

**Biostatistics**

B1. Describe the biostatistics process in the discipline of public health.  
 B2. Describe how concepts of probability, random variables and normally and multivariate probability distributions.  
 B3. Describe advanced methodological alternatives to commonly used statistical methods when assumptions are not met.  
 B4. Distinguish among the different measurement scales and the implications for selection of statistical methods to be used based on their characteristics.  
 B5. Apply knowledge of descriptive statistics to summarize public health data.  
 B6. Apply knowledge of inferential statistics to estimate population parameters.  
 B7. Apply knowledge and inferential techniques according to the type of study design for assessing a particular research hypothesis.  
 B8. Apply basic inferential techniques with vital statistics and public health records in the description of public health phenomena and in public health research and evaluation.  
 B9. Interpret results of statistical analyses based on public health studies.  
 B10. Develop written and oral presentations based on statistical analyses for both public health professionals and the general public audience.

**Epidemiology**

E1. Identify key sources of data for epidemiologic purposes.  
 E2. Describe the processes and processes of public health screening programs.  
 E3. Describe a public health problem in terms of magnitude, person, time and place.  
 E4. Explain the concepts of epidemiology for estimating causality, ethical, economic and political dimensions of health care.  
 E5. Apply epidemiologic and legal principles pertaining to the collection, maintenance, use and dissemination of epidemiologic data.  
 E6. Apply the basic terminology and definitions of epidemiology.  
 E7. Calculate basic epidemiologic measures.  
 E8. Communicate epidemiologic information to lay and professional audiences.  
 E9. Draw operational inferences from epidemiologic data.  
 E10. Interpret the strength and weaknesses of epidemiologic reports.

**Environmental health sciences**

EH1. Describe the direct and indirect human, ecological and safety effects of major environmental and occupational agents.  
 EH2. Describe genetic, phenologic and psychosocial factors that affect susceptibility to adverse health outcomes following exposure to environmental hazards.  
 EH3. Describe federal and state regulatory programs, guidelines and authorities that control environmental health risks.  
 EH4. Identify current environmental risk assessment methods.  
 EH5. Specify strategies for assessing, preventing and controlling environmental hazards that pose risks to human health and safety.  
 EH6. Explain the general mechanisms of toxicity in eliciting a toxic response to various environmental exposures.  
 EH7. Discuss various risk management and risk communication approaches in relation to issues of environmental justice and equity.

# Health Policy and Management

HPolicy	Communication	Leadership	ProFessionism	SysTem	MPreparedness
H1	C10	L2	F4	T1	M14
H4		L7		T4	
H7					
H8					
HP					
H10					

## 1.1. Health care organization, financing and delivery

mandatory

1.1 1.2 3.1 3.2 3.3 3.4 4.1 4.2 4.3

iPAtientSafety	Environmental	HPolicy	Social	Communication	Diversity	iOQuality	ProFessionism	MPreparedness
PS	E3	HQ	SP	C5	D2	O1	F2	M6
						O9	F7	M15
							F8	

## 1.2. Public health law

elective

1.1 2.1 2.2 2.3 2.5 3.1 3.3 4.1 4.3

Environmental	HPolicy	Social	Communication	Diversity
E1	HP	S6	C2	D5
E4		S8	C3	D6
E5			C4	D7
E7				

## 2.1. Public health for professionals seminar

mandatory

1.2 1.3 1.4 1.5 2.4 2.6

HPolicy	Communication	SysTem
H1	C1	T1
H2	C5	T5
HP		T6
HP		T8
HP		T10
		T11

## 2.2. Comparative health systems

elective

1.1 1.2 1.5 1.6

2.7 3.2 4.2 4.3

HPolicy	Leadership	MPreparedness
H10	L1	M2
	L2	M5
	L3	M6
	L4	
	L5	
	L6	
	L7	
	L8	

## 3.1. Public health leadership

mandatory

1.1 1.2 1.3 1.5 2.4 2.6

3.4 4.1

Social	Communication	Leadership	ProFessionism	rProgram	SysTem	MPreparedness
S4	C9	L1	F2	R6	T7	M2
S5				R7		M11
S7				R10		M14

### CDC - Public Health Preparedness and Response Competency Map (Model Version 1.0 – December 17, 2010)

1.1 1.2 1.3 1.6 2.4 3.1 3.3 3.4

1. Manage resources in public emergency conditions.  
 M1-1.1 Develop plans for public emergency conditions.  
 M1-1.2 Manage behaviors associated with emotional responses in self and others.  
 M1-1.3 Manage relationships with internal and external emergency response partners.  
 M1-1.4 Maximize operational resources.  
 M1-1.5 Developable respect for all persons and cultures.  
 M1-1.6 Act within the scope of one's legal authority.  
 M1-1.7 Manage information needed for emergency response.  
 M1-2.2 Apply principles of crisis and risk communication.

2. Communicable and Emerging Infections  
 M2-1.1 Apply epidemiologic principles relevant to the identification and control of an emergency through the chain of command.  
 M2-1.2 Apply principles of crisis and risk communication.  
 M2-1.3 Apply principles of crisis and risk communication.  
 M2-1.4 Collect data according to protocol.  
 M2-1.5 Manage the receipt and transcription of data according to protocol.  
 M2-1.6 Use and Manage PPE.  
 M2-1.7 Coordinate responses to a community based surveillance activity (CBA).  
 M2-1.8 Coordinate responses to the development of emergency plans.  
 M2-1.9 Participate in exercises for the development of emergency plans.  
 M2-1.10 Participate in exercises for the development of emergency plans.  
 M2-1.11 Participate in exercises for the development of emergency plans.  
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 M2-1.50 Participate in exercises for the development of emergency plans.

