# **IMMUNOLOGY (GS06)**

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### GS06 1013 Fundamental Immunology (3 Credits)

Prerequisites: Undergraduate-level Biology and Biochemistry courses plus a basic knowledge of cellular and molecular biology. The objectives of the course are to cover a broad overview of the principles of immunology by the pioneers in the field. Extensive introductory classes are offered by experts in their respected areas. The content of lectures provides students with basic understanding of different functions of the immune systems, two major types of immune responses, the immune cell types mediating immune response, the immune responses to foreign entities and related basic concepts of immunology to clinical settings. Letter Graded Letter Graded

## GS06 1103 Emerging Concepts in Immunology (3 Credits)

Prerequisites: GS06 1013: Fundamental Immunology or Consent of Instructor. The chief objective of this course is to teach students about recent discoveries and techniques used in the field of immunology. Students will critically evaluate and present publications from top-tier journals under the guidance of leading experts in the selected fields. Topic areas include basic, translational, and clinical studies in antigen processing, lymphokines, complement, tumor microenvironment, T and B lymphocytes, vaccines and adjuvants, immunotherapy, CAR T cells, and monoclonal antibodies. The course generally runs for 10 weeks with two meetings per week for 2 hours each session. Auditing this course is permitted with Instructor's consent. Letter Graded

# GS06 1132 Application of Tumor Immunology in the Clinical Setting (2 Credits)

Prerequisites: Previous immunology course such as Fundamental Immunology (GS06 1013) or Permission of instructor prior to enrollment. This course builds upon basic immunology to provide a foundation for tumor immunology as it is applied in the clinical setting. Graduate students, postdoctoral fellows, and medical residents/fellows who participate in this course will gain an understanding of immune surveillance, tumor markers, human tumor immune responses, novel cancer immunotherapeutics, and regulatory process and clinical trial design for cancer immunotherapeutics. Letter Graded

#### GS06 1611 Advanced Topics in Immunology (1 Credit)

Prerequisite: Fundamental Immunology (GS06 1013) and Foundations of Biomedical Research (GS21 1017) or permission of instructor. This course is an analysis of current topics in immunology. Weekly oral presentations of an assigned topic will be made by participating students. Course emphasis is on the development of communication skills and analysis of current research areas. Pass/Fail