

Course Title	Innovation & Entrepreneurship in Health				
Course Code	HSA-533				
Course Type	Elective				
Level	2 nd Cycle				
Year / Semester	2 / 1				
Teacher's Name	Dr Ariana Polyviou				
ECTS	10	Lectures	11	Interactive learning activities	20
Course Purpose and Objectives	<p>The main objectives of the course are to:</p> <ul style="list-style-type: none"> • Introduce the basic principles of innovation and entrepreneurship and to demonstrate their value in the ongoing improvement of healthcare and population health. • Describe the healthcare value chain and the different types of healthcare innovation, as well as to explore the reasons why healthcare differs from other sectors of the economy. • Explore how the main industries involved in healthcare (biopharma and medical devices) create and bring to the market new products and services. • Examine the adoption of innovation in healthcare, and the critical role of the leader in creating an environment that facilitates innovation. • Define and describe disruptive and frugal innovation in healthcare, examining why they are important for tackling the healthcare challenges, both in developed and developing health systems. • Highlight the need to view and manage healthcare innovation from a complex systems perspective. • Equip students with the ability to identify a problem in an evidence-based manner, and to develop an innovative solution, taking into account existing infrastructure and networks. • Provide an overview of business model selection and business plan development. Intellectual property, licensing, alliances, partnerships and start-ups will also be explored. • Discuss the creation of the start-up; namely, what makes an effective start-up team, and potential sources of funding. • Describe venture capital and its associated competencies; pitching to investors, negotiation, valuation, and awareness of the deal structure. • Describe market research and strategy, effective communications, and impact evaluation. 				
Learning Outcomes	<p>After completion of the course students are expected to be able to:</p> <ol style="list-style-type: none"> 1. Define and describe innovation and entrepreneurship. 2. Examine the general process of innovation and the fundamentals from research and management practice. 				



3. Compare the different forms that innovation can take, such as product, process and service innovation.
4. Compare the different types of innovation such as radical and incremental innovation.
5. Examine the ways in which innovations are adopted and diffused.
6. Describe the healthcare value chain.
7. Outline and examine the characteristics of different types of healthcare innovation.
8. Evaluate why healthcare innovations are complex.
9. Examine the unique economics of healthcare innovation.
10. Examine the way new drugs and medical devices are developed and the challenges companies face in bringing new products to the market.
11. Contrast open- and user-led innovation and why it is important for healthcare innovation.
12. Discuss how governments try to support the innovation process.
13. Outline and examine the reasons why innovation adoption in healthcare requires careful consideration of the wider context and the nature of the innovation itself.
14. Critique the role evidence plays in the decision to adopt innovation and why its collection is hard for many healthcare innovations.
15. Examine the critical role of a leader in creating an environment where people are willing and able to innovate.
16. Examine why disruptive innovation is important in healthcare in advanced health systems and in those of low- to middle-income countries.
17. Demonstrate an understanding of the implications of disruptive innovation for the healthcare workforce and organisations.
18. Contrast the similarities and differences between frugal and disruptive innovation.
19. Examine the challenges in translating frugal innovations into an advanced health system context.
20. Describe why healthcare is often seen as a complex system.
21. Examine what complexity theory and systems thinking means for the management of innovation in healthcare from the perspective of companies developing new products and services, healthcare organisations adopting innovations, and those responsible for large-scale transformation programmes in both developed and developing health systems.
22. Investigate and identify the problem in an evidence-based manner using available data and statistics, describing root causes, barriers, and affected populations.
23. Investigate localized settings, nuances, co-problems, best practices in facing this problem, and opportunities to change the status quo.
24. Develop an innovative solution, centred on the target population and

	taking into account existing infrastructure and networks. 25. Compare and select from different types of business models. 26. Develop a business plan. 27. Describe the concept and importance of intellectual property and licensing. 28. Compare alliances, partnerships and start-ups. 29. Examine the characteristics of an effective start-up team. 30. Evaluate sources of funding. 31. Describe venture capital. 32. Develop a pitch to investors and negotiate with venture capitalists. 33. Examine valuation and the deal structure. 34. Conduct market research and develop a market strategy. 35. Examine effective communications. 36. Apply innovation impact evaluation.																		
Prerequisites	None	Elective	None																
Course Content	1. Introduction to Innovation and Entrepreneurship 2. Opportunity Identification and Innovation Development 3. Pushing the Innovation Forward 4. Creating the Start-up 5. Venture Capital 6. Strategy 7. The Unique Case of the Healthcare Sector 8. Innovation in the Biopharma and Medical Device Industry 9. Health Innovation Adoption 10. Leading Innovation 11. Disruptive and Frugal Innovation 12. Innovation in a Complex System																		
Teaching Methodology	This programme is delivered via distance learning (online) and includes recorded lectures, interactive online tutorials (webinars) and discussion forums, as well as online exercises and other activities.																		
Bibliography	Required Textbooks / Reading: <table border="1"> <thead> <tr> <th>Title</th> <th>Author(s)</th> <th>Publisher</th> <th>Year</th> <th>ISBN</th> </tr> </thead> <tbody> <tr> <td>Managing Innovation in Healthcare</td> <td>Barlow J.</td> <td>World Scientific Publishing Europe Limited</td> <td>2016</td> <td>9781786341518</td> </tr> <tr> <td>Innovation and Entrepreneurship in the Healthcare Sector: From</td> <td>Pareras LG</td> <td>Greenbranch Publishing, LLC</td> <td>2011</td> <td>978-0982705537</td> </tr> </tbody> </table>				Title	Author(s)	Publisher	Year	ISBN	Managing Innovation in Healthcare	Barlow J.	World Scientific Publishing Europe Limited	2016	9781786341518	Innovation and Entrepreneurship in the Healthcare Sector: From	Pareras LG	Greenbranch Publishing, LLC	2011	978-0982705537
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	Idea to Funding to Launch (1 st edn.)				
	Introduction to Social Entrepreneurship	Chahine T	Taylor & Francis Group, LLC	2016	978-1498717052
	Recommended Textbooks / Reading:				
	Title	Author(s)	Publisher	Year	ISBN
	Collective Genius: The Art and Practice of Leading Innovation	Hill LA	Harvard Business Review Press	2014	978-1422130025
Assessment	Online quiz (formative) Participation 10% Coursework (Group and individual exercise assignments) 30% Final exam 60%				
Language	English				