

Infections (INF) – FOM1

FM-109 67 course hours

Updated May 2021

The Infections course occurs in the spring of FOM1 (March-April) and introduces students to the foundations antimicrobial agents, bacteria, viruses, fungi and parasites. The goal of the Infections course is to help students develop a base of knowledge concerning pathogenic microorganisms, and antimicrobial agents that will allow them to understand and eventually treat human infectious disease. These principles are further integrated into FOM2 courses (Organ System Diseases and Patients) for continued development and reinforcement. Teaching occurs in both large and small group sessions in which students apply principles to cases. Students also use preparatory exercises for independent or group learning.

After the INF course, the MS1 will be able to:

- Demonstrate knowledge of the clinically significant viral, bacterial, fungal, protozoan, and helminthic pathogens, and associate them with specific identifying features and with specific disease syndromes (Physician as a Scientist and Clinical Problem Solver)
- Recognize significant classes of antiviral, antibacterial, antifungal, antiprotozoan, and antihelminthic chemotherapeutic agents, and describe the principles of antimicrobial spectra and resistance (Physician as a Scientist and Clinical Problem Solver)
- Demonstrate an understanding of the basic biology of viral and bacterial pathogens, with particular focus on those structures and biochemical mechanisms of the pathogens which constitute targets for antimicrobial chemotherapy, or which enable specific pathogenic strategies (Physician as a Scientist and Clinical Problem Solver)
- Demonstrate an understanding of the origins and evolution of viral pandemics
- Demonstrate an ability to engage in a process of clinical problem-solving, involving the interpretation of microbiological laboratory data (Physician as a Scientist and Clinical Problem Solver)
- Demonstrate an understanding of the basic mechanisms of host defense, both innate and acquired, and the role of the normal microbial flora, against microbial infection (Physician as a Scientist and Clinical Problem Solver)
- Demonstrate knowledge of the primary modes of transmission of infectious agents and associate them with specific pathogens, as well as with risk factors for infectious disease (Physician as a Scientist and Clinical Problem Solver)
- Acquire a framework for understanding strategies employed by pathogens in establishing a locus of infection, replicating, causing host cell damage, and spreading to other sites and/or other hosts. This framework will enable the student to associate the great variety of pathogenic strategies with specific pathogens and understand the basis for infection control policies for contagious diseases (Physician as a Scientist and Clinical Problem Solver)
- Formulate tentative differential diagnoses of infectious diseases based on descriptions of patient history, physical examination, laboratory and imaging findings, drawing upon knowledge acquired in the preceding objectives (Physician as a Scientist and Clinical Problem Solver)
- Choose among different treatment modalities including appropriate choice and pharmacology of anti-infectives for the specific disease syndromes diagnosed (Physician as a Scientist and Clinical Problem Solver)

- Identify the unique features of the medical interview in infectious disease, including the significance of travel, contact and exposure history, as well as intimate details of personal life (Physician as a Scientist and Clinical Problem Solver)
- Understand the psychological and social implications for the patient who is diagnosed with a stigmatizing or contagious infectious disease and the effect on the patient in context of his/her community (Physician as a Scientist and Clinical Problem Solver)

Assessment occurs through responses to structured exams and small group problem solving.

Course co-leader

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