DATA SCIENCES AND OPERATIONS

DSO 499 – Foundations of	
Digital Business Platforms	

Section(s) – 16245R; 16246R Professor Grace Gu Email gracegu@marshall.usc.edu When

MW 12:00-1:50pm; 2:00-3:50pm

Office BRI 307D





WHY TAKE THIS COURSE?

In 2021, seven out of the world's top ten largest public corporations by market capitalization are platform companies: *Apple, Amazon, Meta, Alibaba, Tencent, Alphabet, Microsoft…* These digital platforms are revolutionizing ALL industries: IT, finance, healthcare, entertainment, consumer retail, real estate automotive, or smart energy, you name it. Interested in a career in technology or management for digital platform companies? Do you want to have an advantage in case study interviews for jobs or summer internship opportunities for big tech platform companies in consulting/banking/media/gaming/ entertainment/ e-commerce/ retail industries? Or do you want to launch your own product on digital platforms? This course will use case study methods to analyze digital tech platforms and prepare you for these great opportunities.

COURSE OBJECTIVES

Units

4 Units

This course gives students a competitive advantage in career preparation for consulting and business model innovation in any industry that delivers services and value through digital platforms. Upon completing the course, you will be able to understand, analyze, and independently conduct case study towards digital platform business models and platform strategy decisions.

KEY CONCEPTS

- Identify the key components and foundations of digital business platforms
- Assess business strategy decisions in managing digital business models
- Conduct in-depth case analysis on digital platforms
- Use digital business frameworks to theorize emerging digital platform phenomena
- Pitch to potential investors or business partners about the dynamics of disruptive digital platform business models

COURSE DESCRIPTION

The course contents are based on recent case studies, articles, industry reports, current happenings. We are aiming for a rich interactive and collaborative learning experience throughout this course. The class format will consist of lectures, case discussions, and student presentations. Concepts will be presented in the context of leading examples of internet and technology platforms such as the sharing economy platforms, online labor markets, computing technology platforms (e.g., mobile), social networks, cloud computing, videogames, and financial technology platforms. Examples of cases in this course include *Airbnb, Uber, LinkedIn, TikTok, Facebook (Meta), Pokemon Go, Pinduoduo,* etc. The course is general management multi-disciplinary orientated. Enrollment open to all USC students from all schools and all majors.

DSO 499 - Foundations of Digital Business Platforms

Syllabus^{*} – Spring 2023 – MW – 2:00-3:50pm – 4 Units Professor: Grace Gu Office: BRI 307D Email: gracegu@marshall.usc.edu

Office Hours: MW 3:50pm – 4:30pm plus by appointment

COURSE DESCRIPTION

With the rapid development of information technology in the past two decades, online platforms have drastically altered the way we live. In the business world, digital platform companies have also witnessed legendary success with their new business models in various areas. How are online marketplaces different from traditional commerce? What are the theoretical and practical reasons behind digital platforms' success? What are some of the latest digital platform business models, and how to evaluate platform performance in a business ecosystem?

This class will analyze digital business platforms. The class format will consist of lectures, case discussions, and student presentations. Concepts will be presented in the context of leading examples of internet and technology platforms such as the sharing economy platforms, online labor markets, computing technology platforms (e.g., mobile), social networks, cloud computing, videogames, and financial technology platforms. The class will consider key business decisions for these platforms, including the role of scale economies and network effects, market entry strategies, vertical integration, the dynamics of platform competition and long-run industry structure.

The course consists of four modules. Module 1 is an introduction to digital platforms, to catch a glimpse of digital platform business models and lay the foundation for the next modules. Module 2 and 3 explore the various business models of new and successful online platforms in two parts: platform foundations, and the emerging platform business models. Module 4 concludes with visioning the future of digital platforms.

The goal of the course is to teach you the skills to understand, analyze, and develop critical thinking toward digital platform business models. As companies launch many new initiatives and services that are delivered through digital platforms, there is a need for business professionals who understand the new business models evolving in the industry – and who understand the many cross-functional elements that must be in place for business development to prosper. These are not just for entrepreneurial ventures, but most frequently larger established companies that are innovating with new initiatives and services. The Covid-19 pandemic has greatly accelerated digital transformation and the use of digital business models. And we are entering a new digital normal. We are aiming for a rich interactive and collaborative learning experience throughout this course.

