	課程	資訊 Co	urse Infor	mation			
Course title	English: Measuring burden of disease: methods and applications						
(中/英文)	6						
課程編號	MGH5001	班次		學分數	2		
Curriculum Number	853 U0150	Class		Credits			
全/半年	半年			必/選修	選修		
Full/Half Yr.	Half Yr.			Required/Elective	Elective		
授課教師	林先和(主授)			開課系所	全球衛生碩士學		
Instructor	張書森、楊銘欽、鄭守夏(合 授)			Designated for	位學程 MGH		
上課時間	(二)6,7				公衛 210		
Time				Venue			
備註	本課程以英語	授課;全	全球衛生研	頁士學位學程選修;	總人數上限20		
Remarks	人。						
	課程大綱	(中/英)	文) Cour	se Syllabus			
Please respect the 課程概述 Course Description	iption health policy making and priority setting. In the past few years there have been major advancements in burden of disease research, mainly led and stimulated by the Global Burden of Disease Study (GBD). This course will give an overview on the concepts and methods used to quantify the burden of disease at the national and global level. The GBD will be a						
	main focus of this course, but other alternative approaches will also be						
	reviewed. The course consists of lectures, computer labs, a hands-on group-based project, and a field visit to the Ministry of Health and Welfare.						
課程目標 Course Objective	 At the end of the course the students are expected to: 1. Understand the key concepts and elements in burden of disease studies 2. Comment on the strengths and limitations of burden of disease studies 3. Understand the estimating procedures of the GBD study 4. Be familiar with and be able to use the major databases of GBD while acknowledging their limitations 						
課程要求 Course Requirement	The course will be offered in English. Basic understanding of key concepts of epidemiology and biostatistics will be helpful but is not absolutely required.						

關鍵字	Global health; burden of disease; disability-adjusted life years; health-					
Keywords	adjusted life expectancy					
Office Hours	By appointment					
指定閱讀						
Designated reading						
參考書目	1. Lopez AD, Mathers CD, Ezzati M, Jamison DT, Murray CJL (Eds.).					
References		Global Burden of Disease and Risk Factors. Washington, DC: Oxford				
	University Press and Word Bank, 2006					
	2.	2. Smith JN. Epic Measures. New York: HarperCollins Publishers; 2015				
			xman AD, Vos T, Murray	`	ý Q	
		Metaregression Framework for Descriptive Epidemiology. Seattle and				
		Loi	ndon: University of Washi	ngton	Press; 2015	
		#	項目	%	說	记明
評量方式		1	Participation	20		
Grading		2	Homework	30		
		3	Final group project	50		
週次 Week	日非	期	□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□		CEPH 核心能力	
		te			(CEPH Core	
					• • • • •	Competence)
第1週Week1			Measuring burden of diseases, injuries, and		D17-3	
为 I 旭 Week I			risk factors: what, why, and how			
			I. Invited Talk: Global H	ealth	Cost	D17-3 D1711
第2週Week 2			Effectiveness Analysis			
			II. YLL and Life table			
第3週Week 3			Cause of death and Garbage code D17-3 D17-6		D17-3 D17-6	
			I. YLD: incidence-based and prevalence- D17-3 D17-		D17-3 D17-6 3	
第4週Week4		based approach				
			II. Disability weights			
第5週Week 5			Estimating burden of disease from health D17-3		D17-3	
		expenditures				
第6週Week 6			Lab I (Life table and gat	rbage	code	D17-3

	redistribution)	
第7週Week7	Spring break	
	Measuring the burden of risk factors:	D17-3
第8週Week8	comparative risk assessment (CRA) I	
	I. Measuring the burden of risk factors:	D17-3
第9週Week9	comparative risk assessment (CRA) II	
	II. Lab II (CRA)	
第10週Week 10	Mid-term progress report	
	Measuring the burden of injuries and mental	D17-3 D17-10
第 11 週 Week 11	illness	
	I. Benchmarking	D17-11
第 12 週 Week 12	II. Forecasting the burden of disease	
	National infectious disease surveillance and	D17-3 3
第13週Week 13	health open data in Taiwan; Field visit to	
	Taiwan CDC	
第 14 週 Week 14	National burden of disease studies in Taiwan	D17-4 3
第15週Week 15	Application of GBD results	D17-10 3
	Quantification of disease burden using EYLL	D17-3
第 16 週 Week 16	(expected years of life lost)	
第 17 週 Week 17	Evidence-based health policy making;	D17-3 D17-10
	evaluation of health system performance	D17-11
第18週Week 18	Final project presentation	

全球衛生碩士學位學程 核心能力

Global Health Program Competencies

Code

Competencies

D17-1	Explain public health history, philosophy and values
D17-2	Identify the core functions of public health and the 10 Essential Services*
D17-3	Explain the role of quantitative and qualitative methods and sciences in describing and
	assessing a population's health
D17-4	List major causes and trends of morbidity and mortality in the US or other community
	relevant to the school or program
D17-5	Discuss the science of primary, secondary and tertiary prevention in population health,
	including health promotion, screening, etc.
D17-6	Explain the critical importance of evidence in advancing public health knowledge
D17-7	Explain effects of environmental factors on a population's health
D17-8	Explain biological and genetic factors that affect a population's health
D17-9	Explain behavioral and psychological factors that affect a population's health
D17-10	Explain the social, political and economic determinants of health and how they
	contribute to population health and health inequities
D17-11	Explain how globalization affects global burdens of disease
D17-12	Explain an ecological perspective on the connections among human health, animal
	health and ecosystem health (eg, One Health)
1	Analyze the roles, relationships, and resources of the entities influencing global health
2	Apply ethical approaches in global health research and practice
3	Apply monitoring and evaluation techniques to global health programs, policies, and
	outcomes
4	Propose sustainable and evidence-based multi-sectoral interventions, considering the
	social determinants of health specific to the local area
5	Design sustainable workforce development strategies for resource-limited settings
6	Display critical self-reflection, cultural humility, and ongoing learning in global health

*授課內容引用本所(系)教師發表之著作0篇,引用本院教師發表之著作0篇。 (請列出著作出版資料:作者姓名,題目,期刊名稱,卷數,起訖頁數及出版年)