Pricing Principles and Strategies: Theory, Practice, and Leadership
Syllabus as of 04-23-25 Updated

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Course Overview

Goal:

This course will present executive perspective on the *Theory, Practice and Leadership of Pricing* in various business domains. Emphasis will be placed on how Principles of Pricing can and should be used to form Pricing Strategies. Our journey will examine the economic, marketing, and messaging relationship between a Buyer and Seller in various settings and how effective pricing can lead to improved business outcomes.

Course Description:

The founder of Amazon, Jeff Bezos, said "*Lowering prices is easy. Being able to afford to lower prices is hard.*" At first glance, customers rationally prefer lower prices, and sellers rationally prefer higher prices, provided customers still buy at those higher prices. So, price setting is both a compromise and optimization. The *Principles and Strategies* behind pricing are rooted in many domains – marketing, branding, advertising, psychology, economics, finance, and operations to name a few. Furthermore, markets form around pricing norms, leading to institutionalized practices and anticipated competitor reactions. This is especially the case with pricing on digital platforms such Amazon and streaming services, like Netflix and Apple.

In this course, we will explore the many aspects that are part of the principles and strategies of pricing, allowing us to better understand the compromises and optimizations that are core to pricing and how to manage those. Specifically, we will call on *Theory from Economics and Finance* that lead to rational pricing strategies and explore how and when theory must be augmented with empirical observations. And as a great deal of pricing success and norms are driven by empirical realities, we will focus heavily on the *Practice of Pricing,* the role of customer irrationality, competitor reactions, and the influence of branding and messaging on pricing, and how overall positioning can impact pricing decisions. Dominant practice norms like tiered pricing, subscription models, surge pricing, dynamic pricing, couponing, loyalty programs, and auctions will be examined for appropriateness in practice, through contemporary case studies.

Our course will include guest speakers from many industries that apply analytical models to improve pricing decisions. You will learn from their perspectives on the *Leadership of Pricing* in business practice and the challenges and realities of pricing in the real-world.

Given the reliance on digital platforms for the sale of both physical goods and digital products and services in many aspects of our lives, we will examine pricing on digital platforms in detail. Course work will examine multiple pricing data sets using *AI and Analytics tools* and students will explore pricing challenges through project work that invokes the ethical challenges of AI assisted pricing, today and the near future.

About Russell Walker, Ph.D.

Dr. Russell Walker is Associate Teaching Professor of Marketing and International Business and Director of Experiential Learning in Analytics at the Foster School of Business at the University of Washington. From 2007-2019, he was Clinical Professor at the Kellogg School of Management at Northwestern University, where he founded the school's executive-level risk management curriculum and the school's popular Analytical Consulting Lab, Risk Lab, Global Lab and Digital Lab – novel experiential classes that brought MBAs together with real-world corporate opportunities focused on data, risk, and digital strategy. Professor Walker received the Kellogg Impact Award, given by his students for excellence and influence in teaching.

His most recent book, "From Big Data to Big Profits: Success with Data and Analytics" (Oxford University Press, August 2015), in which Dr. Walker explores how firms can best monetize Big Data, received the Silver Business Technology Book award from Axiom Books. In his award-winning 2013 title, "Winning with Risk Management" (World Scientific Publishing), he makes the case for companies succeeding on the basis of risk management, much as companies compete on efficiency, costs, labor, location, and other dimensions. He has authored numerous popular business case studies supporting this theory, many of which have been recognized for excellence by the Aspen Institute, Harvard Business Review Press, Harvard School of Business, Kellogg School of Management, the World Bank, and the Bank of England, among others.

He has advised leading organizations internationally on risk management and analytics, including: the U.S. Department of State, the World Bank, the Securities and Exchange Commission, the US Federal Reserve Banking System, the FBI, the Department of Homeland Security, the Bank of England, International Finance Corporation, Microsoft, CME Group, John Deere, Teradata, Discover Financial, USAA, IBM, State Farm, PG&E, Capital One Financial, and many other leading banks and insurers.

