

Syllabus - MEM 490 Product Management

Adjunct Professor: Birju Shah

Project Based Class adopted from PM101 taught at HBS & MIT

Fall 2017

Enrollment: Limited to 45

Schools Eligible: MEM, Undergrad Seniors in IE & Comp Sci., Kellogg, Students currently in Garage

Class Session: Fridays, Weekly 1PM - 4PM with working time included in class session

Location: [McCormick Education Center, Krebs Classroom](#)

Office Hours: by appointment & located in Chicago

Application process: No application required.

Course Website:

<https://www.mccormick.northwestern.edu/engineering-management/curriculum/descriptions/490a.html>

Join our slack channel, post your idea:

https://join.slack.com/t/mem490/shared_invite/MjE5NTk3OTM2NjYyLTE0OTk4NzIxMDMtNzdhM2YzNWZkOQ

Why is this class necessary? Read:

<http://www.mckinsey.com/industries/high-tech/our-insights/product-managers-for-the-digital-world>

Overview and Career Focus

Product Management is a project-based course that focuses on action learning and a build your own case approach to teach foundational product management skills. The class goals are simple:: 1) Learn how to launch a product 2) Learn how to obtain a top notch product management job in tech.

Students evaluate user needs, specify functional requirements, and identify business go to market strategies for a new web or mobile application. Students attend weekly sessions featuring skill-building exercises led by outside experts and peer-to-peer feedback on project work-in-progress. Students should get used to defending their idea, execution, designs, go-to-market to their peers as they will present frequently in class.

Product Management is designed as a 101 course for students who lack prior product management experience and who either wish to work in that role after graduation in a tech company, in a startup, or for aspiring founders who want to gain a better understanding of the product development process.

Students enrolled or wanting to enroll in any NUvention class will find the MEM Product Management class will teach you the tools, process, and will power to build a scalable product; however, does not replace NUvention which will teach you everything you need to know to launch a business (different than product!). Although this class teaches content that is heavily focused on web and mobile applications, this should not discourage other individuals interested in building other products/services.

What is Product Management?

Product Managers (PMs) can have a big impact on a technology company's performance. PMs define a product's functional requirements and then lead a team responsible for its development, launch, and ongoing improvement. *MEM Product Management* aims to build understanding of the PM role and develop skills required to perform the role by addressing the following issues:

- What is a PM? Why are they necessary in Companies, Start-ups? Are they a mini-CEO?

- What does a PM do and with whom do they work at different stages of the product life cycle? What are the attributes of successful PMs?
- What techniques do PMs use to understand customer needs and validate demand for a product?
- What does a PM need to know about user experience design?
- Why do some tech companies require PMs to write detailed product specifications while others do not?
- What is the difference between waterfall and agile software development methods, and when/why would one choose one over the other?
- What does a PM need to know about technology, e.g., model-view-controller architecture, APIs, databases?
- How do you develop an actionable Profit and Loss statement for your product (NOT A BUSINESS CASE!)?

Course Deliverables & Evaluation

Working mostly in teams of three or four, students will deliver five major end-products during the term:

- 1) Plan for researching user needs for their proposed application
- 2) Market Requirements Document (MRD)
- 3) Wireframes for their proposed application
- 4) Product Requirements Document (PRD), with detailed specifications & a mock P&L
- 5) Reflection essay on lessons learned from the course
- 6) Final early stage product vision presentation.

There will be weekly readings (most commonly, blog format) and small assignments due in each session. Students will regularly present work-in-progress in class, and will be asked to provide written & verbal feedback on other teams' work.

Teaching Method: Classes will be a mix of lecture, workshops, peer-to-peer presentations, hands on doing, and guest visitors. The concepts will be reinforced with additional readings and homework assignments.

Prerequisites: You will need a strong idea, strong will power, and propensity/drive/passion to execute a web, mobile, or hardware oriented product. The goal is for you to understand your customers, your product, and how to launch and scale. Marketing & Business classes are good prerequisites. A follow-on class can be NUvention.

Evaluation: Grades will be based on the five deliverables above (75%), a final presentation (15%), and class participation (10%).

Grading: Letter (ABCD/NP)

Student Participant Requirements

Ideal candidates will register for this class with a pre determined team of 2-3 other team members. These small teams will focus on specifying a product and if they continue the curriculum, learn to launch the product. All candidates for the class should strongly consider the workload of this class is to launch a business or a product, and to teach you the skillset required to be an effective/exceptional Product Manager in a tech company or startup. You can sign-up as an individual member

Please enroll with a diverse team (i.e. MBA, coding skills, hardcore science, etc..). If you are taking this class solo, be prepared for the workload and being a jack of all trades (CEO, CTO, CMO).

A project suited for Product Management will fit one of two profiles:

1. Your idea is at an early stage of development. You've done enough customer discovery work to have some confidence that you've identified a real customer pain point, and you have some hypotheses about potential solutions. However, these hypotheses haven't yet been tested and you don't have specifications/preliminary designs in hand.

2. You've already launched your website/application, and you are poised to either design a new version or to add significant new features. You have hypotheses about the new version/features, but you haven't tested the hypotheses nor have you completed specification and design work.

Candidates should be serious about taking their idea to execution.

