

MEDICAL MICROBIOLOGY (MMI)

School of Medicine

MMI 098 – Directed Group Study (1-5 units)

Course Description: Group Study in Medical Microbiology and Immunology; primarily for lower division students. Directed reading and discussion on selected topics.

Prerequisite(s): Consent of instructor.

Learning Activities: Variable 1-5 hour(s).

Repeat Credit: May be repeated when topic differs.

Grade Mode: Pass/No Pass only.

MMI 099 – Special Study for Undergraduates (1-5 units)

Course Description: Special study for lower division students.

Prerequisite(s): Consent of instructor.

Learning Activities: Variable 1-5 hour(s).

Enrollment Restriction(s): Restricted to lower division standing.

Repeat Credit: May be repeated.

Grade Mode: Pass/No Pass only.

MMI 130 – Medical Mycology (2 units)

Course Description: Various aspects of pathogenic fungi, particularly affecting humans, will be discussed including epidemiology, pathogenesis and pathology, diagnosis and therapy. Course offered in alternate years.

Prerequisite(s): Consent of instructor; a course in pathogenic microbiology.

Learning Activities: Lecture 2 hour(s).

Grade Mode: Letter.

MMI 177 – Human Virology (3 units)

Course Description: Covers viruses that cause diseases in humans, the structure and classification of medically-important viruses, methods of transmission and replication strategies. Viruses that are important human pathogens and epidemiology, immune response, detection, diagnosis and treatment of human viral infections. Discussion of clinical cases, cellular pathology, cancer and emerging and reemerging human viral diseases including Coronaviruses, vaccines, antivirals, and use of viruses in medicine.

Prerequisite(s): BIS 102 or BIS 101 or BIS 101V or BIS 103 or BIS 104 or BIS 105.

Learning Activities: Lecture 3 hour(s).

Grade Mode: Letter.

MMI 188A – Human Immunology (3 units)

Course Description: Understand the human immune system, the nomenclature and functional significance of the tissues, cells, proteins and genes, as well as the normal regulatory mechanisms and pathologic outcomes related to the immune response.

Prerequisite(s): Undergraduate level introductory Biology course.

Learning Activities: Lecture 3 hour(s).

Enrollment Restriction(s): Student cannot enroll in this course if already taken MMI 188 or MMI 188B.

Grade Mode: Letter.

MMI 188B – Human Immunology (4 units)

Course Description: Understand the human immune system, the nomenclature and functional significance of the tissues, cells, proteins and genes, as well as the normal regulatory mechanisms and pathologic outcomes related to the immune response.

Learning Activities: Lecture 3 hour(s), Discussion 1 hour(s).

Enrollment Restriction(s): Not open to students who have taken MMI 188 or MMI 188A.

Grade Mode: Letter.

MMI 192 – Internship in Medical Microbiology (1-12 units)

Course Description: Supervised work experience in medical microbiology and related fields.

Prerequisite(s): Upper division standing; approval of project prior to period of internship.

Learning Activities: Internship 3-36 hour(s).

Grade Mode: Pass/No Pass only.

MMI 194H – Senior Honors Project in Medical Microbiology & Immunology (5 units)

Course Description: Project in research related to immunology of medically important viruses. Development of a hypothesis-driven project, performance of experimental protocols and preparation of graphical representation of original data. Requires oral and written presentation of research results.

Prerequisite(s): MMI 199; consent of instructor.

Learning Activities: Independent Study 15 hour(s).

Repeat Credit: May be repeated 3 time(s) with consent of instructor.

Grade Mode: Pass/No Pass only.

MMI 198 – Group Study in Medical Microbiology (1-5 units)

Course Description: Directed reading and discussion and/or laboratory investigation on selected topics.

Prerequisite(s): Consent of instructor; upper division standing.

Learning Activities: Variable.

Grade Mode: Pass/No Pass only.

MMI 199 – Research in Medical Microbiology (1-5 units)

Course Description: Individual research.

Prerequisite(s): Consent of instructor. Upper division standing.

Learning Activities: Variable.

Grade Mode: Pass/No Pass only.

MMI 200D – Mechanisms for Microbial Interactions with Hosts (3 units)

Course Description: Study of mechanisms involved in microbial interactions within a host environment. The following principles are basic to understanding these interactions: host recognition, invasion, competition and growth, and host defense.

Prerequisite(s): MIB 200A; or consent of instructor.

Learning Activities: Lecture/Discussion 3 hour(s).

Grade Mode: Letter.

MMI 210A – Critical Analysis of Contemporary Research on Animal Models of Human Infectious Disease (1 unit)

Course Description: Topics will include diverse vertebrate and invertebrate models of human infectious diseases.

Prerequisite(s): Consent of instructor; students funded by the Animal Models of Infectious Diseases Training Grant.

Learning Activities: Lecture/Discussion 1 hour(s).

Enrollment Restriction(s): Limited enrollment.

Repeat Credit: May be repeated.

