

CHEM 181L: Syllabus

The course has two components, a weekly one-hour lecture period and a three-and-half hour laboratory period. The syllabus for both components, shown below, is organized by weeks. The "course week" is defined to begin with Friday lecture and end the following Thursday, e.g. Week 1 runs from Friday, August 31 to Thursday, September 6. The Lecture and Laboratory topics and their dates are in **bold, italics**. The third and fourth columns, **Date** and **Due**, respectively, indicate when assignments are due and where to turn them in. (Note: Assignments appear in the week they are assigned and the week they are due.)

See the CHEM 181L website for more detailed descriptions about the topics and associated assignments.

Week	Assignment	Due Date	Due a) before lecture, b) in lecture, c) before lab, d) in lab	✓
Pre-Course	Peruse Course Website Complete Pre-Course Questionnaire	Aug 31 Aug 31	a online	
Week 1	Lecture - Introduction to CHEM 181L Laboratory - Meet Your Instructors & Explore the Scientific Method	Aug 31 Sep 03-06		
Week 2	Lecture - Scientific Method Read <i>The Memory Tease</i> Laboratory - Introduction, Lab Safety & Malachite Read Laboratory Information (Getting Comfortable in the Lab & Copper Metal from Malachite) Complete Pre-Lab Notes (Getting Comfortable in the Lab) Read & Sign Lab Safety Forms Begin Lab Notes 1 (Copper Metal from Malachite)	Sep 07 Sep 07 Sep 10-13 Sep 10-13 Sep 10-13 Sep 10-13 Sep 17-20	a c c d d	
Week 3	Lecture - Scientific Writing I Read Scientific Writing Information & Nanokids Articles Begin Writing Assignment 1 (<i>Popular Chem Magazines</i>) Laboratory - TBA Turn in Lab Notes 1 (Copper Metal from Malachite) Read Laboratory Information (TBA) Begin Lab Notes 2 (TBA)	Sep 14 Sep 14 Sep 21 Sep 17-20 Sep 17-20 Sep 17-20 Sep 17-20	a b c c d	
Week 4	Lecture - Scientific Writing II Review Scientific Writing Information Turn in Writing Assignment 1 (<i>Popular Chem Magazines</i>) Laboratory - Sunscreens Turn in Lab Notes 2 (TBA) Read Laboratory Information (Sunscreens) Begin Research Report 1 (Sunscreens) Begin Feedback Response 1 (Sunscreens)	Sep 21 Sep 21 Sep 21 Sep 24-27 Sep 24-27 Sep 24-27 Nov 01-04 Nov 01-04	a b c c d d	

