Fall 2018

Polymeric Properties in Food

Instructor
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Time and Place
This is a three credits course. The course meets during the fall semester of 2018 on Wednesday from 7:15-10:05 pm in Room 101.

Office hours: 2:00 – 4:00pm, Wednesday

Topics [week(s)]

Lecture 1  Introduction to Polymer Science: Structure & MW  Sept. 5
Lecture 2  Polymer Conformation: Ideal Chains  Sept. 12
Lecture 3  Polymer Conformation: Real Chains  Sept. 19
Lecture 4  Thermodynamics of Polymer Solutions  Sept. 26
Lecture 5  Network and Gelation  Oct. 3
Lecture 6  Characterization of Polymer Structures: Scattering Techniques  Oct. 10
Mid-term:  Oct. 17
Lecture 7  Viscoelasticity and Elasticity of Polymers  Oct. 24
Lecture 8  Solid-State Properties of Polymers  Oct. 31
Lecture 9  Naturally Occurring Biopolymers  Nov. 7
Lecture 10  Impact of Water Activity on Food Biopolymers  Nov. 14
Lecture 11  Biopolymer Films & Nanocomposites  Nov. 28
Lecture 12  Biopolymers for Food/Drug Delivery Applications  Dec. 5
Final Exam  Dec. 12
Reading Materials


#3: The instructor will also provide handouts from review articles and book chapters for related topics.

Grading
Grades will be based on a homework (20%), mid-term (40%), and final exam (40%).