

Course Schedule - Spring 2008

Chemistry

102 **General Chemistry I** credit: 3 hours.

For students who have some prior knowledge of chemistry. Principles governing atomic structure, bonding, states of matter, stoichiometry, and chemical equilibrium; descriptive chemistry of the elements and coordination compounds. Students may not receive credit for both CHEM 102 and CHEM 202. Prerequisite: Credit in or exemption from MATH 012; one year of high school chemistry or equivalent.

This course satisfies the General Education Criteria for a Physical Sciences course.

All students enrolled in CHEM 102 should also enroll in CHEM 103. Students must register in either a single lecture-discussion section or a combination of one lecture and one quiz section beginning with the same letter. CHEM 102 and CHEM 103 are approved for General Education credit only as a sequence. Both courses must be completed to receive Natural Science and Technology credit.

CRN	Type	Section	Time	Days	Location	Instructor
32172	lecture	AL1	10:00 AM - 10:50 AM	TR	room 100 Noyes Laboratory	Hummel, T
32172: Physical Sciences course.						
32172: Students must register for both the "A" Lecture and the "A" quiz section.						
32134	quiz	AQA	09:00 AM - 09:50 AM	WF	room 203 Noyes Laboratory	Hummel, T; Carroll, V
32134: Physical Sciences course.						
32143	quiz	AQB	10:00 AM - 10:50 AM	WF	room 203 Noyes Laboratory	Hummel, T; Pimentel, E
32143: Physical Sciences course.						
32146	quiz	AQC	11:00 AM - 11:50 AM	WF	room 203 Noyes Laboratory	Hummel, T; Carroll, V
32146: Physical Sciences course.						
32149	quiz	AQD	12:00 PM - 12:50 PM	WF	room 203 Noyes Laboratory	Hummel, T; Carroll, V
32149: Physical Sciences course.						
32151	quiz	AQE	01:00 PM - 01:50 PM	WF	room 203 Noyes Laboratory	Hummel, T; Pimentel, E
32151: Physical Sciences course.						
32153	quiz	AQF	02:00 PM - 02:50 PM	WF	room 203 Noyes Laboratory	Hummel, T; Wilson, R
32153: Physical Sciences course.						
32155	quiz	AQG	01:00 PM - 01:50 PM	WF	room 152 Chemistry Annex	Hummel, T; Parmley, S

32155: Physical Sciences course.						
32157	quiz	AQH	10:00 AM - 10:50 AM	WF	room 152 Chemistry Annex	Hummel, T; Parmley, S
32157: Physical Sciences course.						
32159	quiz	AQI	11:00 AM - 11:50 AM	WF	room 152 Chemistry Annex	Hummel, T; Parmley, S
32159: Physical Sciences course.						
32162	quiz	AQJ	12:00 PM - 12:50 PM	WF	room 152 Chemistry Annex	Hummel, T; Parmley, S
32162: Physical Sciences course.						
32169	quiz	AQM	09:00 AM - 10:50 AM	WF	room 111 Noyes Laboratory	Hummel, T; Peoples, A
32169: Physical Sciences course.						
32169: Departmental Approval Required Restricted to Merit Workshop only. Call 244-8279 for information. Concurrent enrollment for 1 hour credit in the Merit section of CHEM 199 is required (See CHEM 199).						
32176	quiz	AQN	11:00 AM - 12:50 PM	WF	room 111 Noyes Laboratory	Hummel, T; Peoples, A
32176: Physical Sciences course.						
32176: Departmental Approval Required Restricted to Merit Workshop only. Call 244-8279 for information. Concurrent enrollment for 1 hour credit in the Merit section of CHEM 199 is required (See CHEM 199).						
46568	lecture	BL1	09:00 AM - 09:50 AM	MW	room 100 Noyes Laboratory	Weaver, J
46568: Physical Sciences course.						
46568: Students must register for both the "B" Lecture and the "B" quiz section.						
46570	quiz	BQ1	09:00 AM - 09:50 AM	TR	room 203 Noyes Laboratory	Weaver, J; Shellhamer, D
46570: Physical Sciences course.						
46571	quiz	BQ2	10:00 AM - 10:50 AM	TR	room 203 Noyes Laboratory	Weaver, J; Shellhamer, D
46571: Physical Sciences course.						
46572	quiz	BQ3	11:00 AM - 11:50 AM	TR	room 203 Noyes Laboratory	Weaver, J; Shellhamer, D
46572: Physical Sciences course.						
46573	quiz	BQ4	12:00 PM - 12:50 PM	TR	room 203 Noyes Laboratory	Chary, A; Weaver, J
46573: Physical Sciences course.						
46574	quiz	BQ5	01:00 PM - 01:50	TR	room 203 Noyes	Chary, A; Weaver, J

			PM		Laboratory	
46574: Physical Sciences course.						
46575	quiz	BQ6	02:00 PM - 02:50 PM	TR	room 203 Noyes Laboratory	Weaver, J; Shellhamer, D
46575: Physical Sciences course.						
46578	quiz	BQ9	11:00 AM - 11:50 AM	TR	room 152 Chemistry Annex	Anderson, N; Weaver, J
46578: Physical Sciences course.						
46579	quiz	BQA	12:00 PM - 12:50 PM	TR	room 152 Chemistry Annex	Anderson, N; Weaver, J
46579: Physical Sciences course.						
46580	quiz	BQB	01:00 PM - 01:50 PM	TR	room 152 Chemistry Annex	Anderson, N; Weaver, J
46580: Physical Sciences course.						
46581	quiz	BQC	02:00 PM - 02:50 PM	TR	room 152 Chemistry Annex	Anderson, N; Weaver, J
46581: Physical Sciences course.						
49212	quiz	BQD	09:00 AM - 10:50 AM	TR	room 209 Noyes Laboratory	Katt, M; Weaver, J
49212: Physical Sciences course.						
49212: Restricted to Transition Program Students Only. Concurrent enrollment for 1 hour credit in CHEM 199 is required (See CHEM 199).						
49037	quiz	BQM	01:00 PM - 02:50 PM	TR	room 209 Noyes Laboratory	Daugherty, T; Weaver, J
49037: Physical Sciences course.						
49037: Departmental Approval Required Restricted to Merit Workshop only. Call 244-8279 for information. Concurrent enrollment for 1 hour credit in the Merit section of CHEM 199 is required (See CHEM 199).						
47915	lecture	CL1	01:00 PM - 01:50 PM	TR	room 100 Noyes Laboratory	Hummel, T
47915: Physical Sciences course.						
47915: Students must register for both the "C" Lecture and the "C" quiz section.						
47916	quiz	CQ1	09:00 AM - 09:50 AM	WF	room 204 Noyes Laboratory	Hummel, T; Wilson, R
47916: Physical Sciences course.						
47917	quiz	CQ2	10:00 AM - 10:50 AM	WF	room 204 Noyes Laboratory	Hummel, T; Abram, D
47917: Physical Sciences course.						

47918	quiz	CQ3	11:00 AM - 11:50 AM	WF	room 204 Noyes Laboratory	Hummel, T; Schmucker, D
47918: Physical Sciences course.						
47919	quiz	CQ4	12:00 PM - 12:50 PM	WF	room 204 Noyes Laboratory	Hummel, T; Abram, D
47919: Physical Sciences course.						
47920	quiz	CQ5	01:00 PM - 01:50 PM	WF	room 204 Noyes Laboratory	Hummel, T; Wilson, R
47920: Physical Sciences course.						
47921	quiz	CQ6	02:00 PM - 02:50 PM	WF	room 204 Noyes Laboratory	Hummel, T; Schmucker, D
47921: Physical Sciences course.						
47923	quiz	CQ8	11:00 AM - 11:50 AM	WF	room 8 Chemistry Annex	Hummel, T; Phelan, B
47923: Physical Sciences course.						
47924	quiz	CQ9	12:00 PM - 12:50 PM	WF	room 8 Chemistry Annex	Hummel, T; Phelan, B
47924: Physical Sciences course.						

