

University of California
Mechanical Engineering
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ChE/ME268–Physicochem. hydrodynamics
Fall 2009

Text: de Gennes, Brochard–Wyart, Quéré 2004 *Drops, bubbles, pearls and waves*, Springer

Grading: midterm (35%); final test (65%) with problems based on the homework.

Week	Date	Topic
1	8/26	Surface energy and its manifestations
2	8/31	Spreading of liquids Wetting of textured surfaces
3	9/7	no class Capillarity and gravity
4	9/14	Contact line hysteresis
5 & 6	9/21	Springer Lectures: Professor Wanda Krassowska Neu; Duke University <i>Electroporation of cell membranes</i>
7	10/5	Interfacial instability
8	10/12	Dewetting
9	10/19	Closed book test Friday 10/16 Surfactants
10	10/26	Marangoni effect
11	11/2	Moving contact line: Tanner’s law
12	11/9	Coating flow
	11/11	no class
13	11/16	Evaporating stationary meniscus
14	11/23	Evaporation and diffusion
	11/26	no class
15	11/30	Evaporation and diffusion

Closed–book final test: Friday 12/18 5–7pm