

## BIO 553 Advanced Topics in Immunology

(Spring, 2019)

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Office: PWII, Room 306

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

**Tuesday, 4:30 pm – 7:10 pm. Colgan Hall 204**

*(Important dates: Spring break: March 11-17; Reading days: May 7; Exam: May 14)*

**January 22nd:**

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

**January 29 th:**

- Basics of Flow-cytometry

I. Introduction to Immunology:

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

**February 5th:**

I. Recognition of Antigens:

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

**February 12th:**

II. Recognition of Antigens:

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

**February 19th:**

III. Maturation, activation of regulation of lymphocytes

- 1). Lymphocytes maturation

**February 26th:**

III. Maturation, activation and regulation of lymphocytes

- 1). T cell activation

**March 5th:**

III. Maturation, activation of regulation of lymphocytes

- 2). B cell activation

**March 12: March Break (No class)**

**March 19th:**

III. Maturation, activation of regulation of lymphocytes

- 3). Immunologic Tolerance

**March 26th:**

IV. Effector Mechanism of Immune Response

- 1). Cytokines
- 2). Innate Immunity

**April 2nd:**

IV. Effector Mechanism of Immune Response

**3). Cell mediated Immunity**

**April 9th:**

**IV. Effector Mechanism of Immune Response**

**4). Humoral Immunity**

**April 16th:**

**V. Immune system in Disease**

**1) Immunity to Tumors**

**April 23rd:**

**V. Immune system in Disease**

**2) Hypersensitivity and autoimmunity and transplantation immunology**

**3) Acquired immunodeficiencies**

**April 30:**

**Final review**

**May 7th:**

**Reading week**

**May 14th: 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+: 97-100%

A : 93-96 %

A-: 90-92%

B+: 87-89%

B: 83-86%

B-: 80-82%

C+ 77-79%

C: 70-76%

D-: 60-69%

F: < 60%