



MANIPAL
UNIVERSITY

Global and Public Health

PUBH 225: *Global Health Problems*

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

Course Description

The burden of communicable diseases is slowly declining in developed countries. However, burden of non-communicable diseases like Diabetes, Hypertension, Cardio-vascular diseases and cancers are on the rise in developed nations. India faces a wide range of public health problems in the areas of communicable and non-communicable diseases and issues on maternal and child health. Communicable diseases continue to be a major public health problem in India. One fifth of the global burden of tuberculosis is contributed by India. Nearly 40 per cent of the Indian population of all ages has tuberculosis infection; 2.5 million persons have HIV infection (7.6 per cent of the global burden of 33 million cases). Vector borne diseases like Malaria, Chickungunya, Dengue, Japanese encephalitis and lymphatic Filariasis are posing serious threat to population health in India. Non-communicable diseases are responsible for two-thirds of the total morbidity burden and about 53 per cent of total deaths (up from 40.4 per cent in 1990 and expected to increase to 59% by 2015). NCDs account for 43 per cent of the Disability Adjusted Life Years (DALYs). The potentially productive years of life lost (PPYLL) due to CVDs in the age group of 35-64 was 9.2 million in 2000 and is expected to rise to 17.9 million in 2030. More than 20 per cent of the population has at least one chronic disease and more than 10 per cent have more than one. Chronic diseases are widespread in people who are younger than 45 years and in poorer segment of the population. As India faces dual burden of diseases, it is important to address the issues keeping global health perspectives.

Learning Objectives

1. To compare the burden of communicable diseases in developing and developed countries
2. To compare the burden of Non-communicable diseases in developing and developed countries
3. To understand the strategies used globally to address global health problems

Course Schedule

Please note that students concentrating in public health will also be required to attend weekly academic field visits as part of their coursework.

Session 01/14 **Introduction: Principles of infectious disease epidemiology**

Readings:

Park, K. (2013). Park's Textbook of Preventative and Social Medicine. 22nd edition.
Jabalpur: Banarsidas Bhanot Publishers. (pp. 89-99).

Session 02/14 **Epidemic/endemic/pandemic**

Readings:

Park, K. (2013). Park's Textbook of Preventative and Social Medicine. 22nd edition.
Jabalpur: Banarsidas Bhanot Publishers. (pp. 89-99).

Session 03/14 **General measures for disease prevention and control**

Readings:

Park, K. (2013). Park's Textbook of Preventative and Social Medicine. 22nd edition.
Jabalpur: Banarsidas Bhanot Publishers. (pp. 111 – 117).

Session 04/14 **Immunization**

Readings:

Park, K. (2013). Park's Textbook of Preventative and Social Medicine. 22nd edition.
Jabalpur: Banarsidas Bhanot Publishers. (pp. 97 – 110).

Session 05/14 **Vaccine preventable diseases**

Readings:

Park, K. (2013). Park's Textbook of Preventative and Social Medicine. 22nd edition.
Jabalpur: Banarsidas Bhanot Publishers. (pp.99 – 111).

Session 06/14 **Midterm examination**

Session 07/14 **Tuberculosis Epidemiology**

Readings:

Park, K. (2013). Park's Textbook of Preventative and Social Medicine. 22nd edition.
Jabalpur: Banarsidas Bhanot Publishers. Chapter: *Introduction to Non-Communicable diseases* (pp.166 - 177).

Session 08/14 **Avian influenza, SARS and Swine flu**

Readings:

Park, K. (2013). Park's Textbook of Preventative and Social Medicine. 22nd edition. Jabalpur: Banarsidas Bhanot Publishers. Chapter: *Introduction to Non-Communicable diseases* (pp.147; 157 – 165).

Session 09/14 **Malaria epidemiology**

Readings:

Park, K. (2013). Park's Textbook of Preventative and Social Medicine. 22nd edition. Jabalpur: Banarsidas Bhanot Publishers. Chapter: *Introduction to Non-Communicable diseases* (pp.233 - 245).

Session 10/14 **Filariasis, Japanese encephalitis, dengue, chikungunya**

Readings:

Park, K. (2013). Park's Textbook of Preventative and Social Medicine. 22nd edition. Jabalpur: Banarsidas Bhanot Publishers. (pp.224 – 232; 245 - 251; 259 - 264).

Session 11/14 **HIV/AIDS epidemiology**

Readings:

Park, K. (2013). Park's Textbook of Preventative and Social Medicine. 22nd edition. Jabalpur: Banarsidas Bhanot Publishers. (pp.316 - 328).

Session 12/14 **Leprosy, viral hepatitis and sexually transmitted diseases**

Readings:

Park, K. (2013). Park's Textbook of Preventative and Social Medicine. 22nd edition. Jabalpur: Banarsidas Bhanot Publishers. (pp.190 - 193; 287 - 315).

