# Course Syllabus OPRE 6341.0W1 Retail Operations

Naveen Jindal School of Management The University of Texas at Dallas

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#### **Course Information**

Course Number/Section OPRE 6341.0W1
Course Title Retail Operations

Term Fall 2016

#### **Professor Contact Information**

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#### About the Instructor

Dr. Dorothée Honhon is an Associate Professor of Operations Management at the Jindal School of Management of the University of Texas at Dallas. She joined the school in September 2013. She received her Undergraduate and Master's degrees in Business Administration from the University of Liege, in Belgium and a Ph.D. in Operations Management from New York University. Prior to her position at UT Dallas, she worked at the McCombs School of Business of the University of Texas at Austin (2006-2011) and the Eindhoven University of Technology, in the Netherlands (2011-2013). At UT Dallas, she teaches OPRE 6302 Operations Management and OPRE 6341 Retail Operations. In 2010, she received the Regents' Outstanding Teacher Award from the Board of Regents of the University of Texas system and in 2011 she received the Trammell/CBA Foundation Teaching Award for Assistant Professors.

Her research interests include inventory management, assortment planning, retail operations, behavioral operations management and transportation theory. She has published papers in journals such as Management Science, Operations Research, MSOM and POMs. Her paper "Assortment planning with vertically differentiated products" received the Wickham Skinner Best Paper Published in Production and Operations Management During 2012 Award. She is an Associate Editor for the Management Science journal, serves as a board member of the Production and Operations Management Society, is the Junior VP of meetings for the Women in OR/MS (a.k.a. WORMS) organization and is VP of communications for the College of Supply Chain Management of the Production and Operations Management Society.

# Course Pre-requisites, Co-requisites, and/or Other Restrictions

There are no pre- or co-requisites for this course.

However, students are expected to have at least a basic knowledge of algebra and statistics. Some notions of econometrics (e.g. forecasting and regression analysis), process analysis (e.g., cycle time, just-in-time), inventory management (e.g., Economic Order Quantity and newsvendor models) and corporate finance (how to read a firm's financial statements) are a plus (though a quick review of these topics will be provided by the instructor). Knowing how to use a spreadsheet software (e.g., Microsoft Excel) will also be useful for the course.

# **Course Description**

Retail is the sale of goods and services to the end consumer; it is the final stage in the supply chain. Retailing is an important industry to study. In the US, retailing accounts for 40% of the economy, and is the largest employer. The online retail business is booming and expected to grow to 10% of US retail sales by 2017.

This retail industry is at the forefront of business changes through its direct connection with the consumer. It generates and foretells demand for the rest of the economy. It is a dynamic industry, with continuous changes in marketing channels, formats, technology, and sourcing. Currently, retailing is one of the main drivers of economic growth and transformation in emerging markets around the world, through both global sourcing and global marketing. Retailing is also a laboratory to learn and test ideas that may apply to other businesses. Sophisticated data can be collected more easily than in other industries. Performance can be measured accurately and promptly. Managers in retailing receive rapid feedback on their decisions.

This course examines various new developments in retailing and the application of operations management principles to these developments. Topics that will be discussed include: responsive supply chains, store execution, assortment planning, pricing, online retailing, sustainability, retailing in emerging markets, use of technology such as RFID, and the link between inventory and financial performance.

This course will be useful for students in two ways. First, because retailers play a dominant role in many supply chains, it is not only important for retailers but also for manufacturers and distributors to understand the retail processes and their consequences on the total supply chain. Secondly, the problems faced by retailers (data availability, reducing lead-times, complexity, etc.) are shared by many other firms in the supply chain. As such, these problems are very generic and the knowledge obtained via this course can thus be applied in a variety of industries.

The course makes use of case studies, research articles and newspaper articles. Students will be asked to work on a team project which they will present at the end of the semester. There will be two in-class open note exams as well as weekly homework assignments and quizzes, most of them based on a case study or a news article.

## **Student Learning Objectives/Outcomes**

After completing the course, students will be able to:

- Demonstrate understanding of the crucial importance of retail operations management in today's business environment.
- Apply basic concepts, techniques and methods relevant to the management of retail operations.
- Uncover problems and opportunities for improvement in production and service processes with the enhanced analytical skills and ability.