LEARNING OBJECTIVES

UPON SUCCESSFUL COMPLETION OF THIS COURSE, PARTICIPANTS WILL BE ABLE TO:

Have Advantage in Career!

1) Identify the critical properties of digital platform ecosystems

^{*} This syllabus is subject to change with updates.

- 2) Use digital business frameworks to theorize platform phenomena during case interviews or in daily life
- 3) Conduct in-depth case analysis on digital platform companies
- 4) Assess business strategy decisions in management consulting of digital business models
- 5) Pitch to potential investors or business partners about the dynamics of disruptive digital business models

Have Fun in Everyday Life!

- 6) Describe the methods and strategic moves through which a company can establish digital platform leadership
- 7) Articulate the hows of positioning and managing an enterprise in a digital platform ecosystem
- 8) Design innovative digital business models
- 9) Scope and assess digital business ecosystem niches
- 10) Discuss about the latest trends in digital business models (open innovation, user-generated content, Internet of things, sharing economy models, social commerce...)

THIS COURSE WOULD BENEFIT THOSE PURSUING CAREERS IN THESE AREAS:

- Management Consulting, Technology Strategy Consulting;
- Business Analytics, Business Development, Product Management, Information Systems;
- Marketing, Content Design, Digital Innovation, Business Strategy;
- Venture Capital Investment, Technology Investment, Entrepreneurship.

THIS COURSE WOULD BENEFIT THOSE PURSUING CAREERS IN THESE INDUSTRIES:

Any industry that delivers services and value through digital platforms – really ANY industry! -- healthcare, consumer retail, entertainment, real estate automotive, or smart energy.

USC AS DIGITAL NEXUS

Even in this distance-socializing digital-first world, USC sits in a very special "digital cool" place at the heart of "Silicon Beach" and "Digital Hollywood" with the vibe of the creativity and entertainment industries. Southern California is a major center of commerce, content, and communication in the digital space. It is the gateway that connects us to Asia and the Pacific Rim. As this new world transforms to global digital at an exponential rate, we sit at the roots of its crossroads with the opportunity to watch, participate, and help rethink developments as these new business models trigger a new and evolving digital business ecosystem. USC is a world leader in things digital – and it is an exciting spot to be at.

REQUIRED MATERIALS AND READINGS

- Harvard Business School Cases (Course Pack): The case course pack (12 HBS cases) can be purchased online directly and downloaded in electronic form from Harvard Business Press. You will be able to purchase the case coursepack for a discounted student price at: <u>https://hbsp.harvard.edu/import/1012212</u>. When necessary, I will post supplemental readings on the course website for you.
- 2. Course Reference Text: There is no required textbook for this course. However, if you would like to use a textbook to extend your understanding, a useful one is "*Platform Revolution: How Networked Markets Are Transforming the Economy--And How to Make Them Work*," by Parker, Van Alstyne, and Choudary, 2016. It is trade book rather than a textbook and you can purchase from Amazon in both hard copy and Kindle edition and audio if you would like.

GRADING

Grades will be calculated as follows:

In-Class Quiz and Polls	40%
Class Contribution	10%
Case Discussion Leadership + Case Write-up	20%
Group Project (Report + Individual Summary + Final Presentation)	30%
	100%

10% Class Contributions aims to help you develop the skills to publicly contribute to managerial conversations. Managers must often "sell" their ideas to others in order to get their acceptance and support. In this course, the classroom provides a laboratory in which you can test your ability to convince your peers of the appropriateness of your approach to complex management problems. Furthermore, it tests your ability to carefully listen to others' perspectives and understand why they may reach a different conclusion. Before you can effectively sell your ideas to others, you must understand what is motivating them, what issues they feel are important, and what assumptions they are making that may be different from your own.

Contributions made in class need to reflect an understanding of the preparation for that class. Note that *attendance does NOT equal contribution*. As with all Marshall electives, attendance is expected. To receive a Contribution grade for a session, you need to contribute in a session. Ideally, in a session, all of you would contribute.