Course Syllabus

Useful Course Documents

- [Readings](#) on product management -- blog posts, articles and books -- organized by topic
- [ProductHunt](#)
- [Sign-up & read 100PMs](#)
- [Research Plan Template](#)
- [MRD Template](#)
- [PRD Template](#)
- [Go-To-Market Plan Template](#)
- [Master Team Project Upload List](#)

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Session Number	Session Name	Session Description	Class Agenda	Date
1	Course Introduction	Introduction to Product Management, Examples of current web products Team selection and Product idea overviews	Course Overview What the end of class should look like?	9/22/2017
2	The MRD & Customer Discovery	How do you discover A) Who you are selling to? B) What problems your product solves for your user and C) iterate, test, measure, and make go/no-go decision on a product	Logistics Check Class Lecture MRD Team Working Session	9/29/2017
3	Design	Good design is aesthetic and functional. This class will teach the basics of design, how to match up user stories with good design, how to design and iterate from wireframes. We will have a top designer in chicago speak to the class	Logistics Check Defend your Personas Class Presentation - UX Design Speaker Team Working Sessions	10/6/2017
4	Customer Research	We will show how to interview, create user personas, and walk through a design sprint session with a user to get actionable feedback and develop the voice of the customer.	Defend your Wireframes Class Presentation - template Research Plan Walk Through Team Working Sessions	10/13/2017
5	Customer Interview Workshop & Tech Basics	Good tech PMs have to know about technology. They study, research, and work daily with their engineering counterparts. We will teach the minimum viable tech work you will need to know to have success as a PM. This class will also have a peer to peer interview session	Present your customer research Class Presentation - Template 2 Working session on MRDs In Class Interviews by Team	10/20/2017
6	The PRD & Agile Software Development	The most important doc you can create for your engineers, marketers, comms, PR,	MRD WORKING SESSION AGILE Class Presentation	10/27/2017

		sales, and other product folks. The product requirements doc. We will walk through examples in detail and showcase the necessity of building a great PRD.	Example PRD Walk Through MRD Presentations & Feedback	
7	Usability Testing	No product is excellent in the first attempt. Most companies that fail believe they can pull a Steve Jobs and launch one excellent product. What they do not realize is Steve Jobs was a gigantic fan of usability testing. Testing every minor feature, enhancement, UI in order to "get it right".	No Class: Students should use week to finalize MRD, mocks, and conduct usability testing	11/3/2017(Class Cancelled)
8	Design Critiques	Each team will present their designs & MRD. Start off with an example of a dating application.	Sundr user scenarios Working Sessions PRD WORKING SESSIONS SEND MOCK CASE STUDIES & SUBMISSIONS	11/10/2017
9	PM Careers (interview wkshop)	Panel of PMs at various levels. Students come prepared to ask questions.	Panelists Mock Product Interviews Wildcat Tank:: Pitch your product	11/17/2017
10	Hiring Developers	Most important job you will have is to have a good engineering team. We will bring in some engineers that will discuss what it takes to be a good PM.	Tech Panelist PRD Working Session Role Play Interviews	12/1/2017
11	Product Evolution	Your first product is usually the worst product. Your customer also expects changes. You also want to charge more for your product each year. We will bring an expert in that will talk about how he/she has evolved a product in the mass market over time Final Student Projects & Reflections	Final Student Presentations Group Reflection/Lessons Learned Go to Market Presentation - Launch Your Idea PM 102 Presentation	12/8/2017
	Reflections	Please post your essay to Canvas (No In-Class Session on Reflection)	Student Essay Submission	12/8/2017

Course Assignments

For each class: read the Required Readings and preferably the Recommended Readings.

Refer to the MEM 490: Product Management - Course Plan” for details.

Before the first class:

- Think of an idea you want to execute. Prepare a 90 second pitch to present on Class 1.
- Ideally teams have to be formed via slack before the first class.

Assignments	Due Date
Individual: Develop a list of the attributes of excellent software products & Sketch your improvement ideas.	September 19, 2017
Individual: Review MRD & prepare questions for class Read PRD & prepare questions for class MVP test description for the Beauty on Demand team. Prepare your customer research plan & statements	September 26, 2017
Individual: One primary persona Top three questions, with the EXACT wording that you'd use Customer Research Due	October 5, 2017
Team: 1-2 user stories for your primary persona Sketches for ideas Wireframes - static and interactive Content Model Mood Board	October 10, 2017
Team: Presentation 1. (as described under class 4 assignment)	October 19, 2017
Team: MVC 1-Pager	October 25, 2017
Team: MRD	October 30, 2017
Team: Final Wireframe Individual: Review the PRD template and bring to class any questions you have about the PRD.	November 1, 2017
Team: UI Design Presentation Review the PRD template and bring to class any questions you have about the PRD.	November 15, 2017
Team: PRD	December 1, 2017

Team: Product Manager Job Description	December 6, 2017
Team: Vision Presentation (Final Presentation)	December 7, 2017
Individual: Reflection	December 8, 2017

Deliverable Examples & Expectations

Deliverable	Example
What type of PM are you?	http://www.svpg.com/assets/Files/productmanager.pdf
Vision Statement	Beauty on Demand
Build your Persona & Mocks Exercise	https://www.slideshare.net/jwex1000/harvardxdesign-defining-your-product-vision
MRD	Dating App InstaGoGo
PRD	WesTrek TicketSwap
Product Vision Presentation	In Class Sample Presentation

Class by Class Syllabus [Here](#):