# **Required Textbooks and Materials**

**Required Texts** 

• There is no required textbook.

#### **Required Materials**

- Course packet: Available for purchase online at:
   <a href="http://cb.hbsp.harvard.edu/cbmp/access/51426625">http://cb.hbsp.harvard.edu/cbmp/access/51426625</a>
   Registration with Harvard Business Publishing is required. The course packet contains a set of case studies and articles which we will discuss throughout the semester.
- Other articles: Cases and articles which cannot be made available via the Harvard Business Publishing website will have to be downloaded by the students.

# **Suggested Course Materials**

Suggested Readings/Texts

- Retail Management, A Strategic Approach, Berman & Evans, 12th edition, Pearson.
- Retailing Management, Levy, Weitz and Grewal, McGraw-Hill/Irwin, 9th edition.
- The New Science of Retailing, Fisher & Raman, HBS Publishers

The first two are undergraduate-level textbooks. They contain factual information and examples about the retail industry. The last book is a management-oriented book on how the retailing industry is getting transformed through scientific advances in the last 10-15 years.

Textbooks and some other bookstore materials can be ordered online through Off-Campus Books <a href="http://www.offcampusbooks.com">http://www.offcampusbooks.com</a> or the UT Dallas Bookstore <a href="http://www.bkstr.com/texasatdallasstore/home">http://www.bkstr.com/texasatdallasstore/home</a>. They are also available in stock at both bookstores.

## **Technical Requirements**

In addition to a confident level of computer and Internet literacy, certain minimum technical requirements must be met to enable a successful learning experience. Please review the important technical requirements <a href="http://www.utdallas.edu/elearning/students/getting-started.html#techreqs">http://www.utdallas.edu/elearning/students/getting-started.html</a>.

http://www.utdallas.edu/elearning/students/getting-started.html.

## **Course Access and Navigation**

The course can be accessed using the UT Dallas NetID account at: <a href="https://elearning.utdallas.edu">https://elearning.utdallas.edu</a>. Please see the course access and navigation <a href="http://www.utdallas.edu/elearning/students/getting-started.html#courseaccessandnav">http://www.utdallas.edu/elearning/students/getting-started.html#courseaccessandnav</a> section of the site for more information.

To become familiar with the eLearning tool, please see the Student eLearning Tutorials <a href="http://www.utdallas.edu/elearning/students/eLearningTutorialsStudents.html">http://www.utdallas.edu/elearning/students/eLearningTutorialsStudents.html</a>.

UT Dallas provides eLearning technical support 24 hours a day/7 days a week. The eLearning Support Center <a href="http://www.utdallas.edu/elearninghelp">http://www.utdallas.edu/elearninghelp</a> services include a toll free telephone number for immediate assistance (1-866-588-3192), email request service, and an online chat service.

#### Communication

This course utilizes online tools for interaction and communication. Some external communication tools such as regular email and a web conferencing tool may also be used during the semester. For more details, please visit the eLearning Tutorials webpage <a href="http://www.utdallas.edu/elearning/students/eLearningTutorialsStudents.html">http://www.utdallas.edu/elearning/students/eLearningTutorialsStudents.html</a> for video demonstrations on eLearning tools.

Student emails and discussion board messages will be answered within 3 working days under normal circumstances.

#### **Distance Learning Student Resources**

Online students have access to resources including the McDermott Library, Academic Advising, The Office of Student AccessAbility, and many others. Please see the eLearning Current Students page <a href="http://www.utdallas.edu/elearning/students/cstudents.htm">http://www.utdallas.edu/elearning/students/cstudents.htm</a> for details.

#### **Server Unavailability or Other Technical Difficulties**

The University is committed to providing a reliable learning management system to all users. However, in the event of any unexpected server outage or any unusual technical difficulty which prevents students from completing a time sensitive assessment activity, the instructor will provide an appropriate accommodation based on the situation. Students should immediately report any problems to the instructor and also contact the online eLearning Help Desk <a href="http://www.utdallas.edu/elearninghelp">http://www.utdallas.edu/elearninghelp</a>. The instructor and the eLearning Help Desk will work with the student to resolve any issues at the earliest possible time.

