

Digital Health

Syllabus

Digital technologies hold great potential for enhancing health care, in terms of empowering patients, improving access and equity, and delivering better health outcomes. Yet health care’s digital transformation lags behind that of other industries. This course, Digital Health, aims to help learners unlock digital health’s potential to improve health care by providing a framework to enable learners to think strategically about digital solutions, develop and deploy them in health care’s unique culture and ecosystem, and navigate the sometimes competing needs of health care’s multiple stakeholders.

Introduction		<ul style="list-style-type: none"> • Explore the potential benefits and risks for digital solutions in health care • Understand systemic barriers to technology innovation in health care • Introduce key stakeholders for digital solutions 	
Modules	Case Studies	Takeaways	Key Exercises
Module 1 Patient Perspective	Patient-facing solutions: Omada Health	<ul style="list-style-type: none"> • Apply a design imperative that focuses on unmet medical needs and patient experience, more than the technology • Understand the patient perspective on the value of a digital solution • Explore how implementation of a digital solution contributes to user experience and outcomes • Navigate the potential of digital solutions to improve access but also create new barriers to care 	<ul style="list-style-type: none"> • Identify barriers to care in simulated clinical interaction, and opportunities for digital solutions to mitigate these • Take a patient-centric view of unmet medical needs, key metrics and outcomes for a digital solution • Consider barriers to patient success with a digital solution. • Evaluate how well competing fictional start-ups address the themes of this module
Module 2 Physician and Enterprise Perspective	Enterprise AI solutions: Google Health	<ul style="list-style-type: none"> • Understand the physician perspective on patient-facing digital solutions • Appreciate the unique aspects of designing and implementing enterprise digital solutions (e.g., for health systems) • Understand key concepts in the development pipeline for AI algorithms • Explore data stewardship and trust beyond existing regulations like HIPAA • Appreciate the importance of integrating digital solutions into human and clinical workflows 	<ul style="list-style-type: none"> • Explore the competing needs of stakeholders for an enterprise digital solution • Consider physician needs and apprehensions about digital solutions • Evaluate the robustness and potential weaknesses of an AI development pipeline • Proactively anticipate how bias can arise in development and deployment of AI algorithms • Evaluate how well competing fictional start-ups address the themes of this module

Modules	Case Studies	Takeaways	Key Exercises
Module 3 Business Perspective	Solving needs for patients and drug discovery: Evidation Health	<ul style="list-style-type: none"> • Understand emerging business models and care platforms in digital health • Understand the relative advantages of B2C vs B2B business models for patient facing solutions • Explore how real-world digital health companies are evolving their capabilities and business models, including patient care and value-based care • Explore the potential for software as a medical device (SaMD) and its regulatory approval pathways • Navigate health care specific considerations such as regulatory approval, payment systems, and selling to the enterprise 	<ul style="list-style-type: none"> • Compare the strengths and weaknesses of different digital business models • Differentiate the capabilities of different digital care management platforms • Consider the regulatory implications of different kinds of digital health solutions • Reflect on obstacles to successful pilots with care delivery organizations • Evaluate how well competing fictional start-ups address the themes of this module
Module 4 System Perspective	Digital solutions in the future of health care: Walmart Health	<ul style="list-style-type: none"> • Explore the multidisciplinary trends shaping the future of health care • “Look over the horizon” and anticipate how digital solutions will shape new ways of delivering health care in the future • Understand the importance of data interoperability in enabling a digital future for health care • Understand the potential roles of new entrants in health care (e.g., tech, consumer retail) in the future of care delivery and health care • Appreciate how health care transformation will involve digital tools but also interconnected changes across the ecosystem 	<ul style="list-style-type: none"> • Compare health care to other sectors of the economy that are more digitally mature, as a view into the future • Understand the usefulness but also limitations of the “patients as consumers” analogy • Anticipate changes to the patient experience, culture of health care, and other stakeholder perspectives in a digitally-enabled future of health care • Describe the challenges of data coordination and interoperability • Evaluate the equity impact of a digital tool • Decide which fictional start-up you choose to back based on your integrative evaluation

Learning requirements: To earn a Certificate of Completion from Harvard Online, participants must thoughtfully complete modules 0-4 by stated deadlines.