103 **General Chemistry Lab I** credit: 1 hours.

Laboratory studies to accompany CHEM 102. Prerequisite: Credit or concurrent registration in CHEM 102 is required.

This course satisfies the General Education Criteria for a Physical Sciences course.

CHEM 103 is the laboratory course that accompanies CHEM 102. Students may not receive credit for both CHEM 103 and CHEM 203. Engineering students must obtain a dean's approval to drop this course after the second week of instruction. CHEM 102 and CHEM 103 are approved for General Education credit only as a sequence. Both courses must be completed to receive Natural Science and Technology credit.

CRN	Type	Section	Time	Days	Location	Instructor
32343	laboratory	R10	08:00 AM - 10:50 AM	M	room 201 Chemistry Annex	Weaver, J; Ota, N
32343: Physical Sciences course.						
44406	laboratory	R18	08:00 AM - 10:50 AM	F	room 201 Chemistry Annex	Plachta, S; Weaver, J
44406: Physical Sciences course.						
32345	laboratory	R20	11:00 AM - 01:50 PM	M	room 201 Chemistry Annex	Weaver, J; Zhong, M
32345: Physical Sciences course.						
32361	laboratory	R21	11:00 AM - 01:50	M	room 201	Fanizza, M; Weaver,

			PM		Chemistry Annex	J
32361: Physical Sciences course.						
32346	laboratory	R22	11:00 AM - 01:50 PM	T	room 201 Chemistry Annex	Weaver, J; Ota, N
32346: Physical Sciences course.						
32348	laboratory	R26	11:00 AM - 01:50 PM	R	room 201 Chemistry Annex	Pera, S; Weaver, J
32348: Physical Sciences course.						
32347	laboratory	R28	11:00 AM - 01:50 PM	F	room 201 Chemistry Annex	Paek, J; Weaver, J
32347: Physical Sciences course.						
32352	laboratory	R30	02:00 PM - 04:50 PM	M	room 201 Chemistry Annex	Ebisu, R; Weaver, J
32352: Physical Sciences course.						
32365	laboratory	R31	02:00 PM - 04:50 PM	M	room 201 Chemistry Annex	Fina, P; Weaver, J
32365: Physical Sciences course.						
32355	laboratory	R32	02:00 PM - 04:50 PM	T	room 201 Chemistry Annex	Putman, R; Weaver, J
32355: Physical Sciences course.						
32367	laboratory	R33	02:00 PM - 04:50 PM	T	room 201 Chemistry Annex	Qin, F; Weaver, J
32367: Physical Sciences course.						
32357	laboratory	R34	02:00 PM - 04:50 PM	W	room 201 Chemistry Annex	Weaver, J; Zhong, M
32357: Physical Sciences course.						
32369	laboratory	R35	02:00 PM - 04:50 PM	W	room 201 Chemistry Annex	Bendis, E; Weaver, J
32369: Physical Sciences course.						
32358	laboratory	R36	02:00 PM - 04:50 PM	R	room 201 Chemistry Annex	Reid, C; Weaver, J
32358: Physical Sciences course.						
32371	laboratory	R37	02:00 PM - 04:50 PM	R	room 201 Chemistry Annex	Knight, C; Weaver, J
32371: Physical Sciences course.						
44405	laboratory	S10	08:00 AM - 10:50 AM	M	room 201 Chemistry Annex	Weaver, J; Ota, N

44405: Physical Sciences course.						
44420	laboratory	S18	08:00 AM - 10:50 AM	F	room 201 Chemistry Annex	Weaver, J; Ota, N
44420: Physical Sciences course.						
44417	laboratory	S20	11:00 AM - 01:50 PM	M	room 201 Chemistry Annex	Weaver, J; Zhong, M
44417: Physical Sciences course.						
44421	laboratory	S21	11:00 AM - 01:50 PM	M	room 201 Chemistry Annex	Fanizza, M; Weaver, J
44421: Physical Sciences course.						
32362	laboratory	S22	11:00 AM - 01:50 PM	T	room 201 Chemistry Annex	Weaver, J; Ota, N
32362: Physical Sciences course.						
32364	laboratory	S26	11:00 AM - 01:50 PM	R	room 201 Chemistry Annex	Pera, S; Weaver, J
32364: Physical Sciences course.						
32363	laboratory	S28	11:00 AM - 01:50 PM	F	room 201 Chemistry Annex	Paek, J; Weaver, J
32363: Physical Sciences course.						
32354	laboratory	S30	02:00 PM - 04:50 PM	M	room 201 Chemistry Annex	Ebisu, R; Weaver, J
32354: Physical Sciences course.						
32366	laboratory	S31	02:00 PM - 04:50 PM	M	room 201 Chemistry Annex	Fina, P; Weaver, J
32366: Physical Sciences course.						
32356	laboratory	S32	02:00 PM - 04:50 PM	T	room 201 Chemistry Annex	Putman, R; Weaver, J
32356: Physical Sciences course.						
32368	laboratory	S33	02:00 PM - 04:50 PM	T	room 201 Chemistry Annex	Knight, C; Weaver, J
32368: Physical Sciences course.						
39114	laboratory	S34	02:00 PM - 04:50 PM	W	room 201 Chemistry Annex	Weaver, J; Zhong, M
39114: Physical Sciences course.						
32370	laboratory	S35	02:00 PM - 04:50 PM	W	room 201 Chemistry Annex	Bendis, E; Weaver, J
32370: Physical Sciences course.						

32359	laboratory	S36	02:00 PM - 04:50 PM	R	room 201 Chemistry Annex	Reid, C; Weaver, J
32359: Physical Sciences course.						
35065	laboratory	S37	02:00 PM - 04:50 PM	R	room 201 Chemistry Annex	Knight, C; Weaver, J
35065: Physical Sciences course.						

104 **General Chemistry II** credit: 3 hours.

Lecture and discussions. Section A, B and C (Biological Version): Chemistry of organic and biochemical systems, chemical energetics and equilibrium, chemical kinetics, and reaction mechanisms. Section D (Engineering Version): Chemistry of materials, including organic and biological substances, chemical energetics and equilibrium, chemical kinetics, and solids and crystals. Students may not receive credit for both CHEM 104 and CHEM 204. Prerequisite: CHEM 102 or CHEM 202 or advanced placement credit for one semester of college-level chemistry.

This course satisfies the General Education Criteria for a Physical Sciences course.

All students enrolled in CHEM 104 should also enroll in CHEM 105. Students must register for one quiz and one lecture section. Engineering students must obtain a dean's approval to drop this course after the second week of instruction. Students must register for one lecture and one quiz section beginning with the same letter. CHEM 104 and CHEM 105 are approved for General Education credit only as a sequence. Both courses must be completed to receive Natural Science and Technology credit.

