

## MMG991 FS20 – Graduate Immunology (modular) Syllabus

**Mon & Wed from 3 to 4:30 PM by zoom**

### **Instructors**

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### **Course Objectives**

This is an advanced immunology course that requires basic knowledge of molecular biology, cell biology, physiology and genetics. Prior completion of an undergraduate level immunology course (e.g. MMG451) is highly recommended. The students are expected to be familiar with the nomenclatures used in the field of immunology. Upon completion of the course, the students are expected to have an insightful understanding of the components of the immune

system and the principles of how the immune system works. This course is taught by a team of immunologists.

Three independent modules are offered.

1. **Molecular Immunology** (protein structures and functions of immune receptors and molecules, gene expression and regulation, DNA rearrangements and antigen receptor diversifications)
2. **Cellular Immunology** (Cells in the immune system, Lymphocytes development and differentiation, cellular interactions in immune responses)
3. **Applied Immunology** (Immunity against bacterial and viral infections, and cancer cells. Vaccines, Transplantation and Immunotherapies. Immunodeficiency and autoimmune diseases).

The modules are offered in succession (no overlap in time) so students can choose freely to enroll in any combination. Each module counts for 1 credit. There will be an exam at the end of each module. Exam questions can be multiple choices, filling the blank, or short essay questions. The exams will be graded numerically (0-5).