# **Assignments & Academic Calendar**

Each week (except weeks 8, 14 and 15), students are asked to do the following things in the following order:

- Watch the module video assigned for that given week;
- (optional but highly appreciated) Fill out the minim survey about the quality of the module video;
- Take the corresponding graded quiz (due date is Sunday at 11:59PM CST);
- Read the material (and watch the videos) listed under "Reading" for that week in the table below;
- Complete and submit the homework assignment (due date is Sunday at 11:59PM CST).

	WEEK	TOPIC	READING	ASSESSMENT	DUE DATE
0	08/22	Course Access and Self- Orientation			
1	08/22- 08/28	Module 1: Introduction to retail operations	Course syllabus  Article: "Rocket Science Retailing is Almost Here – Are You Ready?"  Case study: Zara: Fast Fashion + videos to watch	Graded quiz 0 Graded quiz 1 HW1	08/28 at 11:59 pm CST
2	08/29- 09/04	Module 2: Fast fashion	Case study: Paper and more (A)	Graded quiz 2 HW2	09/04 at 11:59 pm CST
3	09/05- 09/11	Module 3: Inventory management	Article: "Execution: The Missing Link in Retail Operations"  Article: "Desperately Seeking Shelf Availability: An Examination of the Extent, Causes, and Efforts to Reduce Retail Out-of-Stocks"	Project: Submit retailer & team Graded quiz 3 HW3	09/11 at 11:59 pm CST
4	09/12- 09/18	Module 4: Inventory	Article: "Which Products Should You Stock?" pages 1- 9	Graded quiz 4 HW4	09/18 at 11:59 pm CST

		inaccuracy and stock-outs			
5	09/19 09/25	Module 5: Consumer behavior	Article: "Which Products Should You Stock?" pages 10-11	Graded quiz 5 HW5	09/25 at 11:59 pm CST
6	09/26- 10/02	Module 6: Assortment planning (part I)	[none]	Graded quiz 6 HW6	10/02 at 11:59 pm CST
7	10/03- 10/09	Module 7: Assortment planning (part II)	[none]	Graded quiz 7	10/09at 11:59 pm CST
8	10/10- 10/16	Exam I			10/14 or 10/15
			Article: "Linking Finance and Operations in Retailing" Case study: David Berman + videos to watch	HW7	10/16 at 11:59 pm CST
9	10/17- 10/23	Module 8: Linking finance and operations	Case study: RFID at the METRO Group + videos to watch	Graded quiz 8 HW8	10/23 at 11:59 pm CST
10	10/24- 10/30	Module 9: Technology in retailing	[none] + videos to watch	Project progress report Graded quiz 9 HW9	10/30 at 11:59 pm CST
11	10/31- 11/06	Module 10: Online retailing	Article: "The brave new world of pricing"  Case study: Cambridge Software Corporation	Graded quiz 10 HW10	11/06at 11:59 pm CST
12	11/07- 11/13	Module 11: Retail pricing	Article: "Reaching 50 million nanostores: retail distribution in emerging megacities" Case study: Wal-Mart China: Sustainable Operations Strategy	Graded quiz 11 HW11	11/13 at 11:59 pm CST

13	11/14- 11/20	Module 12: Sustainability & Emerging markets	[none]	Graded quiz 12	11/20 at 11:59 pm CST
14	11/21- 11/27		*** Fall break ***		
15	11/28- 12/04	(no module) - work on final course project	[none]	Final project report Peer evaluation form	12/04 at 11:59 pm CST
16	12/05- 12/11	Exam II	[none]		12/09 or 12/10

# **Grading Policy**

The students' grade will be assessed through homework assignments, exams, a course project and graded quizzes as follows:

Deliverable	Weight
Assignments	20%
Exam I	25%
Exam II	25%
Course project	20%
Quizzes	10%
Total	100%

The grading scale in the following table is provided as a guideline. The actual grading scale may differ based on the relative performance of students in the class.

