INFO 6215: BUSINESS ANALYSIS & INFORMATION ENGINEERING

SOFTWARE PRODUCT MANAGEMENT

FALL 2024

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Class time:	Tuesday, 5:30 – 8:30 pm
Office Hours:	Virtual upon request; TA will host assistance hours

Course Description

This is a project-based course that uses a "learn-by-doing" approach to build product management skills for a software system. Assuming a role as a software product development lifecycle manager, students will perform market research, construct business analysis, evaluate system requirements, determine the specific feature functionality, and design the feature compatible with the whole system. This course teaches a balanced approach to software systems engineering, applying both top-down and bottom-up development approaches. It is designed for students who are interested in a product manager's role but have no prior experience.

Course Learning Objectives

Product managers can have a tremendous 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. Upon successful completion of this course, students will build an understanding of the PM role and develop skills required to perform the role:

- Product Management vs Project Management
- Attributes of a Software Product Manager
- Software Product Management Lifecycle
- Software development methodologies
- Understanding market needs, customer demands, and competitive landscape
- Managing system requirements and feature functionalities
- System of Systems integration and interfaces

- Software architecting and design elements
- User Experience (UX) design considerations
- Product Roadmap
- Pilots, Proof of Concept, and Minimum Viable Product (MVP)
- Go-To-Market and Product Launch
- Deployment and Software Release Lifecycle
- Maintenance and upgrades

Reference Materials

Speaker Videos: As assigned in slides.
Case Studies: As assigned in class.
BOOK: Inspired: How to Create Tech Products Customers Love by Marty Cagan
BOOK: Start at the End: How to Build Products That Create Change by Matt Wallaert
BOOK: Escaping the Build Trap: How Effective Product Management Creates Real Value by Melissa Perri
BOOK: The Lean Product Playbook by Dan Olsen

Grading

Participation + Discussion:	14%	(14 classes, 1% each)
Homework Assignments:	50%	(10 Assignments, 5% each)
Final Presentation:	30%	(Qualitatively Graded)
Peer Review:	5%	(Based on teammates' evaluation of contribution in class project)
Class Evaluation:	1%	(Submit a review for the class, professor, syllabus, course content, etc.)

Team Project will be graded subjectively on the project quality and learning shown by all the team members during the final presentation. Peer evaluation will also be considered for all team members to rate team participation.

Evaluation Standards

A	95 – 100%	B	84 – 86.9%	C	74 – 76.9%
A-	90 – 94.9%	B-	80 – 83.9%	C-	70 – 73.9%
B+	87 – 89.9%	C+	77 – 79.9%	F	69.9% & below

Final Percentage will be rounded up. For e.g., 83.96% will be considered as 84% and get a B grade, or 89.92% will be considered as 89.9% and get a B+ grade.

Late Work Policy

Late submission of assignments after deadlines will receive credit deductions. The assignment grade is lowered by 1% for one-day delay and 2% after that. No submissions accepted beyond one week after the due date.

Academic Integrity

All work done for this course that is either written or presented orally is expected and assumed to be the original work of the student. Any material handed in that is copied/pasted from any source whatsoever (including but not limited to books, magazines, and internet sites) and not properly cited will be considered plagiarized. This practice is expressly prohibited, and any student found to have turned in such material will receive an automatic F for this course. No opportunity will be given to any student to re-do any such work.

Class Attendance & Participation

It is important for students to take part in this class by reading the assigned material and coming to class prepared to discuss it. Class attendance is critical for a robust learning experience and is required aside from irrevocable circumstances like sickness or work emergencies. If you are not able to attend a particular class session, please email me in advance. Please note that you are responsible for catching up with the class in your absence; please work with the TA to address any material you may have missed.

Note: The dynamics of class discussions create significant value for the course, and it is essential for all students to actively participate in these discussions. This will be positively noted by the professor and will be considered as "extra credit" that could influence your final grade positively.

Professionalism

- It is essential that students are respectful and engaged in class content. During class discussions, be willing to speak up and support your point of view, and—at the same time—be willing to hear what others have to say, even when their view differs from yours. It is important to keep a discussion focused on the topic at hand.
- Please use technology minimally during class. The use of technology other than as necessary for the class is disruptive for you, your classmates, and the instructor. One way to get participation grades is to pay attention and stay focused.
- The grade for this course is determined by how well you do on the team project. Everyone on the team should be working together to get the job done. This includes being there for one another when it is necessary, as well as dedicating time to working together either face-to-face or online. Make sure that each person on the team contributes in a meaningful way, so that everyone has an equal say in decision making, and everyone gets a fair share of the work.

Syllabus

The syllabus provides an overview of the course and its expectations. **Please note** the syllabus is subject to change.

Class	Date	Topic	Discussion Points	In-Class Exercises	Assignment
1	9/10/2024	Introduction	• Role of Product Manager • Product Management vs. Project Management • Software vs. Hardware Product Management	Icebreaker & Introduction	ASSN#1: Project Topic Selection Research and select an IT/IS Product Dev Project for the coursework
2	9/17/2024	Software Product Management	• Software Product Development Lifecycle • Software Development Methodologies	Project Topic Discussion	
3	9/24/2024	Business Analysis	• Product Vision • Customer Insights • Addressable Market • Product Demand	EX1: Product Vision Statement	ASSN#2: Value Proposition Canvas
4	10/01/2024	Business Analysis	• Competitive Analysis • Product Strategy	EX2: Product Comparison	ASSN#3: Product Strategy
5	10/08/2024	Business Analysis	• Business Case • Product pricing	EX3: Product Pricing Estimate	
6	10/15/2024	Product Planning	• OKRs • Product Roadmap	EX4: OKRs	ASSN#4: Product Roadmap
7	10/22/2024	Product Planning	• Requirements Gathering • Feature backlog & prioritization	EX5: Customer Journey Mapping	ASSN#5: Feature Mapping & Prioritization
8	10/29/2024	Product Design	• System architecture • Design cycle • Design Sprint	EX6: Design Sprint	ASSN#6: User Personas

9	11/05/2024	Product Design	• UI/UX considerations • Language, stack, platform, security measures	EX7: User Flow / Storyboard	ASSN#7: Design Sprint & Wire Flow Diagram
10	11/12/2024	Product Development	• Team Oversight • Data-driven development • Software development plan	EX8: MVP Backlog	ASSN#8: Sprint Planning
11	11/19/2024	Test & Validation	• Proof of Concept & MVP • Proof of Value • Service Validation • Quality Assurance	EX9: Test Cases	ASSN#9: Acceptance Criteria
12	11/26/2024	Launch & Deployment	• Launch Considerations • Product-Led Growth • Early Adopters • Go-To-Market	EX10: Marketing Campaign	ASSN#10: Product Launch Checklist
13	12/03/2024	Operations & Maintenance	• Customer Success Metrics • Enhancements & bug fixes • Market expansion and adjacencies	EX11: North Star Metric	Final Presentation Submission
14	12/10/2024	Presentations	• Team Presentations		