

Tentative 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. 24–26	Introduction Safety Review Check-In CSU Northridge Chemistry 333L Manual, pp. 1–17 UCLA video: Safety
Jan. 31 – Feb. 2	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. 7–9	Recrystallization of Acetanilide CSU Northridge Chemistry 333L Manual, pp. 29–41 CSU Northridge video: Recrystallization UCLA video: Recrystallization
Feb. 14–16	Simple Distillation of α -Pinene CSU Northridge Chemistry 333L Manual, pp. 48–67 CSU Northridge video: Simple Distillation UCLA video: Simple Distillation
Feb. 21–23	Molecular Modeling Conformational Analysis with ChemDraw and Chem3D CSU Northridge Chemistry 333L Manual, pp. 81–86 Wade, Sections 3-13 to 3-15
Feb. 28 – March 9	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 14–16	<p>Extraction</p> <ul style="list-style-type: none"> Which Phase is Which? The "Salting-Out" Effect Acid-Base Extraction of Benzil and Benzoic Acid <p>CSU Northridge Chemistry 333L Manual, pp. 87–96, 99–101</p> <p>CSU Northridge video: Extraction</p> <p>CSU Northridge video: Extraction Demonstrations</p> <p>UCLA video: Extraction</p>
March 21–23	<p>Spring Break</p>
March 28–30	<p>Thin-Layer Chromatography (TLC)</p> <ul style="list-style-type: none"> TLC Analysis of <i>o</i>-Hydroxyacetophenone and <i>p</i>-Hydroxyacetophenone TLC Analysis of a Mixture of Common Analgesics <p>CSU Northridge Chemistry 333L Manual, pp. 103–112</p> <p>CSU Northridge video: Thin-Layer Chromatography</p> <p>UCLA video: Thin-Layer Chromatography</p>
April 4–6	<p>Separation of Cholesterol and a Cholesteryl Ester by Column Chromatography</p> <p>CSU Northridge Chemistry 333L Manual, pp. 113–124</p> <p>CSU Northridge video: Column Chromatography: Separation of Cholesterol and a Cholesteryl Ester</p> <p>UCLA video: Column Chromatography</p>
April 11–13	<p>Acid-Catalyzed Dehydration of 2-Methylcyclohexanol</p> <p>CSU Northridge Chemistry 333L Manual, pp. 125–133, 189–192</p> <p>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</p> <p>CSU Northridge video: Acid-Catalyzed Dehydration of 2-Methylcyclohexanol</p> <p>UCLA video: Gas Chromatography</p>
April 18–20	<p>Stereoselective Reduction of 4-<i>tert</i>-Butylcyclohexanone</p> <p>CSU Northridge Chemistry 333L Manual, pp. 138–142, 183–184, 189–192</p> <p>Wade, Sections 10-11 and 18-11</p> <p>CSU Northridge video: Stereoselective Reduction of 4-<i>tert</i>-Butylcyclohexanone</p> <p>UCLA video: Gas Chromatography</p> <p>UCLA video: Infrared Spectroscopy</p>
April 25–27	<p>Check-Out</p>
May 2–4	<p>Infrared Spectroscopy</p> <p>CSU Northridge Chemistry 333L Manual, pp. 143–149, 183–184</p> <p>Wade, Sections 12-1 to 12-12</p> <ul style="list-style-type: none"> Appendices 2A and 2B <p>CSU Northridge video: Infrared Spectroscopy</p> <p>UCLA video: Infrared Spectroscopy</p>

May 9–11

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](#)