

Columbia University
Organic Chemistry Laboratory Syllabus
CHEM S3543
Summer 2011

Instructor Information

Anna Ghurbanyan
E-mail: ag2860@columbia.edu
Laura Schacherer
E-mail: lns2107@columbia.edu

Office Phone: (212) 854-6790
Office Location: 211 Havemeyer
Laboratory Location: 202 Havemeyer

Textbook

Required: Operational Organic Chemistry: A Problem-Solving Approach to the Laboratory Course, John W. Lehman, 4th Edition. ISBN 0-13-600092-4
Recommended: Organic Chemistry, John McMurry, 7th Edition.
ISBN 978-0-495-11258-7

Course Materials

Laboratory notebook with duplicate numbered pages and a combination lock must be purchased. Safety goggles and a lab coat will be provided.

Teaching Assistant Office Hours

Individual Teaching Assistants (TAs) will hold office hours Mondays through Fridays in 343 Havemeyer. Office hour schedule will be posted on *Courseworks* in the beginning of the semester. You can address conceptual or experimental questions to any TA during his/her office hours, but grading questions should be addressed **ONLY** to your assigned TA.

Make-up Labs

One make-up week is scheduled for April 18th through 22nd. If a lab is to be missed you must notify your instructor and/or TA via e-mail, by phone, or in person. Please note that you must be present for the first three technique experiments: extraction, recrystallization, and chromatography, as well as the lecture on instrumentation, in order to master the skill set required to perform the more challenging experiments.

Deadlines

Graded pre-labs are due upon your entrance to the laboratory at 1:00 PM on the date indicated on the syllabus. Notebook carbon copies must be turned in to your TA at the end of each laboratory period. Lab reports are due two weeks after the lab has been completed and are also due at 1:00 PM on the date indicated on the syllabus. Please be advised that your TA does not have the authority to extend deadlines of the lab reports.

Grading

Factors that will influence your final letter grade in this course will be weekly quizzes, lab reports, as well as your lab performance evaluation from your TA.

Columbia University
Organic Chemistry Laboratory Syllabus
CHEM S3543
Summer 2011

Course Schedule

Dates	Experiments	Experiment Titles	Assignments
May 23, 24		Check-In, Course Introduction, Safety Lecture	
25, 26	Exp 2	Separating the Components of "Panacetin." <i>Extraction and Evaporation</i>	Pre-Lab 1
30, 31	Exp 3	Identifying a Constituent of "Panacetin." <i>Recrystallization and Melting Point Measurement</i>	Pre-Lab 2
June 1, 2	Hand-out	<i>Thin Layer and Column Chromatography</i>	Pre-Lab 3
6, 7		Introduction to Instrumentation. <i>IR and NMR</i>	
8, 9	Exp 11	Identification of Unknown Ketones	Pre-Lab 4
13, 14	Exp 5	Preparation of Synthetic Banana Oil	Pre-Lab 5
15, 16	Exp 21	Dehydration of Methylcyclohexanols	Exp 5 Report
20, 21	Exp 37	Friedel-Crafts Acylation of Anisole	Exp 21 Report
22, 23	Exp 30	Synthesis of Triphenylmethanol	Exp 37 Report
27, 28	Exp 42	A Wittig Reaction of <i>trans</i> -Cinnamaldehyde	Exp 30 Report
29, 30	Exp 32	Identification of a Conjugated Diene from Eucalyptus Oil	Final Quiz

Columbia University
Organic Chemistry Laboratory Syllabus
CHEM S3543
Summer 2011

Point Distribution

Experiment	Quiz	Notebook	Pre-Lab	Lab Report	Technique	Total Points
Exp 2	20	10	10		5	45
Exp 3	20	10	10		5	45
Hand-out	20	10	10		5	45
Exp 11	20	10	10		15	55
Exp 5	20	5	10	45	15	95
Exp 21	20	5		45	15	85
Exp 37	20	5		45	15	85
Exp 30	20	5		45	15	85
Exp 42	20	10			15	45
Exp 32	30*	10			15	55

*The final quiz will be composed of experimental questions covering Experiment 42, theoretical questions covering Experiment 32, and comprehensive questions related to experimental techniques covered throughout the course.