EPID 751 - Emerging & Re-emerging Infectious Diseases
Fall 2017
3 Credit Hours
Meeting Days & Times: **Mon., Wed. & Fri. 9:05 - 9:55 a.m.**
Room Number: **1305** McGavran Hall (Gillings School of Global Public Health)

An overview of the basic principles of infectious diseases (IDs), focusing on emerging and re-emerging IDs that affect public health in the U.S. and globally. Topics include a general introduction to the biology of ID agents (bacteria, viruses, prions, and eucaryotic parasites), factors affecting emergence/re-emergence, mechanisms of pathogenesis, immunology of infection, epidemiology, and strategies for diagnosis, prevention and control. Three 50 min lectures per week. Course Director: Lola Stamm, Ph.D. Phone: 966-3809 Email: lstamm@email.unc.edu

No Prerequisites; No Permission.

Lecture Schedule (41 lecture periods Fall 2017)

No.	Lecture Title	Lecturer	Date
1.	Introduction to EPID 751	Stamm	23 Aug. 17
2.	Overview- Emerging & Re-emerging Infectious Diseases	Stamm	25 Aug. 17
3.	Constitutive Host Defenses – Innate Response	Stamm	28 Aug. 17
4.	Induced Host Defenses – Adaptive Response	Sivaraman	30 Aug. 17
5.	Induced Host Defenses – Continued	Sivaraman	1 Sept. 17
	Labor Day Holiday – No Class!		**4 Sept. 17**
6.	Induced Host Defenses – Continued	Sivaraman	6 Sept. 17
7.	Induced Host Defenses - Continued	Sivaraman	8 Sept. 17
8.	Vaccines	Weber	11 Sept. 17
9.	Seroepidemiology	Meshnick	13 Sept. 17
10.	Molecular Techniques for Detecting & Typing ID Agents	Miller	15 Sept. 17
11.	**EXAM #1 (In Class)**	**Stamm**	**18 Sept. 17**
12.	Introduction to Viruses	Sheahan	20 Sept. 17
13.	Overview- Emerging & Re-emerging Viral Diseases	Sheahan	22 Sept. 17
14.	Coronaviruses- SARS & MERS	Graham	25 Sept. 17
15.	Zika Virus	Weber	27 Sept. 17
16.	Ebola Virus	Weber	29 Sept. 17

17.	Chikungunya Virus	Heise	2 Oct. 17
18.	HIV/AIDS	Swanstrom	4 Oct. 17
19.	Influenza Virus	Miller	6 Oct. 17
20.	Therapeutics for Emerging Viruses	Sheahan	9 Oct. 17
21.	Prions – The Brain Eater- Nova Film	Stamm	11 Oct. 17
22.	Prions – Class Discussion	Stamm	13 Oct. 17
23.	**EXAM #2 (In Class)**	Stamm	**16 Oct. 17**
	Fall Break – No Class!		**18-20 Oct. 17**
24.	Introduction to Bacteria	Stamm	23 Oct. 17
25.	Overview- Emerging & Re-emerging Bacterial Diseases	Stamm	25 Oct. 17
26.	Bacterial Mechanisms for Gene Transfer	Stamm	27 Oct. 17
27.	Antibiotics & Bacterial Resistance Mechanisms	Stamm	30 Oct. 17
28.	Staphylococcus aureus (MRSA)	Stewart	1 Nov. 17
29.	Treponema pallidum (Re-emergence of syphilis)	Stamm	3 Nov. 17
30.	Borrelia burgdorferi (Lyme disease & Tick-borne diseases)	Stamm	6 Nov. 17
31.	Mycobacterium tuberculosis (TB)	Braunstein	8 Nov. 17
32.	Vibrio cholerae (Cholera)	Levinson	10 Nov. 17
33.	Shiga Toxin Producing E. coli (STEC)	Miller	13 Nov. 17
34.	Salmonella	Levinson	15 Nov. 17
35.	Bordetella pertussis (Whooping cough)	Weber	17 Nov. 17
36.	Introduction to Eucaryotic Parasites	Stamm	20 Nov. 17
	Thanksgiving Holiday- No Class!		**22-24 Nov. 17**
37.	Plasmodium (Malaria)	Parr	27 Nov. 17
38.	Plasmodium ID Research	Parr	29 Nov. 17
39.	Cryptosporidum, Cyclospora & Giardia (GI Parasites)	Simmons	1 Dec. 17
40.	Leishmania (Leishmaniasis)	Stamm	4 Dec. 17

41.	Trypanosoma cruzi (Chagas Disease)	Bowman	6 Dec. 17
	EXAM #3 (Saturday, Dec. 9th at 8:00 a.m.)	Stamm	**9 Dec. 17**

Course Objectives: Students completing **EPID 751** will have an improved understanding and appreciation of the following:

1. Scope and nature of the problem of emerging and re-emerging infectious diseases (IDs)
2. Factors involved in the emergence and re-emergence of IDs
3. Public health, economic, and social impact of emerging and re-emerging IDs
4. Basic biology and epidemiology of selected emerging and re-emerging ID agents
5. Host defense mechanisms aimed at preventing and/or controlling IDs
6. Microbial factors aimed at subverting host defense mechanisms
7. Strategies for diagnosis, prevention, and control of emerging and re-emerging IDs

Class attendance is required. Final grade is based on the mean of your three exam scores.

You are on your honor for all exams/assignments.

Valuing, Recognizing, and Encouraging Diversity:

Promoting and valuing diversity in the classroom enriches learning and broadens everyone's perspectives. Inclusion and tolerance can lead to respect for others and their opinions and is critical to maximizing the learning that we expect in this course. Our own closely held ideas and personal comfort zones may be challenged. The results, however, create a sense of community and promote excellence in the learning environment. Diversity includes consideration of (1) the variety of life experiences others have had, and (2) factors related to "diversity of presence," including age, economic circumstances, ethnic identification, disability, gender, geographic origin, race, religion, sexual orientation, social position. This class will follow principles of inclusion, respect, tolerance, and acceptance that support the values of diversity.