



SCHOOL OF PRODUCT MANAGEMENT

Product Manager

Syllabus



BEFORE YOU START

Overview:

This Nanodegree program teaches the foundational skills all product managers use in leading the development of software products, whether they are mobile apps, desktop apps, or web platforms for consumers or enterprises. It is ideal for beginners who want to start a career in product management and set themselves up to land a job and be successful starting day 1.

Learning Objectives

A GRADUATE OF THIS PROGRAM WILL BE ABLE TO:

- ✓ Define product strategy and KPIs based on market analysis.
- ✓ Design a user-centered prototype that adheres to engineering constraints.
- ✓ Take a product through the development process, with a focus on high quality, risk management, and communication.
- ✓ Communicate a product roadmap that builds consensus amongst internal stakeholders and create a comprehensive go-to-market plan.
- ✓ Build tests to enhance product features based on market data.

Prerequisites

A well-prepared learner should have basic computer skills, such as managing files, using third-party online programs, and navigating the internet through an online browser. Learners must also have:

- ✓ General understanding of the product development lifecycle (Product Development Cycle)
- ✓ Familiarity with different roles required to build a product (Product Management Basics)
- ✓ Familiarity with Google Workspace or similar software for building slides (Professional Presentations)



LENGTH OF PROGRAM*:
4 months at 10hrs/week*



SKILL LEVEL:
Beginner



REQUIRED HARDWARE/SOFTWARE

Learners need access to the internet and a computer running a 64-bit operating system with at least 8GB of RAM. Learners also need access to spreadsheet, slide editing, and word processing software (i.e., Google Docs, Microsoft Office, OpenOffice, etc.).

*The length of this program is an estimation of total hours the average student may take to complete all required coursework, including lecture and project time. If you spend about 5-10 hours per week working through the program, you should finish within the time provided. Actual hours may vary.

Course #1: Product Strategy for Product Managers

The most effective products start with a comprehensive market-based, insight-driven strategy. Understand the role that product managers play during product development, with a focus on activities that happen early in the product development cycle. Learn how to identify the right problems to solve through market research, target user definition, and market sizing. Create a compelling vision and strategy that will set up the team to solve those problems. Understand how to communicate effectively to get people excited about and interested in ideas.



COURSE PROJECT

Pitch a Product Vision

The inception of any product that gets built starts with a vision and a product manager that rallies stakeholders behind that vision. In this project, learners will choose to act as a product manager for one of four top technology companies and develop a compelling pitch for the development of a new product. Learners will be provided a business scenario relevant to each of the four companies and based on the provided business scenario of the company they choose, they will perform primary and secondary market research to identify target users and size the market opportunity for a new product. Then, learners will compile their analysis into a pitch deck and present the vision of their product to business stakeholders.

Course #1: Product Strategy for Product Managers



Lessons

#01 - INTRODUCTION TO PRODUCT MANAGEMENT

- Understand what product management involves.
- Describe why product management is important.
- Understand the history and evolution of product management.

#02 - THE ROLE OF A PRODUCT MANAGER

- Understand the purpose of the product manager role in an organization.
- Understand what a product manager does during the different stages of the product development cycle.
- Identify key cross-functional partners and customize communications based on understanding of their key priorities.
- Describe various customer discovery techniques for gathering requirements.
- Learn how to complete each component of a product requirements document (PRD), including documenting requirements.

#03 - PROBLEM IDENTIFICATION

- Learn how to identify problems that are worthwhile to solve.
- Understand the market through qualitative and quantitative research methods.
- Identify the target user and build user personas based on synthesis of research.
- Calculate the total addressable market (TAM) for the product.
- Calculate the return on investment (ROI) for solving a problem.
- Define hypotheses about the product that need to be validated.
- Test hypotheses by putting them in front of users.
- Understand the components required to build a business case.

