

CH-413: Nanobiotechnology Syllabus 2025

Week	Date	Lecture (14:15-16:00)	Exercise (16:15-17:00)
1	February 20	Introduction to nanobiotechnology, fluorescence, FRET	Instructions for Paper Review Debate and Final Project (written proposal).
2	February 27	Single-molecule fluorescence	Exercise session
3	March 6	Force spectroscopy	Exercise session
	March 6	<i>Exercise 1 due by 23:59</i>	
4	March 13	Superresolution microscopy	Debates: groups A to D
5	March 20	Optical sensing	Exercise session
	March 20	<i>Proposal idea due by 23:59</i>	
6	March 27	Electrical sensing	Debates: groups E to H
	March 27	<i>Exercise 2 due by 23:59</i>	
7	April 3	DNA sequencing	Exercise session
8	April 10	Microfluidics	Debates: groups I to L
	April 10	<i>Exercise 3 due by 23:59</i>	
9	April 17	Nanoparticles I	Exercise session
	April 17	<i>Proposal first draft due by 23:59</i>	
10	April 24	NO LECTURE (Semester break)	
11	May 1	Nanoparticles II	Exercise session
12	May 8	DNA/RNA origami	Debates: groups M to P
	May 8	<i>Exercise 4 due by 23:59</i>	
13	May 15	Single-cell analysis	Exercise session
14	May 22	Single-cell manipulation and study	Debates: groups Q to T
15	May 29	NO LECTURE (Ascension)	
	May 30	<i>Proposal final draft due by 23:59</i>	

Paper review debate format: see separate handout on Moodle.

Exercise session format: The teaching assistants will be available to answer any questions related to the exercises, the paper review debate, and the final project. Additionally, students are encouraged to use these sessions to discuss or brainstorm proposal ideas with the teaching assistants.

Contact

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