Dr. Walker began his career with Capital One Financial, where he served as a senior corporate strategist specializing in advancing analytics throughout the enterprise for the purposes of improving marketing and risk management. Currently, he serves on the Scientific and Technical Council for the Menus of Change, an initiative led by the Harvard School of Public Health and the Culinary Institute of America, to develop healthier and more environmentally sound food choices. He was a board member of the Virginia Hispanic Chamber of Commerce, where he developed support programs for Hispanic entrepreneurs and advised U.S. senators on U.S. Latino matters. He currently advises the Cuba Study Group, a nonpartisan group dedicated to enabling prosperity in Cuba.

More on his work can be found at russellwalkerphd.com

Professor Walker holds an MS and Ph.D. from Cornell University, and an MBA from the Kellogg School of Management at Northwestern University and a BS from the University of South Florida.

Course Schedule
Course Outline, Frameworks, Cases and Readings

Week I - Class 1 Pricing Principles: The Theory and Practice of the Buyer and Seller

In this module, we will examine the roles and economic interests at work in the Buyer and Seller. We will examine the Theory of Pricing models and how markets and information can impact and change the goals and outcomes in Pricing.

> **Topics:**
> What is the Goal of Pricing?
> What are the Economic Interest of the Buyer and Seller?
> Introduction to Pricing Theory
> Risk Decisions for the Buyer
> Predicting the Buyer Behavior
>
> **Frameworks:**
> Theory of Pricing and Pricing Models
> Predicting a Buyer's Actions
> Rational Customer Behavior
> (Ir)Rational Customer Behavior
> Customer Utility
>
> **Readings:** 1. *MinuteGrocer: Estimating Economic Value to the Customer*
>   By: Aradhna Krishna
>   Publication Date: May 2023
>   Product Number: W07C53-PDF-ENG
>
>   2. *The Good-Better-Best Approach to Pricing*
>   By: Rafi Mohammed
>   Publication Date: Aug 2018
>   Product Number: R1805H-PDF-ENG

Week II: Class 2 Theory – Price Elasticity and Analytics
For a great many firms, pricing decisions involve some rationality. In this module, we will examine when such rationality takes a major role in pricing. Specifically, we will examine how pricing is driven by quantity in a real business setting.

> **Topics:**
> Pricing in variable consumption
>
> **Frameworks:**
> Price Elasticity
> Pricing Rationale
> Regressions in Pricing
>
> **Readings:** 1. *The Pitfalls of Pricing Algorithms*
>   By: Marco Bertini, Oded Koenigsberg

Publication Date: Aug 2021
Product Number: R2105D-PDF-ENG

2. *Using Market Research to Assess Willingness to Pay for Pricing Decisions*
By: Kamel Jedidi, Robert J. Morais
Publication Date: Jul 2023
Product Number: CU378-PDF-ENG

Guest Speaker: Dr. Mauricio Valera of Amazon

Analytical Assignment 1: Build a Model to Predict Market Share with Price Changes in a Competitive Market (Hot dog sales data)

Week III: Class 3: Theory and Practice - Pricing in Business to Customer Relationships (B2C)

For a great many firms, products are sold to individuals and the Buyer-Seller relationship is B2C. In this environment, Pricing is strongly enabled by Marketing and Advertising actions. We will explore B2C pricing practices and the role of Pricing in the overall 4Ps and 5Cs of Marketing.

Topics:
Pricing in B2C
Pricing Decisions in the 4Ps and 5Cs
Integrating Pricing in the Marketing and Advertisement

Frameworks:
Pricing and signals for quality
Pricing and signals for value
Utility Theory
Prospect Theory
Customer Alternatives
BATNA and Reservation Price Alternatives in Pricing

Readings: 1. *Toblerone Pricing at Airport Duty-Free Shops*
By: Nirmalya Kumar, Lipika Bhattacharya
Publication Date: Jan 2024
Product Number: 073SMU-PDF-ENG

Guest Speakers: Dr. Josh Cherry of Reddit, Amazon, Pinterest and
Dr. Dmitry Lubensky of Amazon and Pinterest

Week IV: Class 4: Theory and Practice - Pricing in Business-to-Business (B2B) Relationships

For a great many firms, products are sold to in B2B relationships. In such relationships, Pricing is impacted by: Delivery, Scale of Sale, Financing, and ultimately a Negotiation process. We will examine Pricing in the B2B environment.