#04 - VISION & STRATEGY

- Define and craft compelling vision for a new product.
- Identify strategic areas to invest in based on organizational goals and competitive analysis.
- Build a Business Model Canvas for a product opportunity.
- Understand the importance of defining a minimum viable product (MVP).
- Define key performance indicators (KPIs) that align product strategy to organizational goals.

#05 - COMMUNICATION SKILLS

- Understand the importance and various methods to practice active listening.
- Learn how to craft and deliver compelling stories.
- Apply persuasion and negotiation when communicating to business stakeholders.
- Learn how to structure and deliver strong presentations.

#06 - PROJECT: PITCH A PRODUCT VISION

- Develop and deliver a market-based, insight-driven pitch for a new product that is targeted to executive stakeholders.

Course #2: Product Design

Once the problem has been defined and a market opportunity has been identified, it is important to create a solution that is desirable by its users. Bring an idea through concept, design, and user validation, as well as create a spec to hand off to engineering for development. Use design thinking methodologies to diverge in order to explore ideas, and then ultimately focus in and converge on a single idea. Map out the full concept through creation of a prototype that can be used to validate that learners are solving a problem for real users.



RUN A DESIGN SPRINT

Pitch a Product Vision

The most desirable products have been built iteratively with the user in mind. In this project, learners will take a problem/opportunity (using work from the previous course) through a design sprint. During the design sprint, learners will explore multiple ideas, narrow down ideas to the most compelling one, create a storyboard and prototype, conduct user research, refine their ideas, and incorporate findings into a final product spec.

Course #2: Product Design



Lessons

#01 - INTRO TO DESIGN SPRINT

- Describe the purpose and process of a design sprint.
- Identify good candidates for a design sprint.
- Learn how to plan and involve necessary stakeholders in a design sprint.
- Differentiate between the responsibilities of the product manager and designer roles.

#02 - UNDERSTAND

- Describe the Understand phase of the design sprint.
- Describe how lightning talks, interviews, and competitive analysis can be used as an input during the Understand phase.
- Use the “How Might We” method to identify opportunities.
- Utilize the “rose/bud/thorn” method to classify things as positive, negative, or opportunities.
- Apply affinity mapping to identify thematic insights.

#03 - DEFINE

- Describe the Define phase of the design sprint.
- Define success metrics using the HEART framework.
- Explain the difference between goals, signals, and metrics.
- Craft design principles.
- Write a future press release.

#04 - SKETCH

- Describe the Sketch phase of the design sprint.
- Use the Crazy 8s method to brainstorm ideas through sketching.
- Facilitate a process for sharing and voting on sketches within the team.
- Create a more detailed, in-depth solution sketch that contains at least 3 frames.

#05 - DECIDE

- Describe the Decide phase of the design sprint.
- Identify assumptions behind ideas and formulate questions about them.
- Create a decision matrix to narrow down ideas to those worth pursuing.
- Represent perspectives from a wider audience using Thinking Hats.

#06 - PROTOTYPE

- Describe the Prototype phase of the design sprint.
- Create a storyboard to map out a plan for your prototype.
- Learn how to utilize different types of prototyping.
- Create a high-fidelity, interactive prototype.
- Apply best practices for creating prototypes.

#07 - VALIDATE

- Describe the Validate phase of the design sprint.
- Create plans and data collection processes for a user study.
- Run a user study and interview users.
- Conduct a feasibility discussion with an engineer.

