

## CHEM-ENG 535 - Microfluidics and Microscale Analysis in Materials and Biology

Prof. Sarah Perry

Class Schedule

Week	Date	Topic	Reading Assignment	Comments, Deadlines
1	1/21	<b>Course Introduction</b> Syllabus, Literature & Design Assignments Scaling: micro- vs. macro-fluidics		
	1/23	<b>Microfabrication</b> Materials, Photolithography, Soft Lithography	Wiki Textbook Chapters 1 and 2	<b>Homework #1 Due</b> Introduction to Microfluidics and Wiki Page Selections
2	1/28	<b>Device Design</b> Adobe Illustrator - <b>Bring Laptop</b>		
	1/30	<b>Paperfuge Activity</b>		<b>Homework #2 Due</b> Safety Training and OWW Registration
3	2/3	<b>**Last day to add/drop with no record**</b>		
	2/4	<b>Flow Control</b> Laminar Flow and Mixing, Droplet Microfluidics	Wiki Textbook Chapter 4	
	2/6	<b>Valving Strategies</b>	Wiki Textbook Chapter 5	<b>Homework #3 Due</b> Introduction to Illustrator, Microfluidic Mazes
4	2/11	<b>Copyright and Fair Use</b> <b>Hands On</b> Photolithography Training		
	2/13	<b>Hands On</b> Soft Lithography Training		<b>Homework Due</b> Outline of Design Project Plan
5	2/18	<b>**Monday Class Schedule**</b>		
	2/20	<b>Methods for Separation</b>	Wiki Textbook Chapter 6	
6	2/25	<b>Paper Microfluidics and Roll-to-Roll Fabrication</b>	Wiki Textbook Chapter 7	
	2/27	<b>3D Printing</b> Lecture and Tour by Dave Follette LSL N410	Wiki Textbook Chapter 3	<b>Homework Due</b> Preliminary Device Designs
7	3/3	<b>Hands On</b> Team Time		
	3/5	<b>Hands On</b> Team Time		<b>Homework Due</b> Preliminary Draft of Individual Wiki Pages

Week	Date	Topic	Comments, Deadlines
8	3/10	TBD	
	3/12	TBD	<b>Homework Due</b> Device Designs
9		<b>**Spring Break**</b>	
10	3/24	<b>** Last day to drop with DR - Grad Students**</b> <b>**Last day to drop with "W" and select P/F**</b> Hands On Team time	
	3/26	TBD	<b>Homework Due</b> Design Project Update
11	3/31	TBD	
	4/2	TBD	
12	4/7	TBD	
	4/9	TBD	<b>Homework Due</b> Final Draft of Individual Wiki Pages
13	4/14	TBD	
	4/16	TBD	<b>Homework Due</b> Design Project Update
14	4/21	TBD	
	4/23	TBD	
15	4/28	TBD	
	4/30	<b>**Reading Day**</b>	<b>Homework Due</b> Individual Reflection Paper
16		<b>Design Project Presentations (TBD)</b>	<b>Homework Due</b> Final Design Report