Bi114 Syllabus Winter 2020

Lecture	Date	Class Topic	Reading	Instructor
1	1/6/20	Introduction	Janeway-Chp 1	PJB
2	1/8/20	Cells and Organs of the immune system	Kuby Chp 2**	PJB
3	1/13/20	Ab structure/effector functions	Janeway-Chp 4,10	PJB
4 – PS1	1/15/20	Experimental Methods in Immunology	Janeway-Appendix I	PJB
	1/20/20	(Caltech holiday)		
5 – PS1 Due	1/22/20	Innate Immunity I- Complement/NK cells/Macrophages	Janeway-Chp 2	MY
6 – PS2	1/27/20	Innate Immunity II- Pattern Recognition	Janeway-Chp 3	MY
7	1/29/20	T cells part I: MHC structure/function	Janeway-Chp 4, 6	PJB
8 – PS2 Due	2/3/20	(TA Midterm review)		TAs
Midterm Exam – February 3, 2020 (handed out after review); Due February 10, 2020 at 11:59pm)				
9	2/5/20	T cells part II: Function/Responses	Janeway-Chp 4, 5	PJB
10	2/10/20	Antigen Presentation	Janeway-Chp 6	PJB
11	2/12/20	The Dendritic Cell	Janeway-Chp 9	MY
	2/17/20	(Caltech holiday)		
12 – PS 3	2/19/20	VDJ Recombination/class switching	Janeway- Chp 5	MY
13	2/24/20	B cell development	Janeway-Chp 4,8	PJB
14 – PS3 Due	2/26/20	Adaptive Immune Responses	Janeway-Chp 7,8,9,10	MY
15 – PS4	3/2/20	T Cell Development	Janeway- Chp 12, 14,15	MY
16	3/4/20	Regulatory T cells	Janeway-Chp 9, 15	MY
17 – PS4 Due	3/9/20	Autoimmunity / Mucosal Immunology	Janeway- Chp 12, 14,15	MY
18	3/11/20	(TA Final review)		TAs
Final Exam – March 11, 2020 (handed out after review); Due March 18, 2020 at 11:59pm				

**https://books.google.com/books?id=oOsFf2WfE5wC&pg=PA23&source=gbs_toc_r&cad=3#v=onepage&q&f=false

Lecture
Mondays and Wednesdays, 1:30-2:55pm, 200 BRD
(URL:https://courses.caltech.edu/course/view.php?id=3230)

Problem Sets handed out:

- Flashcards for Chapter 1 available Jan 6, 2020; must be completed by Jan 13, 2020.
- Flashcards for Chapter 4 available Jan 6, 2020; must be completed on or before Jan 20, 2020.
- Flashcards for Chapters 3, 5, 7 and 9 available Jan 6, 2020; must be completed before midterm.
- Problem Set 1: Handed out January 15; Due January 22
- Problem Set 2: Handed out January 27; Due February 3
- Problem Set 3: Handed out February 19; Due February 26
- Problem Set 4: Handed out March 2; Due March 9
- Problem Sets are due 1 week after they are assigned

Midterm Exam:

- Handed out February 3, 2020; Due February 10, 2020 at 11:59pm

Final Exam:

- Handed out March 11, 2020; Due March 18, 2020 at 11:59pm

Instructor office hours

Mary Yui	4-5pm Thursday (or by appointment) in 205 Kerckhoff
Pamela Bjorkman	4-5pm Thursday (or by appointment) in 361 Broad

TA office hours

Scheduled office hours for each problem set:

Problem Set 1: Kim, Broad 200, 7-8pm, on Tue. Jan. 21, 2020
Problem Set 2: Jessica, Broad 200, 7-8pm, on Thu. Jan 30, 2020
Midterm Review: Jessica and Kim, Broad 200, Jan 30, 2020
Problem Set 3: Kim, Broad 200, 7-8pm, on Mon. Feb. 24, 2020
Problem Set 4: Jessica, Broad 200, 7-8pm, on Thu. March 6, 2020
Final Review: Jessica and Kim, Broad 200, March 12, 2020