Total score	Final letter grade
[93-100]	А
[90-92)	A-
[87-89)	B+
[83-86)	В
[80-82)	B-
[73-79)	C+
[66-72)	С

[60-65)	C-
[0,59)	F

Students can check their grades by clicking "My Grades" on the course menu after the grade for each assessment task is released.

## Assignments

There are 11 homework assignments throughout the semester. Homework assignments are to be submitted individually online via eLearning by the end of the week when they are due (Sunday at 11:59pm CST). No late submission will be accepted under any circumstance. Students may work in teams but each student should submit his or her own assignment.

Homework assignments will be graded by the TA. Points will be given based on effort. A grade of 10 out of 10 will be given to students who show they spent at least 2 hours doing the readings and working on the homework. Otherwise a grade of 8 out of 10 will be given provided the students hand in solutions. A grade of 0 will be given to students who do not hand in any assignment. This means the correctness of the students' answers is less important. What matters is that the students do the reading in order to get familiar with the topic before watching the module video.

Answers to the homework questions can be presented in bullet-point format, i.e., no need to write in full sentences.

Any concern regarding the grading of homework assignments should be addressed directly to the TA and not to the instructor, no later than one week after the grade is posted on eLearning.

When computing the average grade on homework assignments, the two lowest grades will be dropped. In other words, a student's final score on homework assignments will be the average of his or her best 9 scores (with each homework having equal weight). However students are strongly encouraged to submit all 11 assignments as they constitute the best preparation for the exams.

Link to the assignments are available in eLearning. Students are asked to submit their assignments in PDF format with a simple file name. To submit their assignment, students should click the assignment name link and follow the on-screen instructions to upload and submit their file(s). For additional information on how to submit assignments, view the <a href="Submitting An Assignment video tutorial">Submitting An Assignment video tutorial</a>.

It is the students' responsibility to check that they upload the correct version of their homework and that the file is readable. Unreadable files will lead to a zero grade. Incorrect or incomplete versions will be graded as such. Students are expected to retain proof of the successful upload (such as a screen shot of the eLearning submission page). Such evidence will need to be produced for a student to claim any technical failure of the eLearning website pertaining to the uploading of deliverables.

**Please Note:** Each assignment link will be deactivated after the assignment due time. After their submission is graded, students may go to My Grades on the course menu and click the score link to check the results and feedback.

#### **Group Project**

The course project is to be done in teams of 5 students. Each group can use the available group tools under its own group area in the course to communicate and collaborate within the group. A web conference system is available for use. Teams can schedule a live web conference for team work. Please see the Web Conferencing page for more information.

Each team is to pick a retailer (or online retailer) and perform an analysis which involves the following elements (unless they are not applicable for the chosen retailer):

- Overall presentation of the retailer: description of the products, brief company history, business model, financial performance, primary market analysis, main competitors, etc.
- A discussion of relevant aspects of inventory management for the retailer, e.g., inventory perishability or short life cycle (obsolescence), demand seasonality, quick response replenishment (see modules 2 and 3)
- A discussion of stock-outs and inventory availability (see module 4)
- A discussion of store execution problems such as inventory inaccuracy and misplaced items (see module 4)
- A discussion of assortment planning, i.e., depth vs breadth, customization, localization, etc. (see modules 5-7)
- A calculation of inventory turns and related metrics and interpretation of these values (see module 8)
- A discussion of the use of technology for managing store operations and for interactions with the customers (see module 9)
- A discussion of the internet channel, e.g., design of the website, level of customization, etc. (see module 10)
- A discussion of pricing practices, e.g., markdowns, dynamic pricing, coupons, etc. (see module 11)
- A discussion of "green" practices or sustainability-driven initiatives (see module 12)
- A discussion of expansion to or from emerging markets and the associated challenges (see module 12)

Not all the topics above need to be discussed in detail but at least one or two elements should be studied at length. Students are given a lot of freedom in designing the analysis to answer the question they have chosen to focus on. They can make use of empirical methods or analytical methods. The report can be purely descriptive or include a mathematical analysis. If the students use empirical methods, the data they use can be gathered though store visits, interviews with store employees, surveys, even experiments or it can be publicly available data (from the internet or financial reports). The final report should include a bibliography, which is a list of references including links to websites where data and information were gathered from. Ultimately it is up to the students to decide how ambitious they want to be with the project. As explained below, effort is an important component in the grading of the final report.