CRN	Type	Section	Time	Days	Location	Instructor
32231	lecture	AL1	09:00 AM - 09:50 AM	TR	room 100 Noyes Laboratory	Yerkes, C
32231: Physical Sciences course.						
32211	quiz	AQA	09:00 AM - 09:50 AM	WF	room 19 Noyes Laboratory	Yerkes, C; Lee, F
32211: Physical Sciences course.						
32213	quiz	AQB	10:00 AM - 10:50 AM	WF	room 19 Noyes Laboratory	Yerkes, C; Lee, F
32213: Physical Sciences course.						
32213: Designated for James Scholars.						
32216	quiz	AQC	11:00 AM - 11:50 AM	WF	room 19 Noyes Laboratory	Yerkes, C; Castleberry, R
32216: Physical Sciences course.						
32218	quiz	AQD	12:00 PM - 12:50 PM	WF	room 19 Noyes Laboratory	Yerkes, C; Castleberry, R
32218: Physical Sciences course.						
32218: Designated for James Scholars.						
32220	quiz	AQE	01:00 PM - 01:50 PM	WF	room 19 Noyes Laboratory	Yerkes, C; Castleberry, R

32220: Physical Sciences course.						
32222	quiz	AQF	02:00 PM - 02:50 PM	WF	room 19 Noyes Laboratory	Yerkes, C; Castleberry, R
32222: Physical Sciences course.						
32224	quiz	AQG	01:00 PM - 02:50 PM	WF	room 209 Noyes Laboratory	Yerkes, C; Komperda, R
32224: Physical Sciences course.						
32224: Departmental Approval RequiredRestricted to Merit Workshop only. Call 244-8279 for information. Concurrent enrollment for 1 hour credit in the Merit section of CHEM 199 is required (See CHEM 199).						
32226	quiz	AQH	09:00 AM - 09:50 AM	WF	room 303 Noyes Laboratory	Yerkes, C; Wong, O
32226: Physical Sciences course.						
32228	quiz	AQI	10:00 AM - 10:50 AM	WF	room 303 Noyes Laboratory	Yerkes, C; Wong, O
32228: Physical Sciences course.						
39107	quiz	AQK	11:00 AM - 11:50 AM	WF	room 303 Noyes Laboratory	Yerkes, C; Wong, O
39107: Physical Sciences course.						
39108	quiz	AQL	12:00 PM - 12:50 PM	WF	room 303 Noyes Laboratory	Yerkes, C; Wong, O
39108: Physical Sciences course.						
49038	quiz	AQN	09:00 AM - 10:50 AM	WF	room 209 Noyes Laboratory	Yerkes, C; Komperda, R
49038: Physical Sciences course.						
49038: Departmental Approval RequiredRestricted to Merit Workshop only. Call 244-8279 for information. Concurrent enrollment for 1 hour credit in the Merit section of CHEM 199 is required (See CHEM 199).						
32261	lecture	BL1	10:00 AM - 10:50 AM	MW	room 100 Noyes Laboratory	Ray, C
32261: Physical Sciences course.						
32236	quiz	BQA	09:00 AM - 10:50 AM	TR	room 111 Noyes Laboratory	Ray, C; McKay, T
32236: Physical Sciences course.						
32236: Departmental Approval RequiredRestricted to Merit Workshop only. Call 244-8279 for information. Concurrent enrollment for 1 hour credit in the Merit section of CHEM 199 is required (See CHEM 199).						
32238	quiz	BQB	11:00 AM - 12:50 PM	TR	room 111 Noyes Laboratory	Ray, C; Snider, S
32238: Physical Sciences course.						

32238: Departmental Approval Required Restricted to Merit Workshop only. Call 244-8279 for information. Concurrent enrollment for 1 hour credit in the Merit section of CHEM 199 is required (See CHEM 199).

32239	quiz	BQC	09:00 AM - 09:50 AM	TR	room 304 Noyes Laboratory	Ray, C; Chowdhury, T
32239: Physical Sciences course.						
32241	quiz	BQD	11:00 AM - 11:50 AM	TR	room 304 Noyes Laboratory	Ray, C; Tan, K
32241: Physical Sciences course.						
32243	quiz	BQE	12:00 PM - 12:50 PM	TR	room 304 Noyes Laboratory	Ray, C; Tan, K
32243: Physical Sciences course.						
32245	quiz	BQF	01:00 PM - 01:50 PM	TR	room 304 Noyes Laboratory	Ray, C; Wolf, L
32245: Physical Sciences course.						
32251	quiz	BQH	10:00 AM - 10:50 AM	TR	room 19 Noyes Laboratory	Ray, C; Wolf, L
32251: Physical Sciences course.						
32252	quiz	BQI	11:00 AM - 11:50 AM	TR	room 19 Noyes Laboratory	Ray, C; Wolf, L
32252: Physical Sciences course.						
32254	quiz	BQJ	12:00 PM - 12:50 PM	TR	room 19 Noyes Laboratory	Ray, C; Blakely, K
32254: Physical Sciences course.						
32256	quiz	BQK	01:00 PM - 01:50 PM	TR	room 19 Noyes Laboratory	Ray, C; Blakely, K
32256: Physical Sciences course.						
32258	quiz	BQL	02:00 PM - 02:50 PM	TR	room 304 Noyes Laboratory	Ray, C; Wolf, L
32258: Physical Sciences course.						
44422	quiz	BQX	10:00 AM - 10:50 AM	TR	room 304 Noyes Laboratory	Ray, C; Chowdhury, T
44422: Physical Sciences course.						
32305	lecture	CL1	12:00 PM - 12:50 PM	TR	room 100 Noyes Laboratory	Yerkes, C
32305: Physical Sciences course.						
32248	lecture	CL2	12:00 PM - 12:50 PM	TR	room 8 Chemistry Annex	Yerkes, C

32248: Physical Sciences course.						
32293	quiz	CQA	09:00 AM - 09:50 AM	WF	room 304 Noyes Laboratory	Yerkes, C; Mohan, S
32293: Physical Sciences course.						
32298	quiz	CQB	10:00 AM - 10:50 AM	WF	room 304 Noyes Laboratory	Yerkes, C; Mohan, S
32298: Physical Sciences course.						
32300	quiz	CQC	11:00 AM - 11:50 AM	WF	room 304 Noyes Laboratory	Yerkes, C; Gorski, E
32300: Physical Sciences course.						
32301	quiz	CQD	12:00 PM - 12:50 PM	WF	room 304 Noyes Laboratory	Yerkes, C; Tumuluru, S
32301: Physical Sciences course.						
32302	quiz	CQE	01:00 PM - 01:50 PM	WF	room 304 Noyes Laboratory	Yerkes, C; Tumuluru, S
32302: Physical Sciences course.						
32303	quiz	CQF	11:00 AM - 11:50 AM	WF	room 9 Chemistry Annex	Yerkes, C; Ford, K
32303: Physical Sciences course.						
32306	quiz	CQG	12:00 PM - 12:50 PM	WF	room 9 Chemistry Annex	Yerkes, C; Ford, K
32306: Physical Sciences course.						
39109	quiz	CQH	09:00 AM - 09:50 AM	WF	room 9 Chemistry Annex	Yerkes, C; Gorski, E
39109: Physical Sciences course.						
39110	quiz	CQI	10:00 AM - 10:50 AM	WF	room 9 Chemistry Annex	Yerkes, C; Carberry, T
39110: Physical Sciences course.						
39111	quiz	CQJ	01:00 PM - 01:50 PM	WF	room 9 Chemistry Annex	Yerkes, C; Ford, K
39111: Physical Sciences course.						
43150	quiz	CQK	02:00 PM - 02:50 PM	WF	room 304 Noyes Laboratory	Yerkes, C; Carberry, T
43150: Physical Sciences course.						
43151	quiz	CQL	02:00 PM - 02:50 PM	WF	room 9 Chemistry Annex	Yerkes, C; Ford, K
43151: Physical Sciences course.						