#08 - NEXT STEPS

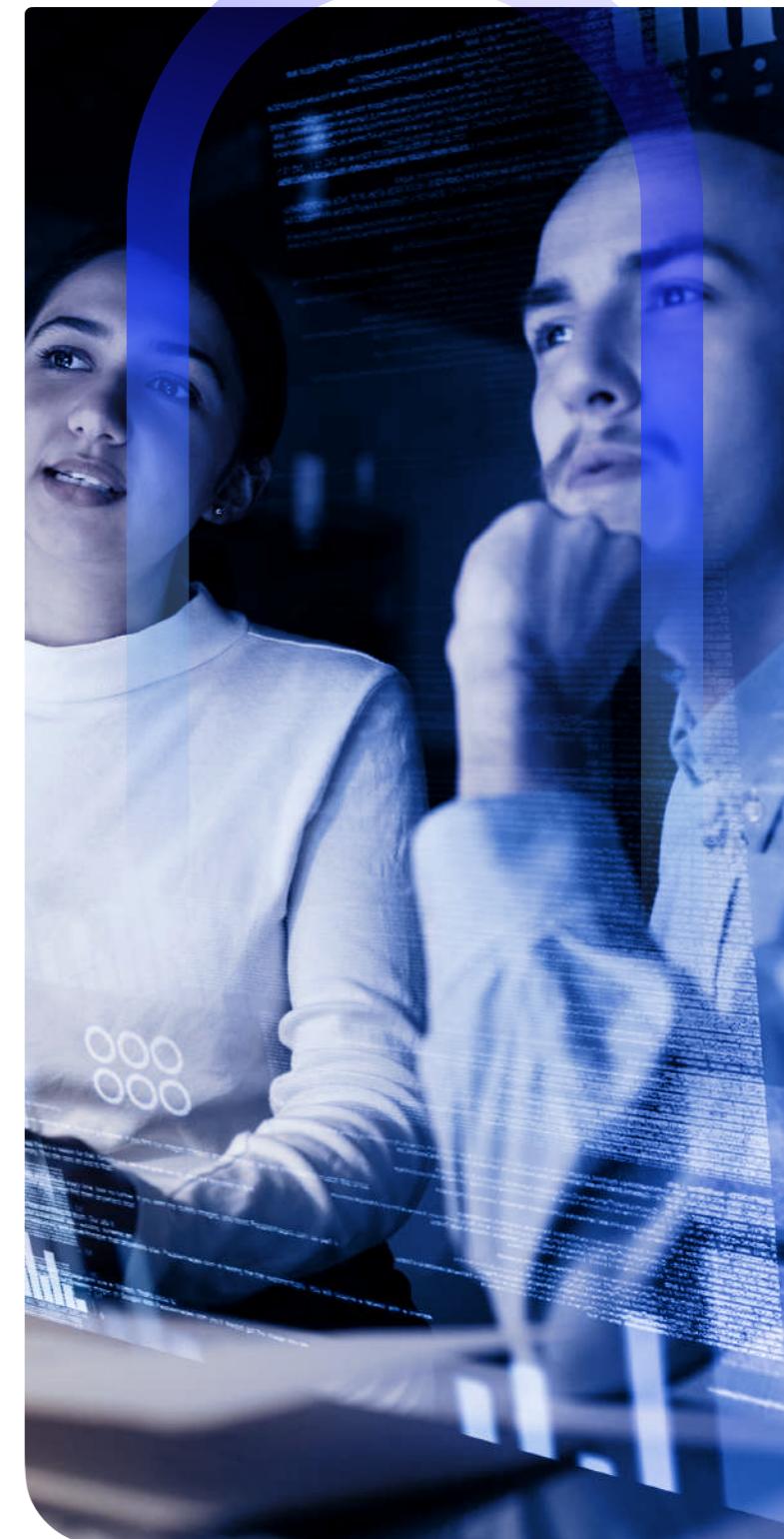
- Describe benefits of iteration and identify when iteration is appropriate.
- Evangelize the idea across cross-functional development teams.
- Create documentation for the engineering team.

#09 - RUN A DESIGN SPRINT

- Take a problem through a design sprint to develop a concept, create a prototype, bring the concept through user testing, and then prepare to hand off the concept to the engineering team.

Course #3: Product Development

Product managers are involved throughout the product development lifecycle. Once a product has been designed, the next step is to build it. This course introduces product development, with a focus on the role a product manager plays and key activities that occur during development, including the lifecycle of a code change, test plan creation, early feedback intake, effective prioritization of issues, and go/no go launch meetings. In addition, learners who complete this course will be equipped with the necessary soft skills to influence without authority, negotiate, and collaborate effectively with geographically distributed teams.



