

Schedule of Experiments

Text: Wade, *Organic Chemistry*, 9th edition.
Laboratory manual: California State University, Northridge, Department of Chemistry and Biochemistry, *Chemistry 333L Laboratory Manual*.

<u>Dates</u>	<u>Experiment, Pre-Laboratory Preparation</u>
Jan. 26–28	Check-in Safety Review CSU Northridge Chemistry 333L Manual, pp. 1–17 UCLA video: Safety
Feb. 2–4	Melting-Point Analysis Evaluation of Purity by Melting-Point Determination Melting-Point Determination of an Unknown CSU Northridge Chemistry 333L Manual, pp. 18–28 CSU Northridge video: Melting-Point Determination UCLA video: Melting-Point Determination
Feb. 9–11	Recrystallization of Acetanilide CSU Northridge Chemistry 333L Manual, pp. 29–41 CSU Northridge video: Recrystallization UCLA video: Recrystallization
Feb. 16–18	Simple Distillation of α -Pinene CSU Northridge Chemistry 333L Manual, pp. 48–67 CSU Northridge video: Simple Distillation UCLA video: Simple Distillation
Feb. 23–25	Molecular Modeling Conformational Analysis with ChemDraw and Chem3D CSU Northridge Chemistry 333L Manual, pp. 81–86 Wade, Sections 3-13 to 3-15

- March 2–4 Fractional Distillation of Cyclohexane and Toluene With and Without a Vigreux Column
CSU Northridge Chemistry 333L Manual, pp. 68–73
 Work together in pairs to do both distillations
CSU Northridge video: [Fractional Distillation](#)
UCLA video: [Fractional Distillation](#)
UCLA video: [Gas Chromatography](#)
- March 9–11 Steam Distillation of Eugenol from Cloves
CSU Northridge Chemistry 333L Manual, pp. 74–80
CSU Northridge video: [Steam Distillation](#)
UCLA video: [Gas Chromatography](#)
- March 23–25 Extraction
 Which Phase is Which?
 The "Salting-Out" Effect
 Acid-Base Extraction of Benzil and Benzoic Acid
CSU Northridge Chemistry 333L Manual, pp. 87–96, 99–101
CSU Northridge video: [Extraction](#)
CSU Northridge video: [Extraction Demonstrations](#)
UCLA video: [Extraction](#)
- April 6–8 Thin-Layer Chromatography (TLC)
 TLC Analysis of *o*-Hydroxyacetophenone and *p*-Hydroxyacetophenone
 TLC Analysis of a Mixture of Common Analgesics
CSU Northridge Chemistry 333L Manual, pp. 103–112
CSU Northridge video: [Thin-Layer Chromatography](#)
UCLA video: [Thin-Layer Chromatography](#)
- April 13–15 Separation of Cholesterol and a Cholesteryl Ester by Column Chromatography
CSU Northridge Chemistry 333L Manual, pp. 113–124
CSU Northridge video: [Column Chromatography: Separation of Cholesterol
and a Cholesteryl Ester](#)
UCLA video: [Column Chromatography](#)
- April 20–22 Acid-Catalyzed Dehydration of 2-Methylcyclohexanol
CSU Northridge Chemistry 333L Manual, pp. 125–133, 189–192
Wade, Sections 6-13 to 6-15, 7-8A to 7-8C, 7-10, 7-11, 7-17B, 7-18, 11-7, and 11-10
CSU Northridge video: [Acid-Catalyzed Dehydration of 2-Methylcyclohexanol](#)
UCLA video: [Gas Chromatography](#)

April 27–29

Stereoselective Reduction of 4-*tert*-Butylcyclohexanone

CSU Northridge Chemistry 333L Manual, pp. 138–142, 183–184, 189–192

Wade, Sections 10-11 and 18-11

CSU Northridge video: [Stereoselective Reduction of 4-*tert*-Butylcyclohexanone](#)

UCLA video: [Gas Chromatography](#)

UCLA video: [Infrared Spectroscopy](#)

May 4–6

Infrared Spectroscopy

CSU Northridge Chemistry 333L Manual, pp. 143–149, 183–184

Wade, Sections 12-1 to 12-12

Appendices 2A and 2B

CSU Northridge video: [Infrared Spectroscopy](#)

UCLA video: [Infrared Spectroscopy](#)

May 11–13

Nuclear Magnetic Resonance (NMR) Spectroscopy

CSU Northridge Chemistry 333L Manual, pp. 150–163, 183–188

Wade, Sections 12-1 to 12-12, 13-1 to 13-13

Appendices 1B, 1C, 2A, and 2B

CSU Northridge video: [NMR Spectroscopy](#)

See the [CSUN Chemistry](#) YouTube channel for the CSU Northridge videos.

See the [Instructional Media Production](#) website for the UCLA organic chemistry videos.