49039	quiz	CQP	01:00 PM - 02:50 PM	WF	room 111 Noyes Laboratory	Yerkes, C; Livingston, M
49039: Physical Sciences course.						
49039: Departmental Approval Required Restricted to Merit Workshop only. Call 244-8279 for information. Concurrent enrollment for 1 hour credit in the Merit section of CHEM 199 is required (See CHEM 199).						
32309	lecture	DL1	01:00 PM - 01:50 PM	MW	room 100 Noyes Laboratory	Ray, C
32309: Physical Sciences course.						
32309: Designated for most engineering students.						
32263	lecture	DL2	01:00 PM - 01:50 PM	MW	room 303 Noyes Laboratory	Ray, C
32263: Physical Sciences course.						
32307	quiz	DQA	09:00 AM - 09:50 AM	TR	room 204 Noyes Laboratory	Ray, C; Wang, P
32307: Physical Sciences course.						
32310	quiz	DQB	10:00 AM - 10:50 AM	TR	room 204 Noyes Laboratory	Ray, C; Wang, P
32310: Physical Sciences course.						
32311	quiz	DQC	11:00 AM - 11:50 AM	TR	room 204 Noyes Laboratory	Ray, C; Wang, P
32311: Physical Sciences course.						
32313	quiz	DQD	12:00 PM - 12:50 PM	TR	room 204 Noyes Laboratory	Ray, C; Steineke, N
32313: Physical Sciences course.						
32314	quiz	DQE	01:00 PM - 01:50 PM	TR	room 204 Noyes Laboratory	Ray, C; Murphy, B
32314: Physical Sciences course.						
32316	quiz	DQF	02:00 PM - 02:50 PM	TR	room 204 Noyes Laboratory	Ray, C; Wang, P
32316: Physical Sciences course.						
32318	quiz	DQG	11:00 AM - 12:50 PM	TR	room 209 Noyes Laboratory	Ray, C; Thorngren, D
32318: Physical Sciences course.						
32318: Departmental Approval Required Restricted to Merit Workshop only. Call 244-8279 for information. Concurrent enrollment for 1 hour credit in the Merit section of CHEM 199 is required (See CHEM 199).						
32320	quiz	DQH	09:00 AM - 09:50 AM	TR	room 9 Chemistry Annex	Ray, C; Murphy, B

32320: Physical Sciences course.						
32321	quiz	DQI	10:00 AM - 10:50 AM	TR	room 9 Chemistry Annex	Ray, C; Steineke, N
32321: Physical Sciences course.						
32322	quiz	DQJ	11:00 AM - 11:50 AM	TR	room 9 Chemistry Annex	Ray, C; Long, B
32322: Physical Sciences course.						
32323	quiz	DQK	12:00 PM - 12:50 PM	TR	room 9 Chemistry Annex	Ray, C; Long, B
32323: Physical Sciences course.						
32324	quiz	DQL	01:00 PM - 01:50 PM	TR	room 9 Chemistry Annex	Ray, C; Long, B
32324: Physical Sciences course.						
32326	quiz	DQM	02:00 PM - 02:50 PM	TR	room 9 Chemistry Annex	Ray, C; Long, B
32326: Physical Sciences course.						

105 **General Chemistry Lab II** credit: 1 hours.

Laboratory studies to accompany CHEM 104. Prerequisite: CHEM 102 and CHEM 103; credit or concurrent registration in CHEM 104 is required.

This course satisfies the General Education Criteria for a Physical Sciences course.

CHEM 105 is the laboratory course that accompanies CHEM 104. Students may not receive credit for both CHEM 105 and CHEM 205. Engineering students must obtain a dean's approval to drop this course after the second week of instruction. CHEM 102 and CHEM 103 are approved for General Education credit only as a sequence. Both courses must be completed to receive Natural Science and Technology credit.

CRN	Type	Section	Time	Days	Location	Instructor
32417	laboratory	X12	08:00 AM - 10:50 AM	T	room 101 Chemistry Annex	Denofrio, L; Flener, C; Sundaradevan, P
32417: Physical Sciences course.						
43152	laboratory	X13	08:00 AM - 10:50 AM	T	room 101 Chemistry Annex	Denofrio, L; Flener, C; Luca, C
43152: Physical Sciences course.						
32419	laboratory	X16	08:00 AM - 10:50 AM	R	room 101 Chemistry Annex	Denofrio, L; Flener, C; Sundaradevan, P
32419: Physical Sciences course.						
43153	laboratory	X17	08:00 AM - 10:50 AM	R	room 101 Chemistry Annex	Denofrio, L; Flener, C; Luca, C
43153: Physical Sciences course.						

32420	laboratory	X18	08:00 AM - 10:50 AM	F	room 101 Chemistry Annex	Denofrio, L; Flener, C; Butcher, D
32420: Physical Sciences course.						
43154	laboratory	X19	08:00 AM - 10:50 AM	F	room 101 Chemistry Annex	Denofrio, L; Flener, C; Zeiger, B
43154: Physical Sciences course.						
32385	laboratory	X40	11:00 AM - 01:50 PM	M	room 101 Chemistry Annex	Denofrio, L; Flener, C; Siller, B
32385: Physical Sciences course.						
43156	laboratory	X41	11:00 AM - 01:50 PM	M	room 101 Chemistry Annex	Denofrio, L; Flener, C; Madrahimov, S
43156: Physical Sciences course.						
32396	laboratory	X42	11:00 AM - 01:50 PM	T	room 101 Chemistry Annex	Denofrio, L; Flener, C; Jablenski, K
32396: Physical Sciences course.						
32397	laboratory	X43	11:00 AM - 01:50 PM	T	room 101 Chemistry Annex	Denofrio, L; Flener, C
32397: Physical Sciences course.						
32394	laboratory	X46	11:00 AM - 01:50 PM	R	room 101 Chemistry Annex	Denofrio, L; Flener, C; Lau, Y
32394: Physical Sciences course.						
43157	laboratory	X48	11:00 AM - 01:50 PM	F	room 101 Chemistry Annex	Denofrio, L; Flener, C; Madrahimov, S
43157: Physical Sciences course.						
39117	laboratory	X49	11:00 AM - 01:50 PM	F	room 101 Chemistry Annex	Denofrio, L; Flener, C; Siller, B
39117: Physical Sciences course.						
32425	laboratory	X70	02:00 PM - 04:50 PM	M	room 101 Chemistry Annex	Denofrio, L; Flener, C; Fellin, M
32425: Physical Sciences course.						
32439	laboratory	X71	02:00 PM - 04:50 PM	M	room 101 Chemistry Annex	Denofrio, L; Flener, C; Mackiewicz, A
32439: Physical Sciences course.						
32426	laboratory	X72	02:00 PM - 04:50 PM	T	room 101 Chemistry Annex	Denofrio, L; Flener, C; Lee, P
32426: Physical Sciences course.						
32440	laboratory	X73	02:00 PM - 04:50 PM	T	room 101	Denofrio, L; Flener,