Week 5	Lecture - Computational Chemistry I Read <i>Computational Chemistry in Context</i> Read <i>Theoretical Chemistry Models</i>	Sep 28 Sep 28 Sep 28	a a	
	Laboratory - Molecular Modeling Read Laboratory Information (Molecular Modeling) Turn in Research Report 1 (Sunscreens) Turn in Feedback Response 1 (Sunscreens) Complete & Turn in Lab Notes 3 (Molecular Modeling)	Oct 01-04 Oct 01-04 Oct 01-04 Oct 01-04 Oct 01-04	c d d d	
Week 6	Lecture - Computational Chemistry II Re-read <i>Computational Chemistry in Context</i> Re-read <i>Theoretical Chemistry Models</i> Begin Writing Assignment 2 (C&ENews)	Oct 05 Oct 05 Oct 05 Oct 12	a a b	
	Laboratory - None (Reading Holiday)	Oct 08-11		
Week 7	Lecture - Open Topic & Digital Media Project (DMP) Turn in Writing Assignment 2 (C&ENews) Digital Media Project · team members, research topic and question · instructor meeting: title, brief outline, preliminary bibliography, meeting schedule, and media choice	Oct 12 Oct 12 Nov 16 Oct 19 Nov 2	b b email 10/29 - 11/02	
	Laboratory - Molecular Orbitals I Read Laboratory Information (Molecular Orbitals I) Begin Research Report 2 (Molecular Orbitals I) Begin Feedback Response 2 (Molecular Orbitals I)	Oct 15-18 Oct 15-18 Oct 22-25 Oct 22-25	c d d	
Week 8	Lecture - Guest Speaker (Undergraduate Research) DMP - team members, research topic and question Complete Mid-Term Teaching Analysis Poll	Oct 19 Oct 19 Oct 21	email online	
	Laboratory - Stereochemistry Read Laboratory Information (Stereochemistry) Turn in Research Report 2 (Molecular Orbitals I) Turn in Feedback Response 2 (Molecular Orbitals I) Complete Peer Critique 1 (Molecular Orbitals I) Begin Lab Notes 4 (Stereochemistry)	Oct 22-25 Oct 22-25 Oct 22-25 Oct 22-25 Oct 22-25 Oct 29 - Nov 01	c d d d d	
Week 9	Lecture - Guest Speaker (Graduate Student) Read Guest Speaker Articles (Graduate Student)	Oct 26 Oct 26	a	
	Laboratory - IR Spectroscopy Read Laboratory Information (IR Spectroscopy) Turn in Lab Notes 4 (Stereochemistry) DMP - instructor meeting: title, brief outline, preliminary bibliography, and media choice Begin Research Report 3 (IR Spectroscopy) Begin Feedback Response 3 (IR Spectroscopy)	Oct 29 - Nov 01 Oct 29 - Nov 01 Oct 29 - Nov 01 Nov 02 Nov 05-08 Nov 05-08	c d 10/29 - 11/02 d d	
Week 10	Lecture - Open Topic	Nov 02		
	Laboratory - Molecular Orbitals II Read Laboratory Information (Molecular Orbitals II) Turn in Research Report 3 (IR Spectroscopy) Turn in Feedback Response 3 (IR Spectroscopy) Complete Peer Critique 2 (IR Spectroscopy) Begin Lab Notes 5 (Molecular Orbitals II)	Nov 05-08 Nov 05-08 Nov 05-08 Nov 05-08 Nov 05-08 Nov 12-15	c d d d d	

Week 11	Lecture - Open Topic	Nov 09		
	Laboratory - Forensics (Part 1) Read Laboratory Information (Forensics) Turn in Lab Notes 5 (Molecular Orbitals II) Begin Research Report 4 (Forensics) Begin Feedback Response 4 (Forensics)	Nov 12-15 Nov 12-15 Nov 12-15 Dec 07 Dec 07	c d d d	
Week 12	Lecture - Digital Poster Session (2-4pm) Participate in Digital Poster Session Submit Digital Media Project	Nov 16 Nov 16 Nov 16	b b, CD/DVD	
	Laboratory - None (Thanksgiving) Study for Lab Final Continue Research Report 4 (Forensics) Continue Feedback Response 4 (Forensics)	Nov 19-22 Dec 03-06 Dec 07 Dec 07	d d d	
Week 13	Lecture - None (Thanksgiving) Begin Writing Assignment 3 (Chemistry Journal Article)	Nov 23 Nov 30	d, optional	
	Laboratory - Forensics (Part 2) Continue Research Report 4 (Forensics) Continue Feedback Response 4 (Forensics)	Nov 26-29 Dec 07 Dec 07	d d	
Week 14	Lecture - Review Session Turn in Writing Assignment 3 (Chemistry Journal Article) Extra Review Session	Nov 30 Nov 30 Dec 02, 4-6pm (CHM 304)	d, optional optional	
	Laboratory - Final Examination Take Laboratory Final Turn in Research Report 4 (Forensics) Turn in Feedback Response 4 (Forensics)	Dec 03-06 Dec 03-06 Dec 07 Dec 07	d d d	
Week 15	Lecture - Scientific Serendipity Read <i>The Three Princes of Serendip</i> Complete Final Course Evaluation	Dec 07 Dec 07 Dec 12	a online	