

# BIO 553 Advanced Topics in Immunology

(Spring, 2021)

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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, 1:30 pm – 4:10 pm. K. Johnson Hall 132 / Online hybrid**

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

## **January 26:**

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

## **February 2<sup>nd</sup> :**

- Basics of Flow-cytometry

I. Introduction to Immunology:

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

## **February 9th:**

I. Recognition of Antigens:

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

## **February 16th:**

II. Recognition of Antigens:

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

## **February 23th:**

III. Maturation, activation and regulation of lymphocytes

- 1). Lymphocytes maturation

## **March 2nd:**

III. Maturation, activation and regulation of lymphocytes

- 1). T cell activation

## **March 10th:**

III. Maturation, activation and regulation of lymphocytes

- 2). B cell activation

## **March 17th:**

III. Maturation, activation and 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 6th:**

#### IV. Effector Mechanism of Immune Response

##### 4). Humoral Immunity

April 13th:

V. Immune system in Disease

1) Immunity to Tumors

April 20th:

V. Immune system in Disease

2) Hypersensitivity and autoimmunity and transplantation immunology

3) Acquired immunodeficiencies

April 27th:

Final review

#### May 4th: 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%