

SCHEDULE FOR SECTION 2 (TR 6PM)

Week 1

- April 2 Introduction to the course.
[Discussion of quantum mechanics and molecular mechanics](#)
- April 4 [Discussion: Monte Carlo](#)
All Groups: Allantoin Part I: Conformational analysis in the gas phase.

Week 2

- April 9 [Lecture: NMR part I, PSB-N 4606](#)
Group A: Allantoin Part II: Monte Carlo Simulations
Group B: Allantoin Part III: NMR data collection
- April 11 [Lecture: NMR, part II, PSB-N 4606](#)
Group A: Allantoin Part III : NMR data collection
Group B: Allantoin Part II: Monte Carlo Simulations

Week 3

- April 16 **All groups:** [Discussion of enzyme kinetics I](#)
Group A, B3: Enzyme kinetics: Multi-substrate kinetics with GAPDH (no quiz)
Group B1: Circular dichroism study of protein folding (42 °C) (no quiz)
Group B2: Independent study
- April 18 **All groups:** [Discussion of enzyme kinetics II](#)
Group A: Enzyme kinetics: Inhibition of GAPDH
Group B1, B2: Enzyme kinetics: Multi-substrate kinetics with GAPDH
Group B3: Circular dichroism study of protein folding (28 °C) (no quiz)

Week 4

- April 23 **All groups:** [Discussion of enzyme kinetics III](#)
Group A: Independent study
Group B1 and B3: Enzyme kinetics: Inhibition of GAPDH
Group B2: Circular dichroism study of protein folding (12 °C) (no quiz)
- April 25 **All groups:** ***“Allantoin” lab report due***
All groups: [Discussion of peptides & proteins: structure, folding, binding \(part 1\)](#)
Group A1: Circular dichroism study of protein folding (18 °C)
Groups B1: Independent study
Group B2: Enzyme kinetics: Inhibition of GAPDH

Week 5

- April 30 **All groups:** [Discussion of peptides & proteins: structure, folding, binding \(part 2\)](#)
All groups: CD quiz
Group A2: Circular dichroism study of protein folding (58 °C)
Group A1, B: Independent study
- May 2 **All groups:** [Data Analysis Tutorial/Discussion \(Chemistry Computer Lab\) \(TA\)](#)

Week6

May 7 ***“Enzyme Kinetics and Inhibition” report due***
Group A: Ligand Binding to Lysozyme (NAG, 10 °C)
Group B: Protein mass spectrometry 6 PM (no quiz)

May 9 ***“Circular Dichroism and Protein Folding” project due***
Lecture: Mass Spectrometry (in PSB-N 4606)
Group B: Ligand Binding to Lysozyme (NAG, 25 °C)
Group A: Protein mass spectrometry (at 4 PM)

Week7

May 14 ***First Exam***

May 16 **Discussion of protein crystallography**
All groups: Protein crystallography: setting up protein crystallization trials

Week8

May 21 **All groups: *“Ligand Binding to Lysozyme” report due***
All groups: Protein crystallography: microscopic analysis of protein crystals

May 23 **All groups: *“Mass Spectrometry” project due.***
All groups: Protein crystallography: analysis of diffraction data

Week9

May 28 **Memorial Day Holiday**

May 31 Make-up day

Week10

June 4 **All groups: Discussion: How to prepare for the poster session (Kahn)**
All Groups: *“Protein Crystallography” project due*
All groups: Possible Pre-Steady-State Kinetics Demo

June 6

June 7 ***Class will meet on June 7 (Friday) for the poster presentation (Noon ?)***

Second Exam