			PM		Chemistry Annex	C; Cha, C
32440: Physical Sciences course.						
32428	laboratory	X74	02:00 PM - 04:50 PM	W	room 101 Chemistry Annex	Denofrio, L; Flener, C; Butcher, D
32428: Physical Sciences course.						
32441	laboratory	X75	02:00 PM - 04:50 PM	W	room 101 Chemistry Annex	Denofrio, L; Flener, C; Zeiger, B
32441: Physical Sciences course.						
32430	laboratory	X76	02:00 PM - 04:50 PM	R	room 101 Chemistry Annex	Denofrio, L; Flener, C; Cha, C
32430: Physical Sciences course.						
32442	laboratory	X77	02:00 PM - 04:50 PM	R	room 101 Chemistry Annex	Denofrio, L; Flener, C; Sachdeva, A
32442: Physical Sciences course.						
32432	laboratory	X78	02:00 PM - 04:50 PM	F	room 101 Chemistry Annex	Denofrio, L; Flener, C; Sachdeva, A
32432: Physical Sciences course.						
32446	laboratory	X79	02:00 PM - 04:50 PM	F	room 101 Chemistry Annex	Denofrio, L; Flener, C; Borsdorf, D
32446: Physical Sciences course.						
32372	laboratory	Z12	08:00 AM - 10:50 AM	T	room 101 Chemistry Annex	Denofrio, L; Flener, C; Sundaradevan, P
32372: Physical Sciences course.						
32375	laboratory	Z13	08:00 AM - 10:50 AM	T	room 101 Chemistry Annex	Denofrio, L; Flener, C; Luca, C
32375: Physical Sciences course.						
32373	laboratory	Z16	08:00 AM - 10:50 AM	R	room 101 Chemistry Annex	Denofrio, L; Flener, C; Sundaradevan, P
32373: Physical Sciences course.						
32376	laboratory	Z17	08:00 AM - 10:50 AM	R	room 101 Chemistry Annex	Denofrio, L; Flener, C; Luca, C
32376: Physical Sciences course.						
32374	laboratory	Z18	08:00 AM - 10:50 AM	F	room 101 Chemistry Annex	Denofrio, L; Flener, C; Butcher, D
32374: Physical Sciences course.						
32377	laboratory	Z19	08:00 AM - 10:50 AM	F	room 101 Chemistry Annex	Denofrio, L; Flener, C; Zeiger, B

32377: Physical Sciences course.						
32378	laboratory	Z40	11:00 AM - 01:50 PM	M	room 101 Chemistry Annex	Denofrio, L; Flener, C; Siller, B
32378: Physical Sciences course.						
32382	laboratory	Z41	11:00 AM - 01:50 PM	M	room 101 Chemistry Annex	Denofrio, L; Flener, C; Madrahimov, S
32382: Physical Sciences course.						
32379	laboratory	Z42	11:00 AM - 01:50 PM	T	room 101 Chemistry Annex	Denofrio, L; Flener, C; Jablenski, K
32379: Physical Sciences course.						
32383	laboratory	Z43	11:00 AM - 01:50 PM	T	room 101 Chemistry Annex	Denofrio, L; Flener, C
32383: Physical Sciences course.						
32381	laboratory	Z46	11:00 AM - 01:50 PM	R	room 101 Chemistry Annex	Denofrio, L; Flener, C; Lau, Y
32381: Physical Sciences course.						
32445	laboratory	Z48	11:00 AM - 01:50 PM	F	room 101 Chemistry Annex	Denofrio, L; Flener, C; Madrahimov, S
32445: Physical Sciences course.						
39118	laboratory	Z49	11:00 AM - 01:50 PM	F	room 101 Chemistry Annex	Denofrio, L; Flener, C; Siller, B
39118: Physical Sciences course.						
32386	laboratory	Z70	02:00 PM - 04:50 PM	M	room 101 Chemistry Annex	Denofrio, L; Flener, C; Fellin, M
32386: Physical Sciences course.						
32390	laboratory	Z71	02:00 PM - 04:50 PM	M	room 101 Chemistry Annex	Denofrio, L; Flener, C; Mackiewicz, A
32390: Physical Sciences course.						
32387	laboratory	Z72	02:00 PM - 04:50 PM	T	room 101 Chemistry Annex	Denofrio, L; Flener, C; Lee, P
32387: Physical Sciences course.						
32391	laboratory	Z73	02:00 PM - 04:50 PM	T	room 101 Chemistry Annex	Denofrio, L; Flener, C; Cha, C
32391: Physical Sciences course.						
32388	laboratory	Z74	02:00 PM - 04:50 PM	W	room 101 Chemistry Annex	Denofrio, L; Flener, C; Butcher, D
32388: Physical Sciences course.						

32392	laboratory	Z75	02:00 PM - 04:50 PM	W	room 101 Chemistry Annex	Denofrio, L; Flener, C; Zeiger, B
32392: Physical Sciences course.						
32389	laboratory	Z76	02:00 PM - 04:50 PM	R	room 101 Chemistry Annex	Denofrio, L; Flener, C; Cha, C
32389: Physical Sciences course.						
32393	laboratory	Z77	02:00 PM - 04:50 PM	R	room 101 Chemistry Annex	Denofrio, L; Flener, C; Sachdeva, A
32393: Physical Sciences course.						
32443	laboratory	Z78	02:00 PM - 04:50 PM	F	room 101 Chemistry Annex	Denofrio, L; Flener, C; Sachdeva, A
32443: Physical Sciences course.						
39116	laboratory	Z79	02:00 PM - 04:50 PM	F	room 101 Chemistry Annex	Denofrio, L; Flener, C; Borsdorf, D
39116: Physical Sciences course.						

108 **Chemistry, Everyday Phenomena** credit: 3 hours.

Laboratory-based work in which students will evaluate products (such as antacids), synthesize materials (such as soap), and gain a better understanding of forensic chemistry. Credit in CHEM 108 does not count toward Chemistry requirements for students in the Specialized Curriculum in Chemistry, the Science and Letters Chemistry major, the Chemistry Teaching Option, or the Chemistry minor; however the course may be taken by students in any of these groups for general education hours. Prerequisite: Credit or concurrent registration in MATH 012 or MATH 016.

This course satisfies the General Education Criteria for a Physical Sciences course.

CRN	Type	Section	Time	Days	Location	Instructor
39202	laboratory	AB1	09:00 AM - 11:50 AM	R	room 310 Chemistry Annex	Adams, G; Cohen, M
39202: Physical Sciences course.						
39201	lecture	AL1	11:00 AM - 11:50 AM	T	room 137 Henry Administration Bldg	Adams, G
39201: Physical Sciences course.						

199 **Undergraduate Open Seminar** credit: 1 to 5 hours.

Approved for both letter and S/U grading. May be repeated.

CRN	Type	Section	Time	Days	Location	Instructor
10505	independent study		ARRANGED		room 9 Chemistry Annex	

