

Course Title	Epidemiology and Prevention of Chronic and Infectious Diseases in a Global Context				
Course Code	MPH-521				
Course Type	Required				
Level	2 nd Cycle				
Year / Semester	1 / 1				
Teachers' Names	Dr Angeliki Lambrou				
ECTS	10	Lectures	21	Interactive learning activities	22
Course Purpose and Objectives	<p>The main objectives of the course are to:</p> <ul style="list-style-type: none"> Analyse the epidemiology of the major non-communicable and infectious conditions causing the biggest burden on developed and developing societies and critically evaluate national and international preventive initiatives aiming at tackling these. Relate and contrast the different epidemiological paradigms for the aetiology of non-communicable conditions, as well as major emerging and re-emerging infectious conditions in developed and developing societies. Analyse the dynamics of infectious disease outbreak and apply measures of control and surveillance. Analyse the epidemiology of major emerging and re-emerging infectious conditions in the developed and developing world and apply the concept of migrant/refugee health in the context of infectious disease. Analyse the principles of immunization and the basic methodologies involved in the design of such programmes, also highlighting the phenomenon of vaccine hesitancy. Evaluate the global impacts of climate change on the epidemiology of major non-communicable and infectious conditions, including the connection between habitat loss, impact on species and potential for zoonotic transmission and appreciate the near-term health co-benefits that arise because of climate mitigation. 				
Learning Outcomes	<p>After completion of the course students are expected to be able to:</p> <ol style="list-style-type: none"> Analyse the epidemiology of cardio metabolic and cerebrovascular conditions in the developed and the developing world. Analyse the epidemiology of malignancies in the developed and the developing world. Analyse the epidemiology of dementia and other neurodegenerative conditions in the developed and the developing world. Analyse the epidemiology of mental health conditions in the developed and the developing world. Apply the principles of prevention for tackling major non-communicable disease epidemics and design preventive programmes for dealing with these in developed and developing countries. Compare and contrast the major epidemiological paradigms for the aetiology of non-communicable conditions (adult life risk factors, early life biological programming, and life-course effects). Analyse the phenomenon of emerging infectious diseases, their determinants, and the current response approaches. 				

	<ol style="list-style-type: none"> 8. Analyse the main objectives of epidemiological surveillance and distinguish its major types. 9. Analyse the characteristics of incubation period, transmission, and communicability of microbes and relate these with the spread of diseases in the population. 10. Analyse the modes of epidemic initialisation and the types of epidemics. 11. Apply all steps of an outbreak investigation considering the main objectives of infectious disease epidemic investigation. 12. Analyse the major epidemiological characteristics of selected major infectious diseases for public health (e.g., HIV/AIDS, tuberculosis, influenza, diarrhoeal disease, malaria) in the developed and developing world. 13. Apply modes of prevention and control of infectious diseases and relevant measures and relate these with the mode of transmission. 14. Evaluate the objectives and the content of the Expanded Program on Immunization (EPI) of the World Health Organization. 15. Analyse the 'epidemiological profile' of migrants/refugees and the healthy immigrant effect and critically evaluate the myths prevailing regarding this specific issue in modern societies. 16. Evaluate how climate change can impact on the epidemiology of major non-communicable and infectious conditions, including the connection between habitat loss, impact on species and potential for zoonotic transmission. 17. Evaluate the near-term health co-benefits that arise because of climate mitigation at the individual, local, and global scales and provide examples of sectoral policies at the European and national level that can reduce greenhouse gas emissions and improve health. 18. Access and interpret relevant local, national, European, and global information and accurate science about climate change effects on health and the epidemiology of major non-communicable and infectious conditions. 		
Prerequisites	None	Required	None
Course Content	<ol style="list-style-type: none"> 1. Epidemiology of major chronic conditions I: cardiometabolic and cerebrovascular conditions 2. Epidemiology of major chronic conditions II: neoplastic conditions 3. Epidemiology of major chronic conditions III: dementia and other neurodegenerative conditions 4. Epidemiology of major chronic conditions IV: mental health conditions 5. Epidemiological paradigms for the aetiology of chronic conditions 6. Emerging infectious diseases: current understanding 7. Epidemiological surveillance: cornerstone for the organization of public health measures at the national and international level 8. Special concepts in infectious diseases and spread dynamics 9. Infectious disease epidemic investigation 10. Epidemiology of major infectious diseases 11. Measures for prevention and control of infectious diseases in the developed and developing world 12. Migrant health and infectious diseases: epidemiological data and prevailing perceptions in developed societies 		

	13. Global health impacts of climate change and health benefits of climate mitigations strategies				
Teaching Methodology	This programme is delivered via distance learning (online) and includes recorded lectures, interactive online tutorials (Webinars) and discussion fora, as well as online exercises and other activities.				
Bibliography	Required Textbooks / Reading:				
	Title	Author(s)	Publisher	Year	ISBN
	Chronic Disease Epidemiology and Control (4 th ed.)	Remington LP, Brownson RC, Wegner MV	American Public Health Association	2016	978-0875532776
	Modern Infectious Disease Epidemiology (3 rd ed.)	Giesecke J	CRC Press	2017	978-1444180022
	Recommended Textbooks / Reading:				
	Title	Author(s)	Publisher	Year	ISBN
	Sick Societies: Responding to the Global Challenge of Chronic Disease.	Stuckler D, Siegal K	Oxford University Press	2011	978-0199574407
	Oxford Textbook of Global Public Health (6 th ed.) ONLINE	Detels R, Gulliford M, Abdool-Karim Q, Tan CC	Oxford University Press	2015	978-0199661756
	Infectious Disease Epidemiology: Theory and Practice (3 rd ed.)	Nelson KE, Williams C	Jones & Bartlett Learning	2013	978-1449683795
	Control of Communicable	Heymann DL	American Public Health Association	2014	978-087553-0185

	Diseases Manual (20 th ed.)				
	Epidemiology and Prevention of Cardiovascular Disease: A Global Challenge (2 nd ed.)	Labarthe DR	Jones & Bartlett Learning	2011	978-076374-6896
	Cancer Epidemiology: Principles and Methods	dos Santos Silva I.	IARC	1998	928320405-0
	The Strategy of Preventive Medicine	Rose G.	Oxford University Press	1993	019262486-5
	Modern Infectious Disease Epidemiology	Krämer A, Kretzschmar M, Krickeberg K.	Springer	2010	978-038793-8356
	People's Movements in the 21st Century - Risks, Challenges and Benefits	Muenstermann I.	IntechOpen	2017	978-953512-9240
Assessment	Online quiz (formative) Coursework (1 essay and 1 oral presentation) – 30% Mandatory interactive activities and webinar attendance/participation – 10% Final exam – 60%				
Language	English				