20% Case Discussion Leadership + Case Write-up aim to help you develop the skills to be perceived by your coworkers and managers as someone with logical thinking and thought-provoking questions for case analysis. Each student will sign up for two of the cases as a case discussion leader in class. For each case, there may be more than one case discussion leaders.

During the class, you will first discuss in a random small group, collecting thoughts and developing arguments among your group mates. Then, each case leader gives a 15-20 min presentation in class, covering both your individually prepared materials and a summary of the group discussion opinions. Note that your task will NOT be to provide an overview of the case (everyone should know the case already) but to provide your analysis and insights regarding specific issues in the case.

20% Group Project Assignments Group Project Final Report (15%) + Individual Executive Summary (5%). The purpose of the group project is to give you an opportunity to work in teams and apply what has been learned in the course to strategic problems faced by real-world organizations. You will self-select into groups of 4-5 members; it is your responsibility to form teams.

The **first part** of your group project assignments is a final paper that must be completed as a group project. Your report should be 12 to 15-page (12 pt., 1.5 spacing, 1-inch margins, page count not including any figures, tables, or references) addressing one of the following topics:

1. *Starting a platform business*: pick a platform business idea and analyze its prospects for success using course concepts and analysis frameworks

2. Advising an existing platform business: pick an existing platform and analyze its history and current strategy challenges using course concepts and analysis frameworks

3. *Managing a business that is a participant in a platform ecosystem*: pick a business that is influenced by a platform, and analyze its strategy from the perspective of course concepts and frameworks. Examples: content creators in media markets, device manufacturers in computing markets, internet web properties influenced by internet search and online advertising platforms, advertiser/marketer interacting with one of internet search advertising, display advertising, Amazon marketplaces, or eBay.

The **second part** of your group project assignments is to write a one- to two-page executive summary of your paper. You must do this **individually**, please do not discuss your write-ups with anyone else. Your objective here is three-fold: 1) summarize the salient points of the paper *in your own words*, 2) give voice to your own points of view in case you disagree with the group consensus

on a particular point, and 3) any critical thinking questions or points of view you have that are not included in the paper.

<u>Peer Evaluation</u>. At the conclusion of the project, each member of the group will be asked to evaluate every other group member anonymously on the last day of class using a peer evaluation form. All team members must complete the form within 24 hours of their presentation. The goal of this evaluation is to discourage free-riding. The peer evaluation information will not directly determine a student's grade but will be taken into consideration when the instructor assesses each student's group project performance. If any students receive unsatisfactory ratings from their group, their grade will be marked down accordingly.

- **10%** Final Presentation. This final presentation is based on the Group Project content, the goal is for you to practice delivering the essence of your group project in front of an audience (graded as I, K or CT see rubric above). You will work on this presentation with your same final project group members, prepare a presentation in PPT-format or similar formats, and potentially with critical thinking questions that may provoke a class discussion during your presentation, and deliver this presentation in the last week to your classmates and the instructor.
- **40% In-Class Quiz and Polls.** There will be an in-class quiz that counts for 30% of the final grade. It will consist of several case analysis questions similar to what we learned throughout the course. To reinforce concepts learning and encourage you to review course materials, there will also be four short polls given during class throughout the semester. The short polls will altogether count for 10% of the final grade.

Final grades represent how you perform in the class relative to other students. Your grade will not be based on a mandated target, but on your performance. Historically, the average grade for this class is the Marshall target grade of 3.5 ± 0.09 (where A=4, A=3.7, B=3.3, B=3, etc.). Three items are considered when assigning final grades:

- 1. Your average weighted score as a percentage of the available points.
- 2. The overall average percentage score within the class.
- 3. Your ranking among all students in the class.

COURSE CALENDAR

Session #	Date	Торіс		ses listed below. Other readings will be listed Blackboard if needed.			
Part 1	Part 1 Setting the Stage: Digital Platform Business Models						
Week 1	Jan 9	Course Introduction & Over	view				
	Jan 11	Introduction to Platform Bus Models	siness	Case #1 Fasten: Challenging Uber and Lyft			
Week 2 (Jan 16: MLK's	Jan 20 5 Day; no class)	Launching a Successful Plat	form	(cont.) Case #1 Fasten: Challenging Uber and Lyft			
Part 2 Foundations for Digital Platform Business Models							
Week 3	Jan 23 & 25	Platform Architecture and V Creation	alue	Case #2 LinkedIn Corporation			
Week 4	Jan 30 & Feb 1	Platform Monetization and V Capture	√alue	Case #3 Upwork: Reimagining the Future of Work			

The following timetable is for reference purpose and is tentative. Subject to change with prior announcement.

