



Global and Public Health

PUBH 240: *Epidemiology in Developing Countries*

Please refer to the [faculty page](#) for this semester's instructor.

Course Description

This course features the practical use of epidemiology and spreadsheet models for estimating morbidity and mortality, developing intervention or prevention strategies, and setting program priorities in developing country settings. The course also examines the process of policy formulation and resource allocation to international health and disease control.

Course Objectives

To provide the student with the following:

- 1) Introduction to the epidemiological basis for disease prevention and control programs in the developing world.
- 2) Overview of simple, practical methodologies to obtain and validate information.
- 3) Understanding of the usefulness and validity of epidemiologic data sources in developing countries.
- 4) An understanding of how to use epidemiologic data to inform setting health program priorities.

Class Time: *This class meets once a week, for a two-hour session. Please note that students concentrating in public health will also be required to attend weekly academic field visits as part of their coursework.*

Course Schedule

Session 01/15 Introduction
 Infectious diseases concepts

Session 02/15 Communicable disease epidemiology
 Distribution and determinants of disease

Session 03/15 Communicable disease epidemiology

- Natural history of diseases
-

Session 04/15 Epidemiology of infectious diseases

- Concepts of Epidemiological triad
 - Control
 - Elimination
 - Eradication
-

Session 05/15 Epidemic/Endemic/Pandemic

- Concepts and case studies
-

Session 06/15 Disease prevention and control

- Concepts of prevention and control
-

Reading for session 1-6:

Reference book:

Park, K. (2013). Park's Textbook of Preventative and Social Medicine. 22nd edition. Banarsidas Bhanot Publishers.

- Chapter 2: Concept of health and disease (Page no: 12-15, 17-19, 30-42)
 - Chapter 3: Principles of Epidemiology and Epidemiologic methods (Page no: 58-67, 89-98, 105-107, 111-118)
-

Session 07/15 Midterm Exam

Session 08/15 Early childhood infections and Pneumonia

- Epidemiology, prevention and control

Reading: **Reference book:** Park, K. (2013). Park's Textbook of Preventative and Social Medicine. 22nd edition. Banarsidas Bhanot Publishers.

Chapter 5: Epidemiology of communicable diseases: Acute respiratory infections, page no 157-164

Session 09/15 Tuberculosis Epidemiology and RNTCP

- Objectives, strategies and program implementation
- Critical review followed by group discussion

Reading: **Reference book:** Park, K. (2013). Park's Textbook of Preventative and Social Medicine. 22nd edition. Banarsidas Bhanot Publishers.

Chapter 5: Epidemiology of communicable diseases: Tuberculosis, page no 166-183
Chapter 7: Health programmes in India, page no 394-399

Session 10/15 Malaria epidemiology and National vector borne disease control program

- Epidemiology: Objectives, strategies and program implementation
- Critical review followed by group discussion

Reading: **Reference book:** Park, K. (2013). Park's Textbook of Preventative and Social Medicine. 22nd edition. Banarsidas Bhanot Publishers.

Chapter 5: Epidemiology of communicable diseases: Malaria, page no 232-244

Session 11/15 Filariasis and National filarial control program

- Clinical and Epidemiological perspective
- Objectives, strategies and program implementation
- Presentation and group discussion

Reading: **Reference book:** Park, K. (2013). Park's Textbook of Preventative and Social Medicine. 22nd edition. Banarsidas Bhanot Publishers

Chapter 5: Epidemiology of communicable diseases: Filariasis, page no 245-251

Session 12/15 NVBDCP-Japanese encephalitis (JE)/Dengue/Chikungunya

- Clinical and Epidemiological perspective

Reading: **Reference book:** Park, K. (2013). Park's Textbook of Preventative and Social Medicine. 22nd edition. Banarsidas Bhanot Publishers

Chapter 5: Epidemiology of communicable diseases, JE: Page no 259, Dengue: Page no 224, Chikungunya: Page no 263

Chapter 7: Health programmes in India, page no 383-391

Session 13/15 HIV/AIDS Epidemiology and NACP

- Clinical and Epidemiological perspective
- Objectives, strategies and program implementation

Reading: **Reference book:** Park, K. (2013). Park's Textbook of Preventative and Social Medicine. 22nd edition. Banarsidas Bhanot Publishers

Chapter 5: Epidemiology of communicable diseases, 316-328

Chapter 7: Health programmes in India, page no 399-405

Session 14/15 **Revision Class**

Session 15/15 **Final Exam**

Online Resources

Government of India: Ministry of Health and Family Welfare. <http://mohfw.nic.in/>

Evaluation

Midterm Exam	50 %
Final Exam	50 %

Both exams would be of 20 marks each.

Instructions for the exam: (Objective Structured Practical Evaluation)

- There will be total of 10 questions
- Total of 2 marks per question
- 5 minutes for each question
- Total duration 50 minutes

Attendance Requirements

Class attendance is mandatory. It is essential that the students participate fully in the coursework and all required academic activities. Excused absences may only be approved by the Resident Director, and students are expected to make up any missed work. Unexcused absences will adversely affect grades.

Grading

Alliance programs utilize the follow standard grading policy well accepted by most US institutions.

Excellent	A	93-100%	Good	B+	87-89%	Acceptable	C+	77-79%
	A-	90-92%		B	83-86%		C	73-76%
				B-	80-82%		C-	70-72%
						Unsatisfactory	D+	67-69%
							D	63-66%
							D-	60-62%
						Failing	F	<60%

Course Policies

Exams and Assignments

Students are required to take all regularly scheduled exams in courses for which they are registered, and to submit all assignments on time. Any compelling academic, personal, or medical reason that might justify a rescheduled exam or assignment must be brought up to both the Resident Director and program faculty. Failure to take scheduled exams or submit the requisite assignments for a course will adversely affect your grade as per the stated grading criteria for each course.

Classroom Conduct

Student punctuality is extremely important in China and India. Please do not be late for classes or other activities, as it is considered impolite to do so. It is improper to eat in class, to engage in other activities such as texting, or to slump or nap. Students are expected to be alert and engaged as a sign of respect for their professors.

Attendance

Class attendance is mandatory. It is essential that the students participate fully in the coursework and all required academic activities. Authorized absences may only be approved by the Resident Director, and students are expected to make up any missed work. Unauthorized absences will adversely affect a student's grades.