from copying Southwest's approach. Which is cheaper to run, a hub-and-spoke system or a point-to-point system?
3. What are the benefits of quick airplane turnaround? What is the financial impact?
4. Consider the questions facing Kelly (premium beverages, international partners, serving Hawaii). Are these service enhancements consistent with Southwest operations strategy?

Due Before Class

Upload your answers (in a pdf format) to Concept Check #6.

FINAL EXAMINATION:

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