Material for Week 12
Physics 4488/6562: Statistical Mechanics
http://www.physics.cornell.edu/sethna/teaching/562/
Exercises due Mon. May 04
Last correction at April 22, 2020, 9:46 pm

All exercises are from Version 2.0 of the text: http://pages.physics.cornell.edu/∼sethna/StatMech/v2EntropyOrderParametersComplexity.pdf

Monday
In-class question: 11.1 *Maxwell and van der Waals*
Wednesday
Read: Chapter 11, Sec. 11.3 (Nucleation: critical droplet theory), and 11.4.1 (Coarsening)
Pre-class question: 11.12 *Nucleation in 2D*
In-class question: 11.6 *Coarsening in the Ising model*
Friday
Read: Chapter 11, Sec. 11.4 (Morphology of abrupt transitions)
Pre-class question: 11.8 *Minimizing sequences and microstructure*
In-class question: 11.7 *Origami microstructure*
Monday
Read: Chapter 12, Introduction
Pre-class question: 12.17 *The Gutenberg–Richter law*

Exercises

Everyone (4488 and 6562)

11.13 *Linear stability of a growing interface.*
11.5 *Nucleation of dislocation pairs.*

Graduate (6562 only)

10.7 *Noise and Langevin equations.*
11.14 *Nucleation of cracks.*
11.15 *Elastic theory does not converge.* Completely optional: for an extra challenge