Biostatistics	iPAtientSafety	HPolicy	rProgram	SysTem
B4	PS	HP	R4	T1
B5			R5	T3
B6			R8	T9
B7				T10

## 4.2. International health economics

elective

1.1 1.4 1.7 2.2 2.7 3.4

**Legend**

R7 – competence 7 from pillar Program Planning  
 VE1 – partial competence 1 from pillar Environmental Health  
 OD4 – derive from competence 4 from pillar Public Health

97	Competence 7 from pillar Epidemiology is being formed <b>initially</b> by this course
97	Competence 7 from pillar Epidemiology is being <b>consolidated</b> by this course, after being formed initially in another one

# Environmental Health

Environmental	HPolicy	Leadership	iOQuality	rProgram
E1	H3	L6	O6	R1
E2			OD	R3
E4				
E5				
E6				
E7				
E8				

## 1.3. Introduction to environmental health

mandatory

1.4 2.1 2.3 2.4 2.6 2.7 3.1 3.2 4.1 4.3

Environmental	iOQuality	rProgram
E2	O1	R1
E6	O2	
	O3	
	O4	
	O5	
	O6	
	O7	
	O8	
	O9	
	O10	

## 2.3. Biological basis of public health

mandatory

1.2 1.3 1.6 1.7 2.4

Biostatistics	Environmental	HPolicy	Diversity	ProFessionism	SysTem
B8	E5	HP	D1	F5	T8
	E7		O3	F6	T9
			O4		T10

## 3.2. Global health

mandatory

1.1 1.3 1.4 1.5 1.7 2.2 2.7

# Social and behavioral health

Biostatistics	HPolicy	Social	Communication	Diversity	ProFessionism	rProgram	SysTem
B1	HP	S1	C2	D1	F6	R1	T2
			C7	D4	F9		
				D7			
				D8			

## 1.4. Principles of public health

mandatory

2.1 2.6 2.7 3.2 3.4 4.2

Social	Communication	Diversity	ProFessionism	SysTem	MPreparedness
S6	C1	D3	F11	T11	M2
					M4
					M5
					M17

## 1.5. Public health nursing

elective

2.1 2.2 2.5 3.1 3.2 3.3

HPolicy	Social	Communication	Leadership	iOQuality	rProgram	SysTem
HP	S2	C8	L8	O2	R2	T7

## 2.4. Social and behavioral aspects of health

mandatory

2.1 2.3 3.1 3.3 4.1

MPreparedness
M1
M2
M3
M7
M8
M9
M12
M13
M15
M16
M17
M18

## 2.5. Emergency preparedness: the public health perspective

elective

1.2 1.5 1.7

HPolicy	Social	Communication	Diversity	Leadership	ProFessionism
HP	S9	C6	D2	L5	F10
H10	S10	C9	D9		F11
		C10	D10		

## 3.3. Program development in health promotion

mandatory

1.1 1.2 1.5 1.6 2.4

4.1

# Epidemiology

iPAtientSafety	Communication	iOQuality	ProFessionism	rProgram	MPreparedness
PS	C1	O5	F1	R2	M10
PS	C8		F10		M11
PS					
PS					
PS					
PS					

## 1.6. Basic principles and methods of epidemiology

mandatory

1.1 2.2 2.3 2.6 3.3 3.4 4.1 4.3

iPAtientSafety	iOQuality	ProFessionism	rProgram	MPreparedness
PS	O1	F3	R9	M1
PS	O4	F6		M4
PS	O7			M7
PS	O8			

## 1.7. Infectious disease epidemiology

elective

2.3 2.5 2.6 3.2 3.4 4.2 4.3

Biostatistics	iPAtientSafety	Environmental	SysTem
B1	PS	EP	T3
B2			
B3			
B4			
B5			
B6			
B7			
B8			
B9			
B10			

## 2.7. Basic principles of statistical inference

mandatory

1.3 1.4 2.2

3.2 4.2 4.3

iPAtientSafety	Environmental	HPolicy	Communication	Leadership	ProFessionism	SysTem
P1	E1	H3	C4	L4	F1	T2
P2			C7			
P3						
P4						
P5						
P6						
P7						
P8						

## 2.6. Zoonosis epidemiology

elective

2.1 3.1 4.3

Biostatistics	HPolicy	Communication	Leadership	ProFessionism	rProgram
B9	HP	C8	L3	F3	R4
B10				F4	R5
					R6
					R7
					R8
					R10

## 3.4. Program evaluation

mandatory

1.1 1.4 1.6 1.7 3.1

4.1 4.2

iPAtientSafety	ProFessionism	rProgram	SysTem
PS	F7	R2	T4
PS	F8	R3	T6
PS	F9	R9	
PS			
PS10			

## 4.3. Global perspectives in epidemiology

elective



Cluj School of Public Health

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Competencies  
Master in Public Health

Cluj School of Public Health  
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