

CHEM-ENG 590E - Microfluidics and Microscale Analysis in Materials and Biology

Prof. Sarah Perry

Class Schedule

Week	Date	Topic	Reading Assignment	Comments, Deadlines
Course Introduction				
1	1/23	Syllabus, Literature & Design Assignments Scaling: micro- vs. macro-fluidics		
	1/25	Microfabrication Materials, Photolithography, Soft Lithography	Wiki Textbook Chapters 1 and 2	Homework #1 Due Introduction to Microfluidics and Design Project Selections
2	1/30	Paperfuge Activity		
	2/1	Device Design Adobe Illustrator - Bring Laptop		Homework #2 Due Safety Training and OWW Registration
2/5 **Last day to add/drop with no record**				
3	2/6	Flow Control Laminar Flow and Mixing, Droplet Microfluidics	Wiki Textbook Chapter 4	
	2/8	Valving Strategies	Wiki Textbook Chapter 5	Homework #3 Due Introduction to Illustrator, Microfluidic Mazes
4	2/13	Hands On Photolithography/Soft Lithography Training		
	2/15	Hands On Photolithography/Soft Lithography Training		Homework Due Outline of Design Project Plan
5	2/20	Methods for Separation	Wiki Textbook Chapter 6	
	2/22	Paper Microfluidics	Wiki Textbook Chapter 7	Homework Due Preliminary Draft of Individual Wiki Pages
6	2/27	TBD		
	3/1	TBD		Homework Due Preliminary Device Designs

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	3/5	** Last day to drop with DR - Grad Students**	
7	3/6	TBD	
	3/7	**Last day to drop with "W" and select P/F**	
	3/8	3D Printing - Marc Durante (Merck)	Wiki Textbook Chapter 3 See additional articles on Moodle Homework Due Device Designs
9	3/13		
	3/15	**Spring Break**	
8	3/20	TBD	
	3/22	TBD	Homework Due Design Project Update
10	3/27	TBD	
	3/29	TBD	
11	4/3	TBD	
	4/5	TBD	Homework Due Final Draft of Individual Wiki Pages
12	4/10	TBD	
	4/12	TBD	

Week	Date	Topic	Comments, Deadlines
13	4/17	**Monday Class Schedule**	
	4/19	No class - room is booked	Homework Due Design Project Update
14	4/24	TBD	
	4/26	TBD	
15	5/1	Last day of class	
	5/3	(Final exams begin)	Homework Due Individual Reflection Paper
16	TBD	Design Project Presentations LSL N410	Homework Due Final Design Report