10505: Departmental Approval Required						
41974	discussion-recitation	K	04:00 PM - 04:50 PM	M	room 9 Chemistry Annex	Denofrio, L
41974: 2 hours Departmental Approval Required Students will work to administer the Kids and Chemistry Outreach program. Students will work hands-on with elementary age children as well as train their peers to work in elementary school classrooms. Students will create new curricula, improve past curricula, maintain the materials for the program, and share administrative duties such as scheduling classroom visits and training sessions.						
32552	lecture	L1	12:00 PM - 12:50 PM	MWF	room 163 Noyes Laboratory	Denofrio, L; Lu, Y
32552: 2 hours Section L1 and L2: Chemistry and Biology of Everyday Life Intended for students from freshman to senior science majors wishing to explore in depth scientific topics of their interests within the chemistry and biology of everyday phenomena. Initial activities will involve learning and giving presentations about the topics of interests. Later activities could involve performing research in a laboratory. Students will interact closely with professors and other researchers to design and carry out their project. This course is offered to students of all levels. Students who enroll in the course for the first time should sign up for LEC L1 (2 credit hours). Return students should sign up for LEC L2 (1 credit hour). Repeating the course for credit is highly encouraged. Please check the web site at http://atlas.scs.uiuc.edu/chem199L for a detailed description of the course content and registration information.						
32558	lecture	L2	12:00 PM - 12:50 PM	WF	room 163 Noyes Laboratory	Denofrio, L; Lu, Y
32558: 1 hours Section L1 and L2: Chemistry and Biology of Everyday Life Intended for students from freshman to senior science majors wishing to explore in depth scientific topics of their interests within the chemistry and biology of everyday phenomena. Initial activities will involve learning and giving presentations about the topics of interests. Later activities could involve performing research in a laboratory. Students will interact closely with professors and other researchers to design and carry out their project. This course is offered to students of all levels. Students who enroll in the course for the first time should sign up for LEC L1 (2 credit hours). Return students should sign up for LEC L2 (1 credit hour). Repeating the course for credit is highly encouraged. Please check the web site at http://atlas.scs.uiuc.edu/chem199L for a detailed description of the course content and registration information.						
49571	discussion-recitation	LDR	ARRANGED			Adams, G
49571: 1 hours Departmental Approval Required Supplemental Instruction Leadership Program: This course is designated for leaders in the SI Program.						
32559	discussion-recitation	M	ARRANGED			Adams, G
32559: 1 hours for Merit and Transition workshop students only.						
32560	conference	S	05:00 PM - 06:20 PM	T	room 163 Noyes Laboratory	Ray, C
32560: To engage children in hands-on science activities. An additional two hours are devoted to developing activities and materials.						

204 **Accelerated Chemistry II** credit: 3 hours.

Continuation of CHEM 202. Lectures and discussions. Emphasizes chemical thermodynamics, equilibrium, chemical kinetics, and coordination chemistry. Prerequisite: CHEM 202 and/or CHEM 203 and concurrent registration in CHEM 205, or consent of instructor.

This course satisfies the General Education Criteria for a Physical Sciences course.

Students must register for one quiz and one lecture section. Engineering students must obtain a dean's approval to drop this course after the second week of instruction.

CRN	Type	Section	Time	Days	Location	Instructor
32457	lecture	AL1	11:00 AM - 11:50 AM	TR	room 100 Noyes Laboratory	Decoste, D
32457: Physical Sciences course.						
32447	quiz	AQA	09:00 AM - 09:50 AM	WF	room 300 Noyes Laboratory	Decoste, D; Chang, T
32447: Physical Sciences course.						
32448	quiz	AQB	10:00 AM - 10:50 AM	WF	room 300 Noyes Laboratory	Decoste, D; Gerdt, J
32448: Physical Sciences course.						
32448: Designated for James Scholars.						
32449	quiz	AQC	11:00 AM - 11:50 AM	WF	room 300 Noyes Laboratory	Decoste, D; Schlosberg, C
32449: Physical Sciences course.						
32450	quiz	AQD	12:00 PM - 12:50 PM	WF	room 300 Noyes Laboratory	Decoste, D; Gerdt, J
32450: Physical Sciences course.						
32452	quiz	AQF	11:00 AM - 11:50 AM	WF	room 301 Noyes Laboratory	Decoste, D; Chang, T
32452: Physical Sciences course.						
32453	quiz	AQG	12:00 PM - 12:50 PM	WF	room 301 Noyes Laboratory	Decoste, D; Goodpaster, J
32453: Physical Sciences course.						
32455	quiz	AQI	01:00 PM - 01:50 PM	WF	room 300 Noyes Laboratory	Decoste, D; Schlosberg, C
32455: Physical Sciences course.						
32455: Designated for James Scholars.						
32458	quiz	AQJ	11:00 AM - 12:50 PM	WF	room 209 Noyes Laboratory	Decoste, D; Mui, T
32458: Physical Sciences course.						
32458: Departmental Approval Required Restricted to Merit Workshop only. Call 244-8279 for information. Concurrent enrollment for 1 hour credit in the Merit section of CHEM 199 is required (See CHEM 199).						
39113	quiz	AQL	01:00 PM - 01:50 PM	WF	room 301 Noyes Laboratory	Decoste, D; Goodpaster, J

39113: Physical Sciences course.

205 **Accelerated Chemistry Lab II** credit: 2 hours.

Laboratory and discussion. Includes experiments in qualitative analysis, inorganic synthesis, and kinetics as well as an individual project. Students may not receive credit for both CHEM 205 and CHEM 223. Prerequisite: Concurrent registration in CHEM 204 or consent of department.

Students must register for one lab and one lecture section. Engineering students must obtain a dean's approval to drop this course after the second week of instruction.

CRN	Type	Section	Time	Days	Location	Instructor
32544	laboratory	AB1	01:00 PM - 04:50 PM	W	room 310 Chemistry Annex	Oldfield, E; McGuire, B
32544: Designated for James Scholars. James Scholars course.						
32550	laboratory	AB2	01:00 PM - 04:50 PM	R	room 310 Chemistry Annex	Oldfield, E; Barry, K
32551	laboratory	AB3	01:00 PM - 04:50 PM	R	room 310 Chemistry Annex	Oldfield, E; Markwell, S
39125	laboratory	AB4	01:00 PM - 04:50 PM	W	room 310 Chemistry Annex	Oldfield, E; Strole, G
44424	laboratory	AB5	08:00 AM - 11:50 AM	F	room 310 Chemistry Annex	Oldfield, E; Momand, J
44425	laboratory	AB6	08:00 AM - 11:50 AM	F	room 310 Chemistry Annex	Oldfield, E; Brueckner, E
32545	lecture	AL1	02:00 PM - 02:50 PM	T	room 100 Noyes Laboratory	Oldfield, E
32542	laboratory	BB1	01:00 PM - 04:50 PM	T	room 310 Chemistry Annex	Oldfield, E; Rosenberg, A
32542: James Scholars course. Designated for James Scholars.						
32543	laboratory	BB2	01:00 PM - 04:50 PM	T	room 310 Chemistry Annex	Oldfield, E; Stuart, S
43166	laboratory	BB3	08:00 AM - 11:50 AM	M	room 310 Chemistry Annex	Oldfield, E; Momand, J
32546	laboratory	BB4	08:00 AM - 11:50 AM	M	room 310 Chemistry Annex	Oldfield, E; Brueckner, E
32547	laboratory	BB5	01:00 PM - 04:50 PM	M	room 310 Chemistry Annex	Oldfield, E; Shankar, S
32549	lecture	BL1	02:00 PM - 02:50 PM	R	room 100 Noyes Laboratory	Oldfield, E; Shankar, S

232 **Elementary Organic Chemistry I** credit: 3 hours.

Presents elementary structural and synthetic chemistry with emphasis on applications of this material to closely related areas. For students in agricultural, nutritional and biological sciences, as well as premedical, pre dental, and preveterinary programs. One-term survey course; may be followed by CHEM 332. Students may not receive credit for both CHEM 232 and CHEM 236. Prerequisite: CHEM 104 and CHEM 105, or CHEM 204.

CRN	Type	Section	Time	Days	Location	Instructor
39183	lecture	A	08:00 AM - 08:50 AM	MWF	room THEAT Lincoln Hall	Miller, L

233 **Elementary Organic Chem Lab I** credit: 2 hours.

Basic laboratory techniques in organic chemistry are presented with emphasis on experiments of interest to closely related areas. For students in agricultural science, dairy technology, food technology, nutrition, dietetics, premedical, pre dental, and preveterinary programs. Students may not receive credit for both CHEM 233 and CHEM 237. Prerequisite: Credit or concurrent registration in CHEM 232.

