WINTER 2014

MSE 512, CHE 512, MACRO 512: POLYMER PHYSICS

Administrative Details:

Instructor: Anish Tuteja

Office: 2046 H.H. Dow and Bldg. 10 – A185, NCRC

Lecture: 4.30 – 6 PM Mo, We

Office Hours: 2 – 3.30 PM, Friday


Reference Text:

1. Principles of Polymer Chemistry, Paul J. Flory (1953)

2. Polymer Physics, Michael Rubinstein, Ralph H. Colby

   Available Online from UM libraries at: http://mirlyn.lib.umich.edu/Record/005702003

Grading:

Midterm 1: 30%

Final Exam: 40%

Homework: (6-7 Problem Sets): 30%
COURSE OUTLINE

Ch 1 (H&L): Introduction to Chain Molecules

Ch 6 (H&L): Polymer Conformations

Ch 7 (H&L): Thermodynamics of Polymer Solutions

MIDTERM 1 (Feb. 26, 2014)

Ch 9 (H&L): Dynamics of Dilute Polymer Solutions

Ch 12 (H&L): Glass Transition

Ch 13 (H&L): Crystalline Polymers

Ch 10 (H&L): Networks, Gels, and Rubber Elasticity

FINAL EXAM (Thursday, April 24, 10:30 AM – 12:30 PM)