Topics:
Pricing in B2B
Pricing Decisions within Large Scale Transactions
List Pricing and Negotiations
Branding and pass-through risks and opportunities in B2B for Seller

Frameworks:
Private Pricing
Pricing in Competitive Environments
Nash Equilibrium
Impact of settlement and execution on Pricing
Restricting B2B operations
BATNA in B2B Pricing and Switching Costs

Readings: 1. *Maersk Shipping: Is the Price Right?*
By: Jerry Kim, Stephan Meier, Bastiaan Oomens
Publication Date: Sep 2013
Product Number: CU259-PDF-ENG

Guest Speakers: Dr. Josh Cherry of Reddit, Amazon, Pinterest and
Dr. Dmitry Lubensky of Amazon and Pinterest

Analytical Assignment 2: Evaluate the pricing of airline fares for various city pairs. Develop an analytical model to rational assign prices. Students are encouraged to use AI/ML tools to explore the relationships at work in the data. This is a fun exercise, too!

Week V: Class 5 Pricing on Digital Platforms

Serving customers on Digital Platforms, like Amazon, Google Advertisement, Facebooks, Redditt, Phone Apps, and Apple Music offer the Seller enormous scale, but some with some pricing restrictions. Customers enjoy a transparency across products and have grown to expect certain norms in the Digital Platform. Digital Platforms often bring Competitors into easy comparison and lead to numerical evaluation of products and pricing that are less likely in B2C physical goods. We will explore how the Formulate, Implement, and Lead Pricing Strategies in Digital Platforms.

Topics:
Pricing on Digital Platforms: Norms and Practices
Customer Perspective
Seller Perspective
Role of the Digital Platform Pros and Cons

Frameworks:
Advertisement Pricing
Leading Pricing Campaigns
Winning in Digital Platforms

Readings:

1. *Netflix Moves into Ad-Supported Streaming: Cause for Concern or a Normal Transition?*
By: Sayan Chatterjee
Publication Date: Aug 2023
Product Number: UV8776-PDF-ENG

2. *Netflix Leading with Data: The Emergence of Data-Driven Video*
By: Russell Walker, Mark Jeffery, Linus So, Sripad Sriram, Jon Nathanson, Joao Ferreira, Julia Feldmeier
Publication Date: Mar 2010
Product Number: KEL473-PDF-ENG

Guest Speaker: Dan Kiepfer, Blue Nile

Analytical Assignment 3: Evaluate Prices for Major Media Subscriptions, based on Usage Rates

Week VI: Class VI Practice – Loyalty Programs and Reputation in Pricing
For a great many firms, pricing decisions involve some a series of purchases from the Customer. In economics, we consider this a series of economic games. In Practice, the Seller must create compelling pricing models to win the Customer across many purchases. In recent years, the rise of Loyalty programs has created a shadow currency and rebate scheme, whereby customers can benefit from their repeated purchases with a seller.

Topics:
Pricing in repeat purchase settings
Loyalty programs
Formal and informal loyalty recognition
Negotiation Opportunities

Frameworks:
Price Elasticity
Pricing Rationale
Regressions in Pricing

Readings: 1. *Maintaining Customer Loyalty in the Face of Inflation*
By: Christine Alemany
Publication Date: Feb 2024
Product Number: H07ZT3-PDF-ENG

Guest Speaker: Dr. Maggie Lehr, Economist and Product Manager at Alaska Airlines, via Zoom due to Dr. Lehr graciously joining us as a new mom.

