

BIO 553 Advanced Topics in Immunology

(Spring, 2020)

Instructor: Yuntao Wu (Phone: 703-993-4299; email: ywu8@gmu.edu)
Office: PWII, Room 306

Text book: Cellular and Molecular Immunology
By Abul K. Abbas and Andrew H. Lichtman, 6 or 7th edition

Tuesday, 1:30 pm – 4:10 pm. K. Johnson Hall 252

(Important dates: Spring break: March 9-15; Reading days: May 5; Exam: May 12)

January 21nd:

- Introduction to Dr. Wu has his research in HIV Immunology.

January 28th:

- Basics of Flow-cytometry

I. Introduction to Immunology:

- 1). General properties of Immune response
- 2). Cells and tissues of the immune system

February 4th:

I. Recognition of Antigens:

- 1). Antibodies and Antigens
- 2). The major histocompatibility complex

February 11th:

II. Recognition of Antigens:

- 3). Antigen presentation
- 4). Antigen receptors and accessory molecules

February 18th:

III. Maturation, activation of regulation of lymphocytes

- 1). Lymphocytes maturation

February 25th:

III. Maturation, activation and regulation of lymphocytes

- 1). T cell activation

March 3rd:

III. Maturation, activation of regulation of lymphocytes

- 2). B cell activation

March 10th: March Break (No class)

March 17th:

III. Maturation, activation of regulation of lymphocytes

- 3). Immunologic Tolerance

March 24th:

IV. Effector Mechanism of Immune Response

- 1). Cytokines
- 2). Innate Immunity

March 31st:

IV. Effector Mechanism of Immune Response

3). Cell mediated Immunity

April 7th:

IV. Effector Mechanism of Immune Response

4). Humoral Immunity

April 14th:

V. Immune system in Disease

1) Immunity to Tumors

April 21st:

V. Immune system in Disease

2) Hypersensitivity and autoimmunity and transplantation immunology

3) Acquired immunodeficiencies

April 28th:

Final review

May 5th:

Reading week (no class)

May 12th: Final Exam

Grading:

Paper Presentation (20%)

***Class participation (31%)**

Final Exam: multiple choice and short questions (49%)

Bonus for class activity: 5%

***Class participation (7%+ 24% = 31%)**

- For each class attendance: 0.5%. Total: 14 classes x 0.5% = 7%

(Grade will be deducted for missing class (0.5% reduction), late (0.1% deduction) and half class (0.25% deduction))

- Activity in class: 2% for each class. Total: 12 classes x 2% = 24%

(excluding the first two class. Each student is required to ask at least 2 questions to the presenter to earn 2%. If good questions are asked, a bonus 0.5% will be awarded)

A+: 98-100%

A : 94-97%

A-: 90-93%

B+: 87-89%

B: 83-86%

B-: 80-82%

C+ 77-79%

C: 70-76%

D-: 60-69%

F: < 60%