TAs are also available for individual office hours upon request (e-mail the TAs on weekend before desired date)

Kim Dam	kdam@caltech.edu
Jessica Griffiths	jgriffit@caltech.edu

Requirements:

Class Participation:	10% of grade
Problem sets:	35% of grade
Midterm exam:	20% of grade
Final exam:	35% of grade

Reading Material

1. Required Text:
K. Murphy, P. Travers, M. Walport; Janeway's Immunobiology:, 8th edition. Current Biology, Ltd., 2004

2. Recommended Text:
Fundamental Immunology (5th edition), edited by William E. Paul, 2003, Lippincott Williams and Wilkins. Cells and organs lecture taken from Chapter 2 of Kuby textbook, which can be found online here:
https://books.google.com/books?id=oOsFf2WfE5wC&pg=PA23&source=gbs_toc_r&cad=3#v=onepage&q&f=false

3. Assigned readings from the current literature:
Discussed in class and used for problem sets.
The course is based on lectures and assigned reading material, including both a textbook for background and references from the current literature. It is recommended that you buy the textbook by Janeway, and if you are interested, you may also wish to buy the more authoritative Fundamental Immunology book as a reference. Other readings will be handed out by the TAs. There will be citations of optional readings that you can get from the literature, but which are not strictly required. You're encouraged to use the libraries and the internet (using

Caltech's PubMed access- Caltech Connect) to consult these optional papers for additional depth and understanding.

Level of Work
This is not an introductory course. It presupposes some familiarity with the techniques and intellectual vantage points of molecular biology, as well as a comfortable acquaintance with general aspects of cell biology (the cell cycle, transcription, protein synthesis, protein structure & function, DNA recombination, intracellular transport, etc.). You will probably find the workload overwhelming if you are trying to learn these areas of cell biology as you go along the term.

Problem Sets
Problem sets will consist of questions relating to lecture material and assigned papers in the literature will be handed out on the dates specified above. Completed problem sets are due in class one week later or as announced in class. The problem sets are open book and require careful reading of the assigned papers. Consultation with TAs and discussion with classmates is encouraged, but copying answers from another student is a violation of the Honor Code. Over-collaboration will result in a violation of the Honor Code. The problem sets account for 35% of the grade.

No credit will be given for problem sets handed in late, unless you have contacted the TAs before the assignment is due and have a medical excuse signed by a **medical doctor**. The Professors and the TAs determine the amount of time you have for the extension only. Graduate school interviews and traveling do not count as medical excuses. If you plan to be away during part of the term or miss any classes, arrange before you leave to obtain and complete the problem sets early. Beside a documented medical excuse, no other reason will be considered for late submission of problem sets.

The TAs will be available at particular office hours for help before the problem set is due, at a time noted on the problem set. The point of the problem sets is to focus your reading of the literature papers so that we can look forward to some lively discussions**.**

Examinations and General Aspects
There will be two cumulative exams, a midterm exam worth 20% of the grade and a final exam worth 35% of the grade. Beside a documented medical excuse, no other reason will be considered for submission of late exams.

Both the midterm and final are take-home closed book exams. Any copying from published materials, from lecture outlines, the Internet, from another member of the class or any other source is plagiarism and a violation of the Honor Code. The closed book policy is to encourage you to understand the material fully as we go along and not just copy the course material to answer exam questions.

****Every login to Moodle is recorded and looked at by the TAs. "Unauthorized" logins and downloading of course materials will be investigated.****

The only way to understand the material is to ask questions. Please do not be intimidated. Class participation will be rewarded up to 10% of the total grade.

We grade this class on a curve. Although we can't anticipate what percentage range will be assigned to each grade, it is generally the case that you will need to have a 60% or higher in order to pass the class.

Staff

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