Week VII: Class VII Theory and Practice - Dynamic Pricing and Auctions
The rise of digital transactions and intensive measurement of the Customer has led to new pricing models that enable Dynamic Pricing. We will explore how leading models of Dynamic pricing at Uber have resulted in new pricing options. Such dynamic pricing suggest a scarcity and we will explore the theoretical underpinnings of pricing under scarcity the role of auctions. We will examine public and private call auctions and how these form a basis for modern dynamic pricing, such as surge pricing.

> **Topics:**
> Pricing under scarcity
> Auctions, Public and Private
> Dynamic Pricing goals
> Surge pricing – Uber
>
> **Frameworks:**
> Pricing via Auctions
> Dynamic Pricing
> Reputational management of Surge Pricing
>
> **Readings:** 1. *How To Reap Higher Profits with Dynamic Pricing*
>   By: Arvind Sahay
>   Publication Date: Jun 2007
>   Product Number: SMR254-PDF-ENG
>
>   2. *Uber Pricing Strategies and Marketing Communications*
>   By: Paul W. Farris, Gerry Yemen, Virginia Weiler, Kusum Ailawadi
>   Publication Date: May 2014 (Revised May 01, 2016)
>   Product Number: UV6878-PDF-ENG

Guest Speakers: Alex Steinoff '20 of the Seattle Kraken and Chris Kennedy SVP of the Seattle Mariners – on Dynamic Pricing in Sports Ticketing

Week VIII: Practice and Leadership - Pricing Experimentation, A|B Testing in and Open Environment
Firms rarely have perfect environments for exploring pricing options through experimentation. Indeed, in modern online environments, the price experimentation happens on the fly, contemporaneously with all of the other dynamic realities and challenges of selling. In this manner, changing a price or even a product advertisement does not happen in a vacuum, so A|B testing happens in a less than ideal way. We will explore how firms look best execute pricing experiments in this space and how AI and Automation are a critical part of open experimentation in Pricing.

> **Topics:**

Pricing experiments
Leading and Operating in a Dynamic Pricing Environment

Frameworks:
Traditional A|B Testing for Price Experimentation
Price experimentation in an open, dynamic market

Readings: *1. Lessons from More Than 1,000 E-Commerce Pricing Tests*
By: Maxime C Cohen, Adam Kitain, Drew Marconi, Andrew Raftery
Publication Date: Mar 2024
Product Number: H081N7-PDF-ENG

Guest Speakers: Guest Speakers: Executive Teams from Amazon via Zoom,

Analytical Assignment 4: Evaluate Price Strategy and Demand Response for various personal care products sold on Amazon

Week IX: Class IX Pricing Assets, Financial Instruments, and Intellectual Property

As an overview of Pricing, some firms sell assets, like real estate, financial instruments, and intellectual property, where the price is not strictly a function of buyer/seller interactions but includes relevant financial performance and projections on the expected financial performance of an asset. In this module, we will examine some models for pricing of financial assets, such as real estate, loans, and intellectual property.

Topics:
Real estate pricing
Loan pricing
IP pricing
Auctions for assets vs. DCF

Frameworks:
Market value
DCF
Cap Rate
Interest rate premium
Carrying costs

Readings: 1. *San Francisco: Real Estate Valuation*
By: Alberto Ibarra, Ines Alegre Tort-Martorell, Melina Moleskis
Publication Date: Sep 2016
Product Number: IES553-PDF-ENG

2. *Neighborhood Watch: The Rise of Zillow*
By: Russell Walker, Joanna Green
Publication Date: Apr 2017
Product Number: KE1008-PDF-ENG

Guest Speaker: Wise Chou, SVP of T-Mobile and Sam Affolter

Analytical Assignment 5: Build a Model to Find Under and Over-Priced Properties (See San Francisco Data Set)

Week X: Class X Final Presentations, Reflection, Pricing in the Age of AI

In our final class, we will hold final presentation, share reflections and reviews on the course and explore how AI and digital agents will impact pricing in many areas, such a personal purchasing, rent, and vacations, and food.