Grade Mode: Satisfactory/Unsatisfactory only.

MMI 210B – Comparative Analysis of Animal Models of Human Infectious Diseases (1 unit)

Course Description: Compares the major vertebrate and invertebrate animal models that are used most commonly to study human infectious disease, including mouse, non-human primate, *Caenorhabditis elegans*, and *drosophila*.

Prerequisite(s): Students funded by the Animal Models of Infectious Diseases Training Grant; others by consent of instructor.

Learning Activities: Lecture/Discussion 1 hour(s).

Enrollment Restriction(s): Limited enrollment.

Repeat Credit: May be repeated.

Grade Mode: Satisfactory/Unsatisfactory only.

MMI 215 – Medical Parasitology (3 units)

Course Description: Epidemiology, pathogenesis, diagnostic methods and current literature discussion of protozoa, helminths and arthropods of medical importance.

Prerequisite(s): Graduate student with consent of instructor.

Learning Activities: Lecture 1.50 hour(s), Discussion 1.50 hour(s).

Grade Mode: Letter.

MMI 280 – The Endogenous Microbiota in Health & Disease (3 units)

Course Description: Recent insights into the microbial communities inhabiting mucosal surfaces, and will discuss how the composition of these communities contributes to normal development, metabolism, education of the immune system, and disease susceptibility. Offered in spring quarter; even years.

Prerequisite(s): Graduate standing.

Learning Activities: Lecture 3 hour(s).

Grade Mode: Letter.

MMI 291 – Seminar in Microbiology & Immunology (1 unit)

Course Description: Research seminars on current topics in microbiology and immunology.

Learning Activities: Seminar 1 hour(s).

Enrollment Restriction(s): Restricted to students with upper division or graduate standing.

Repeat Credit: May be repeated when topic differs.

Grade Mode: Satisfactory/Unsatisfactory only.

MMI 298 – Group Study in Medical Microbiology & Immunology (1-5 units)

Course Description: Directed reading and discussion and/or laboratory investigation on selected topics. Sections 1, 2, 4, 5 are S/U grading only.

Prerequisite(s): Consent of instructor; open to graduate students.

Learning Activities: Variable.

Grade Mode: Satisfactory/Unsatisfactory only.

MMI 299 – Research (1-12 units)

Course Description: Laboratory investigation contributing to the dissertation for a graduate degree.

Prerequisite(s): Consent of instructor; open to graduate students.

Learning Activities: Variable.

Grade Mode: Satisfactory/Unsatisfactory only.

MMI 410 – Physician Scientist Molecular Medicine Journal Club (1 unit)

Course Description: Weekly seminars by students on research articles in current literature. Topics/articles to be selected by instructors to include a broad range of frontiers in biomedical literature.

Learning Activities: Lecture/Discussion 1 hour(s).

Repeat Credit: May be repeated.

Grade Mode: Honors/Pass/Fail.

MMI 480A – Medical Immunology (2.5 units)

Course Description: Helping to understand the immune system, the nomenclature and functional significance of the tissues, cells, proteins and genes of the immune system, as well as the normal regulatory mechanisms and pathologic outcomes related to the immune response.

Learning Activities: Lecture 2 hour(s), Discussion/Laboratory 0.50 hour(s).

Enrollment Restriction(s): Restricted to Medical students only.

Grade Mode: Pass/Fail only.

MMI 480B – Medical Microbiology (5.5 units)

Course Description: Discussion of the diseases caused by infectious agents includes their pathogenesis, clinical manifestations, diagnosis, treatment epidemiology and prevention. Covers the general properties of and diagnostic techniques for bacteria, fungi and viruses.

Learning Activities: Lecture 2.75 hour(s), Discussion/Laboratory 1 hour(s).

Enrollment Restriction(s): Restricted to Medical students only.

Grade Mode: Pass/Fail only.

MMI 480D – Medical Microbiology D (1 unit)

Course Description: Continuation of longitudinal medical microbiology course series.

Learning Activities: Lecture/Lab 1 hour(s).

Grade Mode: Pass/Fail only.

MMI 497T – Tutoring in Medical Microbiology (1-5 units)

Course Description: Assist instructor by tutoring medical students in one of the departmental courses that is a component of the required curriculum of the School of Medicine.

Prerequisite(s): Consent of instructor; appropriate preparation in subject matter.

Learning Activities: Tutorial 3-15 hour(s).

Grade Mode: Honors/Pass/Fail.

MMI 498 – Group Study in Medical Microbiology & Immunology (1-5 units)

Course Description: Directed reading and discussion and/or laboratory investigation on selected topics.

Prerequisite(s): Medical students with consent of instructor.

Learning Activities: Variable.

Grade Mode: Honors/Pass/Fail.

MMI 499 – Research (1-12 units)

Course Description: Research.

Prerequisite(s): Medical students with consent of instructor.

Learning Activities: Variable.

Repeat Credit: May be repeated.

Grade Mode: Honors/Pass/Fail.