COURSE PROJECT

Manage Product Development

During product development, the role of the product manager is to keep the team unblocked and moving, while identifying and minimizing/mitigating risk. For this project, learners will identify risks/bugs/issues by creating a test plan and getting early feedback on their product from dogfooders. They will then take that feedback and prioritize it to make sure the team delivers a high-quality product. Finally, they will run a go/no go launch meeting to decide whether or not they should launch the product in its current state. Throughout the entire process, they will need to communicate to a variety of different audiences/stakeholders.



Lessons

#01 - INFLUENCING WITHOUT AUTHORITY

- Build credibility.
- Build trust.
- Influence without authority.
- Negotiate and say no when appropriate.

#03 - IMAGE TO IMAGE TRANSLATION

- Describe different development methodologies.
- Implement best practices for collaboration and project management.
- Describe code writing, review, and submission process.
- Work effectively with geographically distributed teams.

#04 - MODERN GANS

- Write test plans.
- Run a dogfood program.
- Apply a prioritization framework.
- Run a go/no go launch meeting.

Course #4: Product Launch

Once a need has been defined and a product has been designed and developed, it is time to bring that product to the market. Learn all about the launch process and the important partners a product manager will need to work with during this phase. Create a plan, identify the launch risks, and figure out how to minimize their impact on the launch. Collaborate with marketing stakeholders to determine how to target customers and develop a compelling message to increase engagement with the product. Work with sales, customer support, and the other teams to prepare them to interface with customers as the product is launched. Execute the launch and use feedback from customers to determine the next steps for the product.

COURSE PROJECT

Deliver a Product to Market

A product finally realizes its impact once it is delivered to customers. In this project, learners will take the product they have developed in the earlier courses and bring it to market. First, learners will create a pre-launch process, including identification of launch risks and mitigations, to enable launch. Then, they will develop a marketing and pricing strategy to communicate the value proposition of their product to customers. Then, learners will write a user guide and other create other communications collateral to prepare the sales and customer support teams to evangelize the product. Finally, learners will use customer feedback to design an A/B test for a new product feature.



Lessons

#01 - SET UP THE PROCESS

- Develop a step-by-step product launch process.
- Understand the importance of scaling.
- Create a scaling plan.
- Identify risks in a product launch and create a plan to mitigate them.

#02 - MARKETING STRATEGY

- Understand the roles of the product manager and product marketing manager and how they collaborate with each other.
- Research competitors to formulate product positioning.
- Learn how to collaborate with marketing to develop a marketing message, acquisition channel strategy and a pricing strategy for a product.

#03 - PREPARE YOUR PARTNER TEAMS FOR LAUNCH

- Understand the other teams and stakeholders that need to be brought into the process as it gets closer to product launch.
- Prepare sales and customer support with appropriate communications collateral for a product launch.
- Create a user guide to educate users.

#04 - LAUNCH & POST-LAUNCH FEEDBACK

- Develop a product rollout timeline.
- Learn how to execute the launch of a product to include announcement to internal stakeholders.
- Use customer feedback to determine priorities for the next iteration of a product.
- Create an A/B test to test a new feature for a product.

Meet your instructors

**Anastasia Root****PRODUCT MANAGER AT GOOGLE**

Anastasia is a growth product manager at Google, leading growth for the Google iOS Search app. Prior to Google, Anastasia has worked on products in real estate, fintech, dating, navigation, and enterprise software.

**Alex King****PRODUCT MANAGER AT GOOGLE**

Alex King is a product manager at Google, where he works on Pixel Camera. He previously worked on setup experiences for smart home devices like Google Wifi, Google Home, and Chromecast. He formerly worked at Uber where he led rider experience for JUMP Bikes and Scooters. He graduated from the University of Washington.



Learn More at

WWW.UDACITY.COM