Week 5	Feb 6 & 8	Product Development in Platform Firms	Case #4 Innovation at Uber: The Launch of Express POOL			
Week 6	Feb 13 & 15	Content Platforms	Case #5 Social Media War 2021: Snap vs. Facebook vs. TikTok			
Week 7	Feb 22 nt's Day; no class)	In-Class Quiz Group Project Prospectus				
(Feb 20: Pieside	It's Day; no class)	Group Project Prospectus				
Part 3	Eme	rging Platform Business Models & Di	gital Platform Ecosystems			
Week 8	Feb 27 & Mar 1	Digitization of Value Chain	Case #6 Kitopi: The Brave New World of Cloud Kitchens			
Week 9	Mar 6 & 8	Platform Management During COVID-19	Case #7 Zoom Video Communica- tions: Eric Yuan's Leadership During COVID-19			
	Mar 12 – 19	Mid-Semester Break				
Week 10	Mar 20 & 22	FinTech Platform Ecosystem	Case #8 Ant Financial			
Week 11	Mar 27 & 29	Orchestration in Platform Worlds	Case #9 Videogames: Clouds on the Horizon?			
Week 12	Apr 3 & 5	Platform Revenue Model	Case #10 Dropbox: "It Just Works"			
Part 4	Part 4 Visioning the Future					
Week 13	Apr 10 & 12	Policies, Regulations, & Governance of Digital Business Platforms	Case #11 Fixing Facebook: Fake News, Privacy, and Governance			
Week 14	Apr 17 & 19	The Future of Platform Revolution	Case #12 HTC and Virtual Reality			
Week 15	Apr 24 & 26	Course Wrap-Up & Final Presenta- tion	In-Class Final Presentation			

STATEMENT ON ACADEMIC CONDUCT AND SUPPORT SYSTEMS

Academic Conduct:

Plagiarism – presenting someone else's ideas as your own, either verbatim or recast in your own words – is a serious academic offense with serious consequences. Please familiarize yourself with the discussion of plagiarism in SCampus in Part B, Section 11, "Behavior Violating University Standards"_policy.usc.edu/scampus-part-b. Other forms of academic dishonesty are equally unacceptable. See additional information in SCampus and university policies on <u>Research and Scholarship Misconduct</u>.

Students and Disability Accommodations:

USC welcomes students with disabilities into all of the University's educational programs. The Office of Student Accessibility Services (OSAS) is responsible for the determination of appropriate accommodations for students who encounter disability-related barriers. Once a student has completed the OSAS process (registration, initial appointment, and submitted documentation) and accommodations are determined to be reasonable and appropriate, a Letter of Accommodation (LOA) will be available to generate for each course.

The LOA must be given to each course instructor by the student and followed up with a discussion. This should be done as early in the semester as possible as accommodations are not retroactive. More information can be found at <u>osas.usc.edu</u>. You may contact OSAS at (213) 740-0776 or via email at <u>osas.frontdesk@usc.edu</u>.

Support Systems:

Counseling and Mental Health - (213) 740-9355 – 24/7 on call

 $\underline{studenthealth.usc.edu/counseling}$

Free and confidential mental health treatment for students, including short-term psychotherapy, group counseling, stress fitness workshops, and crisis intervention.

National Suicide Prevention Lifeline - 1 (800) 273-8255 – 24/7 on call

suicidepreventionlifeline.org

Free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week.

Relationship and Sexual Violence Prevention Services (RSVP) - (213) 740-9355(WELL), press "0" after hours – 24/7 on call

studenthealth.usc.edu/sexual-assault

Free and confidential therapy services, workshops, and training for situations related to gender-based harm.

