

University of Louisville

Dental Microbiology and Immunology (BMSC 806 -02)

Schedule for Spring-Summer 2017 (May 19 – July 29)

Time: 9:00 am – noon (except as noted*)

Room: DE-127 unless noted

<u>Date</u>	<u>Topic</u>	<u>Lecturer</u>
18 May, Thrs	Introduction to the course (10am)* Introduction to the Immune System	Graham Alard
19 May, Fri	Innate immunity (10am)* Inflammation	Alard Alard
22 May, Mon	Complement system; cytokines & receptors Antigen capture and Presentation Video: “complement”	Alard Alard
23 May, Tues	Differentiation and activation of T cells (10am)* Effector T cell functions	Alard Alard
24 May, Wed	Differentiation and activation of B cells Antibody & effector B cell functions Immunology Basics - REVIEW Session	Alard Alard Alard
26 May, Fri	Hypersensitivity type I (10 am)* Hypersensitivities types II – IV	Fernandez Fernandez
30 May, Tues	Immunity to infections Tolerance & Autoimmunity Video: “hygiene hypothesis”	Alard Kosiewicz
31 May, Wed	Immune responses against tumors Genetic & acquired immunodeficiencies <i>Optional</i> Review Exam I	Kosiewicz Kosiewicz Alard-Kosiewicz-Fernandez
2 June, Fri	<i>Study time for Exam I</i>	
6 June, Tues	Exam I – Immunology (HSC Auditorium)	

7 June, Wed	Bacterial ultrastructure & taxonomy (10 am)* Bacterial cell wall & envelope: structure & function	Graham Graham
9 June, Fri	Bacterial growth & physiology Bacterial genetics & molecular biology Video: "Bacterial culture methods"	Graham Graham
13 June, Tues	Antimicrobial agents: targets and characteristics Clinical use of antibiotics Video: "Hunting the nightmare bacteria"	Graham Graham
14 June, Wed	<i>Porphyromonas gingivalis</i> & other periodontal pathogens Dental unit waterline biofilms Mutans streptococci & other agents of dental caries Self-study: Sterilization & disinfection; infection control (due next class meeting)	Potempa Potempa Potempa
16 June, Fri	Normal microbiota (10 am)* Staphylococci: <i>Staphylococcus aureus</i>	Miller Miller
20 June, Tues	<i>Streptococcus pyogenes</i> /other β -hemolytic strep (10 am)* <i>Streptococcus pneumoniae</i> Self-study: bacterial infective endocarditis & prophylaxis (due next class meeting)	Miller Miller
21 June, Wed	Gram-positive rods Mycobacteria, including <i>M. tuberculosis</i> <i>Neisseria</i> , <i>Haemophilus</i> , <i>Bordetella</i>	Graham Graham Miller
23 June, fr	<i>Pseudomonas</i> , <i>Legionella</i> , water microbes <i>E. coli</i> /Other Gram-negative enterics Syphilis and gonorrhea/other STDs	Miller Miller Miller
27 June Tue	Parasitology: overview & oral parasites (10 am)* Helminths, including <i>Trichinella</i> , <i>Enterobius</i> (pinworm)	Graham Graham
28 June, Wed	Protozoa, including <i>Plasmodium</i> (malaria) (10 am)* Study for Exam II (parasites are not easy!)	Graham
30 June, Fri	Optional Review Exam II (10 am)* Optional Review Exam II Self-studies: Oral bacteria, caries, gingivitis & periodontitis (on exam II, but due next meeting July 7th)	Graham Miller
4 July, Tuesday	Holiday	
5 July, Wed	Holiday break/return travel	

7 July, Fri	Mycology: Fungal structure and growth (<i>on Exam III</i>) <i>Candida albicans</i> : oral candidiasis & other infections Other Mycoses: Skin, soft tissue, respiratory, systemic	Roberson Roberson Roberson
11 July, Tues	Exam II –Bacti & Parasitol. (HSC Auditorium)	
12 July, Wed	Nature of human viruses: structure & properties How viruses replication and how to stop it-Antivirals How viruses become diverse and Diagnostic Virology	Casella Casella Casella
14 July, Fri	Viral immunology & human viral vaccines How human viruses are transmitted and cause disease Video: “Vaccines calling the shots”	Casella Casella
18 July, Tuesday	Human Retroviruses HIV and HTLV (10am)* HIV and AIDS	Casella Casella
19 July, Wed	Human Hepatitis viruses (10am)* Human RNA viruses transmitted by fecal-oral route	Casella Casella
21 July, Fri	Paramyxo and corona viruses Human influenza viruses & vaccines Video: “Influenza pandemic of 1918”	Casella Casella
25 July, Tues	Herpesviruses HSV1 and 2, VZV (10am)* Herpesviruses EBV, CMV, HHV8 and Prions diseases	Casella Casella
26 July, Wed	Human arboviral diseases Rabies virus & other zoonotic RNA viruses Video: “Surviving Ebola”	Casella Casella
28 July, Fri	DNA viruses: papilloma, polyoma, parvo, adeno, pox VIROLOGY REVIEW I REVIEW II	Casella Casella Casella
1 Aug, Tues	<i>Study time for Exam III</i>	
2 Aug, Wed	EXAM III – Mycology & Virology (HSC Auditorium)	

Required Textbook: Abbas, A. K. Basic Immunology: Function and Disorders of the Immune System. 4th Edition, Elsevier/Clinical Key, 2014.
(available UofL subscribed Library eBook,)

Required Textbook: Carroll, K. C et. al. Jawetz, Melnick, and Adelberg’s Medical Microbiology 27th Edition, McGraw Hill/Access Medicine, 2016.

(available UofL subscribed Library eBook,)

Optional Textbook: Bagg, J., T.W. MacFarlane, I.R. Poxton and A.J. Smith,
Essentials of Microbiology for Dental Students 2nd Edition,
Oxford University Press/Clinical Key, 2006.
(available UofL subscribed Library eBook,)

Optional Textbook: Ryan, K. J. et al. Sherris Medical Microbiology 6th Edition,