Session 13/14 **Cholera, food poisoning and acute gastroenteritis; enteric fever, leptospirosis and poliomyelitis**

Readings:

Park, K. (2013). Park's Textbook of Preventative and Social Medicine. 22nd edition. Jabalpur: Banarsidas Bhanot Publishers. (pp.200 -218; 266 – 267;184 - 190).

Session 14/14 **Final examination**

Required Course Materials

Please note that copies of all assigned reading will be provided to students in country. Purchase of these texts by individuals is not required.

Course Textbook

Park, K. (2011). *Park's Textbook of Preventative and Social Medicine*. 21st edition. Jabalpur, India: Banarsidas Bhanot Publishers.

Bonita, R., R. Beaglehole, and T. Kjellstrom. *Basic Epidemiology*. (2nd edition). World Health Organization. http://whqlibdoc.who.int/publications/2006/9241547073_eng.pdf

Gordis, L. (2013). *Epidemiology*. (5th edition). Saunders.

Supplemental Course Materials

- Principles of Epidemiology in Public Health Practice
<https://www.cdc.gov/careerpaths/k12teacherroadmap/classroom/principlesofepi.html>
- Government of India: Ministry of Health and Family Welfare. *National Rural Health Mission (2014)*. <http://mohfw.nic.in/NRHM.htm>
- World Health Organization. (2014). <http://www.who.int/en/>
- http://www.who.int/topics/cardiovascular_diseases/en/ (general information section)
- http://www.who.int/topics/hiv_aids/en/ (General information section)
- http://www.who.int/hiv/data/epi_core_dec2014.png
- <http://apps.who.int/gho/data/?theme=main&vid=22100>
- <http://www.who.int/topics/tuberculosis/en/> (General information section)
- <http://www.who.int/tb/country/data/profiles/en/>
- <http://www.who.int/topics/malaria/en/> (General information section)
- <http://www.who.int/topics/cancer/en/> (general information section)
- <http://www.iarc.fr/> (cancer topics and cancer statistics sections)
- Pandemic and Epidemic Diseases (PED) Link: www.who.int/csr/disease/en/
- Roadmap to overcome Neglected Tropical Diseases in SEARO
Link: www.searo.who.int/entity/vector_borne_tropical_diseases/data/NTDRRoadmap/en/
- Control of Communicable Diseases Manual
- Health in 2015 from MDGS to SDGS. (WHO Publication)
Link: [Apps.who.int/iris/bitstream/10665/200009/1/9789241565110_eng.pdf](http://apps.who.int/iris/bitstream/10665/200009/1/9789241565110_eng.pdf)
- Updated Guidelines for Evaluating Public Health Surveillance Systems
Pg No:1-35
Link : <http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5013a1.htm>
- One Health
Link: www.oie.int/en/for-the-media/onehealth/
Link : <http://www.cdc.gov/onehealth/>

Evaluation

Midterm Exam	30%
Final Exam	40%
Field Visits	15%
Attendance	10%
Participation	5%

Assessment Criteria

Midterm Exam

Will cover material from the first 5 class sessions, and field visits. Students will be graded on their answers to multiple choice, short answer, and essay questions. Students should demonstrate familiarity with material covered in class meetings and readings. Arguments supported with information from readings and supplemental course materials will receive higher marks than those supported with observation or general supposition.

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

Final Exam

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

Field Reports

Field visits to local health departments and organizations occur every Friday from 9AM to 1 PM. Students are required to attend all field visits to earn credit from this class. Please see the Field Visits Schedule document for a full list of sites visited, the topic focus of each visit, and required readings.

A 500 word (minimum) field report is due to Aarthy Ramaswamy (aarthu28@gmail.com) the Wednesday following your field visit. Late submissions will result in grade deduction. The report should include your name, the field visit locale and site in the heading, and should briefly address topics and/or questions identified in the field visit information sheet for the particular visit.

Field Report Evaluation Structure: NOTE – a 10 point penalty is applied against all late field report submissions

Element	Marks
Thoroughly addresses assigned questions	50
Includes specific references to field observation and/or lecture	30
Word count, grammar, spelling and citation	20
Total	100

A note on citation: Not all reports will contain referenced works, but citation is required whenever a work is referenced. Any citation style is acceptable, so long as referenced works are noted in either footnotes or a bibliography.

Attendance

A student is allowed 2 excused absences. An excused absence is an absence related to a medical or other emergency about which the student has communicated to the Resident Director and concerned faculty prior to class.

Any additional absence or ANY unexcused absence results in a two point loss to the overall attendance score. Please note attendance requirements through your program as well.

Participation

Faculty give full participation marks to students who are punctual, attentive and engaged in class. Students who are late or inattentive will have points removed from their participation score at the faculty's discretion.

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 course 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.