Office for Equity, Equal Opportunity, and Title IX (EEO-TIX) - (213) 740-5086 eeotix.usc.edu

Information about how to get help or help someone affected by harassment or discrimination, rights of protected classes, reporting options, and additional resources for students, faculty, staff, visitors, and applicants.

Reporting Incidents of Bias or Harassment - (213) 740-5086 or (213) 821-8298 usc-advocate.symplicity.com/care_report

Avenue to report incidents of bias, hate crimes, and microaggressions to the Office for Equity, Equal Opportunity, and Title for appropriate investigation, supportive measures, and response.

The Office of Student Accessibility Services (OSAS) - (213) 740-0776

osas.usc.edu

OSAS ensures equal access for students with disabilities through providing academic accommodations and auxiliary aids in accordance with federal laws and university policy.

USC Campus Support and Intervention - (213) 821-4710

campussupport.usc.edu

Assists students and families in resolving complex personal, financial, and academic issues adversely affecting their success as a student.

Diversity, Equity and Inclusion - (213) 740-2101 diversity.usc.edu

Information on events, programs and training, the Provost's Diversity and Inclusion Council, Diversity Liaisons for each academic school, chronology, participation, and various resources for students.

USC Emergency - UPC: (213) 740-4321, HSC: (323) 442-1000 – 24/7 on call <u>dps.usc.edu</u>, <u>emergency.usc.edu</u>

Emergency assistance and avenue to report a crime. Latest updates regarding safety, including ways in which instruction will be continued if an officially declared emergency makes travel to campus infeasible.

USC Department of Public Safety - UPC: (213) 740-6000, HSC: (323) 442-120 – 24/7 on call dps.usc.edu

Non-emergency assistance or information.

Office of the Ombuds - (213) 821-9556 (UPC) / (323-442-0382 (HSC) <u>ombuds.usc.edu</u>

A safe and confidential place to share your USC-related issues with a University Ombuds who will work with you to explore options or paths to manage your concern.

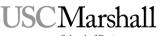
*Occupational Therapy Faculty Practice - (323) 442-33*40 or <u>otfp@med.usc.edu</u> <u>chan.usc.edu/otfp</u>

Confidential Lifestyle Redesign services for USC students to support health promoting habits and routines that enhance quality of life and academic performance.

OPEN EXPRESSION AND RESPECT FOR ALL

An important goal of the educational experience at USC Marshall is to be exposed to and discuss diverse, thought-provoking, and sometimes controversial ideas that challenge one's beliefs. In this course we will support the values articulated in the USC Marshall "<u>Open Expression Statement</u>."

Appendix I



School of Business

Undergraduate Program Learning Goals and Objectives (last update 12/21/17)

Learning goal 1: Our graduates will demonstrate critical thinking skills so as to become future-oriented problem solvers, innovators and decision makers in diverse and rapidly changing business environments.

- Students will demonstrate the ability to anticipate, identify and solve business problems. They will be able to identify and assess central problems, identify and evaluate potential solutions, and translate a chosen solution to an implementation plan that considers future contingencies
- Students will demonstrate the ability to be accurate, clear, expansive (thorough, detailed) and fair-minded in their thinking
- Students will critically analyze concepts, theories and processes by stating them in their own words, understanding key components, identifying assumptions, indicating how they are similar to and different from others and translating them to the real world
- Students will be effective at gathering, storing, and using qualitative and quantitative data and at using analytical tools and frameworks to understand and solve business problems
- Students will understand the concepts of critical thinking, entrepreneurial thinking and creative thinking as drivers of innovative ideas

Learning Goal 2: Our graduates will develop people and leadership skills to promote their effectiveness as business managers and leaders in the 21st century's evolving work and organizational structures.

- Students will recognize, understand and analyze the roles, responsibilities and behaviors of effective managers and leaders in diverse business contexts e.g., functionally diverse, culturally diverse, geographically diverse, etc.
- Students will understand factors that contribute to effective teamwork including how to elicit, manage and leverage diverse perspectives and competencies.
- Students will recognize, understand, and analyze the motivations and behaviors of stakeholders inside and outside organizations (e.g., teams, departments, consumers, investors, auditors)

Learning Goal 3: Our graduates will be effective communicators to facilitate information flow in organizational, social, and intercultural contexts.