Readings: 1. *A Step-by-Step Guide to Real-Time Pricing*
By: Marshall Fisher, Santiago Gallino, Jun Li
Publication Date: Oct 2023
Product Number: R2306F-PDF-ENG

2. *How AI Can Help Companies Set Prices More Ethically*
By: Mark E. Bergen, Shantanu Dutta, James Guszcza, Mark J Zbaracki
Publication Date: Mar 2021
Product Number: H0694Z-PDF-ENG

Guest Speaker: Dr. Matthew Gardner, Chief Real Estate Economic Advisor to Washington State

Team Final Presentation: Develop your Model, Ideas, for how AI can and should improve Pricing in a Domain, Product or your selection. Research the industry and specifically demonstrate how AI will lead to better outcomes for Buyers and Sellers. Importantly, comment on how you would Lead the AI process for superior ethical outcomes.

Grading

5 Team Analytical Assignments:	50%
Final Team Project:	15%
Individual Participation:	20%
Peer Evaluation:	15%

Individual Participation: Our sessions together will be interactive. Students are expected to contribute to the discussion, polls, and reflections on the course readings. Points are earned for each session. With 10 classes, a student can earn 2 points per session through participation in that session.

This course is expected to be especially rich in dialogue and class-room discussion. As MBAs with working experience, your contributions are welcomed and encouraged. In accordance with acknowledging contributions in class and in the spirit of transparency, class participation can be earn up to 2 points per class by attending and contributing to

our in person dialogues. After each class, you may submit your recollection of your in class contributions and takeaways, via a Canvas site by answering the following points:

1. How did you contribute to the learning environment during this class session in person? Note your questions and participation in class dialogue during. Specific questions and contributions to the dialogue should be referenced herein.
2. How did you grow from the class dialogue? What did you take away?
3. Confirm you were present in our class setting.

Thanks in advance for making our time together impactful and beneficial to each other.

Analytics: We will use JMP software and AI tools like ChatGPT to evaluate the data. All analytical exercises involve real-world data sets and present challenges and opportunities at many levels. Students may use any analytics package they prefer.

Final Project:
Assessment of risk and application of risk frameworks to an enterprise of choice. The final project will be presented in the last class.

The course grade will be based on the group homework assignments, individual assignments, and the final project and its presentation, and individual class participation, and peer evaluations (15%). All group work may be completed and submitted as a group, but *everyone* is expected to work on *each* assignment. Each group will submit one copy of the report per assignment, and it should be an electronic copy of their model, analysis and solution.

Each group member *is expected* fill out the attached peer evaluation form reflecting each individual's contribution to the group output. **Groups should be a maximum of 6 people.**

Re-grading
If you believe that your assignment needs to be re-graded, you understand that the entire assignment is subject to regrading, including the possible outcome of a grade reduction.

Assignment Write-ups
This should be a clear and concise explanation of your spreadsheet model, analysis, and conclusions. Use a presentation format with outlines, bullets and tables, rather than long essays.

The write-up should include:

I.   **Executive Summary:**
      Overview of the **problem** addressed, **key issues** involved, and your **solution,**
      which demonstrates your understanding of the assignment. Provide a clear
      description of recommendations, decisions to be made, and other concerns
      that you may wish to raise.

II.   **Analysis:**
      How should risk be framed, measured, and managed in the situation at hand?
      Propose a framework, process, measurement, or best practice that is
      appropriate for the case at hand.

Project
This involves creating, modeling, and analyzing a business case of your choice. It may be
based on your work experience, a case from another course, a magazine article, or even
your own imagination! The goal is to analyze **Pricing** at a specific company. You need
not contact the company, but may rely on public, published, and industry-specific details.
A good model looks at the appropriateness, challenges and limitations of a pricing
example in the real-world! Have fun with it and explore something of interest to you!

You will also make a **fifteen-minute presentation of your project to the class**. The
project report is due at the time of your presentation. You should prepare a presentation
suitable to communicate the entire body of your work, as if you were presenting to a
client or board of directors.