#### Deadlines and deliverables:

- By the end of week 3: students should register their team of 5 students using the Group Signup Sheet on eLearning, then send an email to the instructor with the composition of their team (first and last names of the students) and the retailer they have chosen to study. Within 2 days, they will receive confirmation from the instructor that their choice is accepted. Only one team can study a retailer and retailers who have been chosen by teams in the previous semester may not be chosen again. Confirmation will be given to teams on a first-come-first-serve basis. Students who are not in a team by the end of week 3 will be assigned a team by the instructor.
- By the end of week 10: A two-page progress report should be submitted as a PDF file via eLearning. In this report, the students should write about:
  - The retailer they have chosen;
  - The list of topics (from the list on the previous page) they have chosen to focus on;
  - The methodology they have chosen: data gathering in the stores, research on the internet, interviews, surveys, etc.
  - Their data collection process: how much data they have collected so far and how much more they plan on collecting;
  - A list of articles they have found which are relevant to the topics they focus on (either academic papers or news articles);
  - (Optional) A list of challenges faced so far. This may include concerns about the unequal distribution of work amongst team mates.
- By the end of week 14: A written report of at most 20 pages (not counting bibliography and appendices) should be submitted as a PDF file via eLearning. The length requirement on the project is intentionally kept fairly loose (there is no requirement on the number of words, spacing or page margins). Students are to be the own judges of what is a good length for their report and they are not to add extra "fluff" just to make it to the maximum number of pages.
- By the end of week 14: students should submit the peer evaluation form, where they
  evaluate each team member, including themselves, on the following dimensions:
  participation in team events, workload, quality of work and team interaction skills.
   Failure to submit the peer evaluation form will cost the student 5 points out of 100 on
  the course project.

The breakdown of the grade for the course project (out of 100) is as follows:

- 10 points: progress report

- 90 points: final report

The grade on the progress report will be mostly based on effort. The grade on the final report will be based on effort/ambition (50%), execution (30%) and clarity/format (20%). The effort/ambition dimension is to some extent a relative one: the teams who submit a more indepth, ambitious project will ultimately receive the highest scores. Students within the same team may receive a different grade due to the peer evaluation process. Any concern about the lack of involvement in the project of one of the team members should be brought up to the instructor as early as possible (via email).

One group member will submit the progress report and final report for the group and all group members will be able to view the results and feedback once it has been graded. Both files should be submitted in PDF format.

All students should individually submit the peer evaluation form as a word or PDF file.

#### Participation/Discussions

There is no discussion forum requirements for this course but a public discussion forum will be created where students can exchange ideas which are relevant to the course. Students can also ask clarification questions about the homework assignments, to which other students as well as the instructor and TA can answer. However students are asked not to post specific answers to assignments questions on the discussion board.

# Online quizzes

There will be 13 graded quizzes, numbered 0 to 12. Graded quiz 0 is about the syllabus. Grades quizzes 1 to 12 are based on the course modules (quiz 1 is based on module 1, quiz 2 on module 2, etc.). All quizzes contain 10 true or false questions which are based on the course material (or the syllabus for quiz 0).

When computing the average grade on quizzes, the two lowest grades will be dropped. In other words, a student's final score on graded quizzes will be the average of his or her best 11 scores (with each quiz having equal weight). However students are strongly encouraged to answer all 13 quizzes as they are designed to ensure that the course material was well understood. Students can access the quizzes by clicking the quiz link on the designated page. Please read the on-screen instructions carefully before clicking "Begin". The questions will be displayed one at a time and students have only one opportunity to submit their answers. Each quiz is timed and the maximum allotted time is 15 minutes. Upon completion of the quiz, students will be notified of their score (out of 10) but detailed feedback on which answer was correct and which was not will only be provided immediately after the due time. Each quiz link will be deactivated after the quiz due time. After the quiz due time, students can go to My Grades page, click the quiz and the score link of the quiz to view their graded submission.