- Students will identify and assess diverse personal and organizational communication goals and audience information needs
- Students will demonstrate an ability to gather and disseminate information and communicate it clearly, logically, and persuasively in professional contexts
- Students will understand individual and group communications patterns and dynamics in organizations and other professional contexts

Learning goal 4: Our graduates will demonstrate ethical reasoning skills, understand social, civic, and professional responsibilities *and aspire to add value to society*.

- Students will recognize ethical challenges in business situations and assess appropriate courses of action
- Students will understand professional codes of conduct

Learning goal 5: Our graduates will develop a global business perspective. They will understand how local, regional, and international markets, and economic, social and cultural issues impact business decisions *so as to anticipate new opportunities in any marketplace*.

- Students will understand that stakeholders, stakeholder interests, business environments (legal, regulatory, competitor) and business practices vary across regions of the world
- Students will understand how local, regional and global markets interact and are impacted by economic, social and cultural factors.

Learning goal 6: Our graduates will understand types of markets and key business areas and their interaction to effectively manage different types of enterprises.

- Students will demonstrate foundational knowledge of core business disciplines, including business analytics and business economics
- Students will understand the interrelationships between functional areas of business so as to develop a general perspective on business management
- Students will apply theories, models, and frameworks to analyze relevant markets (e.g. product, capital, commodity, factor and labor markets)
- Students will be able to use technologies (e.g., spreadsheets, databases, software) relevant to contemporary business practices

Appendix II Participation Statements

Participation. In-class participation is 10% of the total grade and evaluated based on your level of involvement in class discussions and in-class exercises.

One of the primary goals of this course is to help you develop the ability both to clarify your own position on a an issue and to be able to articulate and defend it clearly. Sharing your perceptions and ideas with others is crucial for learning and for understanding how the diverse opinions that you are likely to encounter in an organization are debated. You will find yourself presenting and testing new ideas that are not wholly formulated and assisting others in shaping their ideas as well. You should be prepared to take some risks and be supportive of the efforts of others.

Effective class participation consists of analyzing, commenting, questioning, discussing, and building on others' contributions; it is not repeating facts or monopolizing class time. The ability to present one's ideas concisely and persuasively and to respond effectively to the ideas of others is a key business skill. One of the goals of this course is to help you sharpen that ability.

- **Outstanding Contribution**: Your contributions reflect considerable preparation; they are substantive and supported by evidence from the case, readings, and logic. Your comments or questions create a spring-board for discussion by making a critical insight. You synthesize and build upon what has already been said in the discussion. The class learns from you when you speak; in your absence, the discussions would suffer.
- **Good Contribution**. You come prepared with substantiated comments. You demonstrate good insight and clear thinking. You are able to make some connection to what has been said in prior discussion. The class notices when you're not part of the discussion.
- **Minimal Contribution**. You participate but are unprepared. You rarely offer interesting insights into the discussion. It appears that you are not listening to what others are saying during discussion.
- **No Contribution**. You say little or nothing in class. If you were not in the class, the discussion would not suffer.

Appendix III Sample Peer Evaluation Form

Grades for individual student contributions to team projects are assigned by me, based on my observations of the team's working dynamics, my assessment of the team's project quality, and thoughtful consideration of the information provided through your peer evaluations.

Peer Input/Evaluation Form

Complete one form for each of your teammates/group members, including yourself.

Name of group member:					
Assess your teammate's contributions on a scale of 1-5 (5 is excellent)	5	4	3	2	1
Attended and was engaged in team meetings from beginning to end					
Asked important questions					
Listened to and acknowledged suggestions from every team mate					
Made valuable suggestions					
Took initiative to lead discussions, organize and complete tasks					
Contributed to organizing the assignment					
Contributed to writing the assignment					
Reliably completed tasks on time in a quality manner					
Demonstrated commitment to the team by quality of effort					
Was cooperative and worked well with others					
I would want to work with this team member again.					
Describe your teammate's (or your) contributions to the assignment:					
How might your teammate (or you) have made more effective contribute ment?	ition	s to t	he as	ssign	1-
Your name:	Dat	te:			

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