Students must register for one lab and one lecture section.

CRN	Type	Section	Time	Days	Location	Instructor
32580	laboratory	AB1	01:00 PM - 04:50 PM	M	room 257 Noyes Laboratory	Wilson, R; Hayes, T; Lin, E; Ballmer, S
32583	laboratory	AB2	08:00 AM - 11:50 AM	T	room 257 Noyes Laboratory	Wilson, R; Wilcock, B; Perahia, T; Tan, Y
32587	laboratory	AB3	01:00 PM - 04:50 PM	T	room 257 Noyes Laboratory	Wilson, R; Jeong, C; Hesse, A; Timmons, H
32590	laboratory	AB4	09:00 AM - 12:50 PM	W	room 257 Noyes Laboratory	Wilson, R; Hayes, T; Baek, J
32592	laboratory	AB5	01:00 PM - 04:50 PM	W	room 257 Noyes Laboratory	Wilson, R; Lin, E; Ballmer, S
32595	laboratory	AB6	08:00 AM - 11:50 AM	R	room 257 Noyes Laboratory	Wilson, R; Baek, J; Taylor, C; Tan, Y
32597	laboratory	AB7	01:00 PM - 04:50 PM	R	room 257 Noyes Laboratory	Wilson, R; Jeong, C; Hesse, A; Timmons, H
32573	lecture	AL1	08:00 AM - 08:50 AM	R	room 112 Chemistry Annex	Wilson, R
32576	lecture	AL2	03:00 PM - 03:50 PM	R	room 100 Noyes Laboratory	Wilson, R
32578	lecture	AL3	01:00 PM - 01:50 PM	F	room 116 Roger Adams Laboratory	Wilson, R

236 **Fundamental Organic Chem I** credit: 4 hours.

Fundamental structural, synthetic, and mechanistic organic chemistry is presented. For students whose major is chemistry or for those in the specialized curricula in chemistry or chemical engineering. The first term of a two-term integrated sequence (to be followed by CHEM 436). This lecture course is intended to accompany CHEM 237. Students may not receive credit for both CHEM 236 and CHEM 232. Prerequisite: CHEM 204, CHEM 121 or CHEM 222 through CHEM 223.

Students must register for one discussion and one lecture section.

CRN	Type	Section	Time	Days	Location	Instructor
32605	discussion-recitation	ADB	10:00 AM - 10:50 AM	T	room 301 Noyes Laboratory	Nuzzo, R; Deluca, R
32607	discussion-recitation	ADC	12:00 PM - 12:50 PM	T	room 162 Noyes Laboratory	Nuzzo, R; Deluca, R
32600	lecture	AL1	09:00 AM - 09:50 AM	MWF	room 163 Noyes Laboratory	Nuzzo, R

237 **Structure and Synthesis** credit: 2 hours.

Laboratory course introduces synthesis and the basic techniques for the separation, isolation and purification of organic and inorganic compounds. Students may not receive credit for both CHEM 237 and CHEM 233. Prerequisite: Credit or concurrent registration in CHEM 236.

Students must register for one lab and one lecture section.

CRN	Type	Section	Time	Days	Location	Instructor
32618	laboratory	ABB	01:00 PM - 04:50 PM	W	room 263 Noyes Laboratory	Coates, R; Gonzalez, V; Uno, B
32622	laboratory	ABC	01:00 PM - 04:50 PM	R	room 263 Noyes Laboratory	Coates, R; Woerly, E; Uno, B
32612	lecture	AL1	09:00 AM - 09:50 AM	T	room 165 Noyes Laboratory	Coates, R

291 **Cooperative Education Planning** credit: 0 hours.

On-campus planning and discussion of cooperative work-study education programs in industry and government. Each chemistry or chemical engineering student participating in the cooperative education program must register for CHEM 291/CHBE 201 or CHBE 202 each term (CHBE 201 if on-campus, CHBE 202 if off-campus). Same as CHBE 201. Approved for S/U grading only. Prerequisite: Acceptance into the School of Chemical Sciences Cooperative Education Program.

CRN	Type	Section	Time	Days	Location	Instructor
32565	discussion-recitation	A	ARRANGED			Blum, P

293 **Cooperative Education Practice** credit: 0 hours.

Off-campus cooperative practice of chemistry or chemical engineering in industrial or governmental facilities. Each chemistry or chemical engineering student participating in cooperative education must register for CHEM 293 for each off-campus term. Same as CHBE 202. Approved for S/U grading only. Prerequisite: Acceptance into the School of Chemical Sciences Cooperative Education Program.

CRN	Type	Section	Time	Days	Location	Instructor
32568	practice	A	ARRANGED			Blum, P

295 **Chemistry Internship** credit: 0 hours.

Full-time practice of chemical science in an off-campus industrial setting or research laboratory environment. Summary report required. May be repeated. Approved for S/U grading only. Prerequisite: Completion of freshman year or equivalent, or consent of Director of Cooperative Education in Chemistry.

CRN	Type	Section	Time	Days	Location	Instructor
32572	practice	A	ARRANGED			Blum, P
32572: Departmental Approval Required						
32572: Restricted to Chemistry majors only. Departmental approval required. Please see Debe Williams in 105 Noyes.						

312 **Inorganic Chemistry** credit: 3 hours.

Basic chemical bonding in molecules, introduction to symmetry, chemistry of the main group elements, coordination chemistry of the transition elements, organometallic chemistry, solid state chemistry, bioinorganic chemistry, chemistry of the lanthanide and actinide elements. Prerequisite: CHEM 232 or CHEM 236.

CRN	Type	Section	Time	Days	Location	Instructor
32624	lecture	A	11:00 AM - 11:50 AM	MWF	room 213 Gregory Hall	Shapley, P

315 **Instrumental Chem Systems Lab** credit: 2 hours.

Laboratory course emphasizes the application of modern instrumental techniques for characterizing the kinetic behavior and equilibrium properties of chemical systems. Prerequisite: Either CHEM 237 or both CHEM 223 and CHEM 233. Class Section Information: Students must register for one lab and one quiz section.

CRN	Type	Section	Time	Days	Location	Instructor
32631	laboratory	ABA	09:00 AM - 12:50 PM	T	room 157 Noyes Laboratory	Kelleher, N; Dailey, C; Ihms, H; Qavi, A
32634	laboratory	ABB	01:00 PM - 04:50 PM	W	room 157 Noyes Laboratory	Kelleher, N; Ihms, H; Ahlf, D; Gao, Y; Qavi,

						A
32635	laboratory	ABC	01:00 PM - 04:50 PM	R	room 157 Noyes Laboratory	Kelleher, N; Dailey, C; Kellie, J; Ahlf, D
32638	quiz	AQA	04:00 PM - 04:50 PM	M	room 165 Noyes Laboratory	Kelleher, N

317 Inorganic Chemistry Lab credit: 3 hours.

Emphasizes modern techniques for the synthesis, purification, and characterization of inorganic and organometallic compounds. There are three components to the course: lectures on laboratory methodology and reporting, laboratory experiments, and report writing. The final third of the course is dedicated to special individualized projects. Prerequisite: CHEM 315, or credit or concurrent registration in CHEM 312, or equivalent; completion of campus Composition I general education requirement.

This course satisfies the General Education Criteria for a Advanced Composition course.