Peer Evaluation
Please evaluate all members of your group (including yourself) in terms of their
contribution to the group assignments and the final project, and record the scores on the
spreadsheet on the back page. Highlight your own name and grade each member of your
group on each assignment on a scale of 1 (least) to 5 (most), on each assignment and the
term project. At the end of the quarter, compute the average scores for all of your group
members in the last column and return this evaluation form with your final project report.
Please fill these forms this carefully, as it will be one of the inputs used in deciding the
individual course grades. **Submission of the peer evaluation forms is an important
part of assessing your team contribution.**

These evaluations will be guarded with utmost confidentiality, and will be used only by
me, and only for grading purposes.
During this peer evaluation process, please keep in mind the following criteria in terms of
each individual group member's contribution.

Communication: Does the member listen to and consider others' points of view?
Communicate ideas well? Adhere to the group meeting schedule? Is the person open to
feedback?

Innovation: Does he/she generate ideas on how to achieve group goals? Apply past knowledge and experience to the current project? Offer alternative approaches to current ways of thinking? Challenge the status quo when necessary? Encourage innovative thinking among the group members?

Initiative: Does the member help move ahead efficiently? Go beyond the requirements of the task? Look for opportunities to improve? Help others in the group's understand the background material?

Team Orientation: Does the member work well with the group? Acknowledge and pay attention to the group and individual activities? Treat all members as colleagues? Complete individual task requirements to achieve group goals? Give other members credit for their ideas? Consider the group goals as the top priority? Attend all group meetings or provide advance notice when absent? Informs the group of his/her task so that it can be completed when absent?

Media, Computer, Phone Policy

This class involves many guest speakers, which have been invited to speak "Off the Record," offering candid and valuable advice that cannot be shared or recorded. The speakers will reveal corporate strategies, Pricing plans and Marketing norms, analytical examples, corporate investments, partnerships, and market outlooks, and other information that cannot be published or distributed. This candid "Off the Record" viewpoint is instrumental in providing a valuable learning experience. Without it, the speakers are limited to general discussion and unable to provide the same real-world advice that we seek.

In this regard, we have promised to offer them an environment where they need not worry about sharing their "Off the Record" candid feedback. This is exercised by the Foster School in other forums where the school has invited business leaders to speak "Off the Record."

- **No Computer use in the room during the Guest Speaker Sessions. If you wish to take notes, use paper.**
- **All phones on silent mode and are not to be used for accessing the Internet.**
- **No recordings, audial or video of the Guest Speakers are permitted.**
- **The Guest Speaker sessions are not recorded, as per speaker requests.**
- **No posting to social media about details from the Guest Speaker or about anything that the speakers shared.**
- **If you must exit the room, please do so quietly and in a way to not interrupt the group or speakers.**

Thanks for your understanding on these points so that we can create a welcoming environment for our speakers and a rich and valuable dialogue that advances your knowledge of analytics in business.

Foster School and University of Washington Terms and Conditions

Academic Integrity:
I employ the principles and procedures espoused by the University of Washington Student Conduct Code to maintain academic integrity in the course. The Code establishes the expectation that students will practice high standards of professional honesty and integrity. In particular, implementation of the Code at the Foster School of Business prohibits cheating, attempted cheating, and plagiarism—including improper citations of source material—as it pertains to academic work. Suspected violations will be handled in compliance with the University of Washington Student Conduct Code.

Disability-related Accommodations:
To request academic accommodations due to disability, please contact Disability Resources for Students (DRS) http://depts.washington.edu/uwdrs/. If you have a letter from DRS indicating that you have a disability that requires academic accommodations, please present the letter to me *as soon as possible* so that we can discuss the support I can offer you in this class.

Religious Accommodations Policy:
Washington state law requires that UW develop a policy for accommodation of student absences or significant hardship due to reasons of faith or conscience, or for organized religious activities. The UW's policy, including more information about how to request an accommodation, is available at Religious Accommodations Policy. Accommodations must be requested within the first two weeks of this course using the Religious Accommodations Request form.