# Examinations

Exam I will cover the materials from modules 1-7. Exam II will cover the materials from modules 8-12. In other words, exam II is not cumulative. The total exam time will be 2 hours and 30 minutes for exam I and 2 hours for exam II.

This course requires proctored examinations. Local students can now take their exams on-campus at the UTD Student Success Center - Testing Center (no fee charge). There are fixed windows of time during which students can <u>start</u> taking the exam:

- Exam I: Friday October 14 8:30am-6:15pm CST and Saturday October 15 9:00am-10:15am CST.
- Exam II: Friday December 9 8:30am-6:45pm CST and Saturday December 10 9:00am-10:45am CST.

Please see the <u>UTD Student Success Center - Testing Center Website</u> for more information and check the hours of operation and testing center policies. Please be sure to view and follow the Test Center Student Guidelines found on the Testing Center main web page. Students are required to make an appointment using the **RESERVE-A-SEAT application** (at

http://registerblast.com/utdallas/exam) to take the exam during the required exam test windows as specified above.

Students who find UTD geographically inconvenient may use a testing service of their choice at a convenient location to have the exam proctored. All exams must be completed within the above mentioned time windows. All students must inform the instructor of their outside testing location. A proctored exam application must be completed at least two weeks before the start of the exam time window. Please go to the <a href="Proctored Exam Information">Proctored Exam Information</a> page to check out Procedures for Arranging an Individual Proctored Exam and to access and complete the **Online Proctored Exam application**. Please note students are responsible for any fee charge of their testing services.

The UTD Testing Center requests all students strictly follow the proctored exam scheduling deadlines. If any student needs special accommodations, please seek the instructor's approval in advance. If you have any questions about using either UTD or outside testing center service, please email TestingCenter@utdallas.edu.

Students are to take the exam individually and <u>are not to communicate with anyone</u> while taking the exams. The exams are open book and open notes: students can also use any material or equipment they wish (calculator, laptop or tablet) as long as they do not communicate with other people. Any concern regarding the grading of exams should be addressed directly to the instructor, no later than two weeks after the grade was posted on eLearning.

Students can access the exams by clicking the exam link on the designated page. Please read the on-screen instructions carefully before clicking "Begin". After each exam is graded and released, students may go to My Grades page, click the exam and the score link of the exam to view their graded submission.

#### Bonus points

Students who are the first person to notice a significant mistake in the course material (slides, assignments, quizzes, practice problems, practice exams etc.) will be awarded a bonus point. Each bonus point is worth 0.1% of their final grade. Note that spelling or English mistakes are not significant errors.

#### **Course Policies**

#### Makeup Exams

Offering a make-up exam for a missed exam is entirely at the discretion of the instructor. Students with legitimate reasons and letters of proof can request to take make-up exams.

#### Extra Credit

Extra credit work will not be given under any circumstance.

## Special Assignments

Special assignments will not be given under any circumstance.

#### Late Work

No late homework assignments or quizzes will be accepted under any circumstance. It is the students' responsibility to verify that their answers to the assignments and quizzes have been uploaded correctly into eLearning and retain proof of the successful upload (such as a screen shot of the eLearning page). Such evidence will need to be produced for a student to claim any technical failure of the eLearning website pertaining to the uploading of deliverables.

#### Virtual Classroom Citizenship

The same guidelines that apply to traditional classes should be observed in the virtual classroom environment. Please use proper etiquette when interacting with class members and the professor.

#### **Comet Creed**

This creed was voted on by the UT Dallas student body in 2014. It is a standard that Comets choose to live by and encourage others to do the same:

"As a Comet, I pledge honesty, integrity, and service in all that I do."

# **UT Dallas Syllabus Policies and Procedures**

The information contained in the following link constitutes the University's policies and procedures segment of the course syllabus.

Please go to <a href="http://go.utdallas.edu/syllabus-policies">http://go.utdallas.edu/syllabus-policies</a> for these policies.

The descriptions and timelines contained in this syllabus are subject to change at the discretion of the Professor.