CRN	Type	Section	Time	Days	Location	Instructor
32626	laboratory	AB1	01:00 PM - 04:50 PM	W	room 219 Noyes Laboratory	Rauchfuss, T; Ringenberg, M; Letko, C
32626: Advanced Composition course.						
32630	laboratory	AB2	01:00 PM - 04:50 PM	R	room 219 Noyes Laboratory	Rauchfuss, T; Barton, B; Honesty, N
32630: Advanced Composition course.						
45258	laboratory	AB3	01:00 PM - 04:50 PM	F	room 219 Noyes Laboratory	Rauchfuss, T; Barton, B; Marquard, S
45258: Advanced Composition course.						
32628	lecture	AL1	01:00 PM - 01:50 PM	T	room 162 Noyes Laboratory	Rauchfuss, T
32628: Advanced Composition course.						

332 Elementary Organic Chem II credit: 3 hours.

Second course; lectures covering topics in organic chemistry with special applications to the life sciences. This course should not be taken by students who have completed CHEM 236. Students may not receive credit for both CHEM 332 and CHEM 436. Prerequisite: CHEM 232 and CHEM 233.

CRN	Type	Section	Time	Days	Location	Instructor
47558	online	O	ARRANGED			Moore, J
47558: Video-taped lectures, course materials and a discussion board will be made available online. Students enrolled in this section are expected to take course exams and turn in all assignments as outlined for the lecture section.						
32671	lecture	W	08:00 AM - 08:50	MWF	room 100 Noyes	Moore, J

			AM		Laboratory	
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420 **Instrumental Characterization** credit: 2 hours.

Lecture course covers the fundamentals of instrumental characterization including: nuclear magnetic resonance spectroscopy, potentiometry, voltammetry, atomic and molecular spectroscopy, mass spectrometry, activation analysis, electron and x-ray spectroscopy, and gas and liquid chromatography. Prerequisite: CHEM 440; or credit or concurrent registration in CHEM 442; or consent of the instructor.

CRN	Type	Section	Time	Days	Location	Instructor
32639	lecture	A	12:00 PM - 12:50 PM	TR	room 163 Noyes Laboratory	Scheeline, A

423 **Electronic Circuits I** credit: 0 to 5 hours.

Same as PHYS 404. See PHYS 404.

CRN	Type	Section	Time	Days	Location	Instructor
38607	lecture	AC	04:00 PM - 05:50 PM	MW	room 136 Loomis Laboratory	Giannetta, R
38607: 5 hours Undergraduates register for lecture AC (38607) and for one of the laboratory (L) sections.						
36672	lecture	AG	04:00 PM - 05:50 PM	MW	room 136 Loomis Laboratory	Giannetta, R
36672: 4 hours Graduate students register for lecture AG (36672) and for one of the laboratory (L) sections.						
36677	laboratory	L2	01:00 PM - 03:50 PM	TR	room 5106 Engineering Sciences Bldg	Dinsmore, R
36673	laboratory	L3	09:00 AM - 11:50 AM	WF	room 5106 Engineering Sciences Bldg	Giannetta, R

436 **Fundamental Organic Chem II** credit: 3 hours.

Course is the second term of a two-term integrated sequence and should be taken the term following enrollment in CHEM 236. Students may not receive credit for both CHEM 436 and CHEM 332. Prerequisite: CHEM 236 and CHEM 237; students who have completed CHEM 232 and CHEM 233 may be enrolled with consent of instructor.

CRN	Type	Section	Time	Days	Location	Instructor
32672	lecture	A	09:00 AM - 09:50 AM	MWF	room 124 Burrill Hall	White, M

437 Organic Chemistry Lab credit: 3 hours.

Laboratory experiments in organic chemistry with emphasis on synthesis. Prerequisite: CHEM 233 or CHEM 237 and credit or concurrent registration in CHEM 332 or CHEM 436.

CRN	Type	Section	Time	Days	Location	Instructor
32675	laboratory	ABA	08:00 AM - 11:50 AM	TR	room 219 Noyes Laboratory	Denmark, S; Reed, S; Robbins, D
32678	laboratory	ABD	01:00 PM - 04:50 PM	R	room 219 Noyes Laboratory	Denmark, S; Bair, J; Bailey, A
	laboratory	ABD	02:00 PM - 05:50 PM	T	room 219 Noyes Laboratory	Denmark, S; Bair, J; Bailey, A
32673	lecture	ALA	01:00 PM - 01:50 PM	T	room 163 Noyes Laboratory	Denmark, S

442 Physical Chemistry I credit: 4 hours.

Lectures and problems focusing on microscopic properties. CHEM 442 and CHEM 444 constitute a year-long study of chemical principles covering topics such as quantum chemistry, atomic and molecular structure and spectra, statistical thermodynamics, properties and thermodynamics of materials in gases, solids, and liquids, and chemical kinetics and equilibria. Credit is not given for both CHEM 442 and PHYS 427. Prerequisite: CHEM 204, CHEM 121, or CHEM 222; MATH 225 or MATH 415, and a minimal knowledge of differential equations, or equivalent; and PHYS 211, PHYS 212, and PHYS 214 or equivalent.

CRN	Type	Section	Time	Days	Location	Instructor
32679	lecture	A	10:00 AM - 10:50 AM	MWF	room 163 Noyes Laboratory	McDonald, J

444 Physical Chemistry II credit: 4 hours.

Continuation of CHEM 442, focusing on bulk properties. Credit is not given for both CHEM 444 and PHYS 427. Prerequisite: CHEM 442.

CRN	Type	Section	Time	Days	Location	Instructor
32681	lecture	B	10:00 AM - 10:50 AM	MWF	room 217 Noyes Laboratory	Lisy, J

445 Physical Principles Lab I credit: 2 hours.

Laboratory course features experiments concerning the fundamental physical nature of chemical phenomena. Typical experiments include magnetic resonance and thermochemistry. Prerequisite: CHEM 315, and credit or concurrent registration in CHEM 444; or consent of instructor.

CRN	Type	Section	Time	Days	Location	Instructor
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32735	laboratory	AB1	01:00 PM - 04:50 PM	R	room 459 Noyes Laboratory	McDonald, J; Leiding, J
32735: This lab will be held in 459 Noyes.						
32732	laboratory	AB3	06:00 PM - 09:50 PM	T	room 459 Noyes Laboratory	McDonald, J; Leiding, J
32732: This lab will be held in 459 Noyes.						
32734	quiz	AQ1	ARRANGED			McDonald, J
32734: Check with TA in your lab section.						

447 **Physical Principles Lab II** credit: 2 hours.

Laboratory course features advanced experiments concerning the fundamental physical nature of chemical phenomena. This course is a continuation of CHEM 445. Typical experiments include dielectric constants of liquids and low-energy electron diffraction from surfaces. Prerequisite: CHEM 445 or consent of instructor.

Register for the quiz and one laboratory section.

CRN	Type	Section	Time	Days	Location	Instructor
32736	laboratory	AB2	01:00 PM - 04:50 PM	R	room 459 Noyes Laboratory	Gruebele, M; Rodriguez, O
32736: This lab will be held in 459 Noyes.						
41589	laboratory	AB4	06:00 PM - 09:50 PM	T	room 459 Noyes Laboratory	Gruebele, M; Rodriguez, O
41589: This lab will be held in 459 Noyes.						
32737	quiz	AQ1	ARRANGED			Gruebele, M
32737: Check with TA in your lab section.						

460 **Green Chemistry** credit: 3 or 4 hours.

This course seeks to reduce the environmental consequences of the chemical industry. It includes modifying engineering practices, the development of new catalytic processes, modification of existing chemical processes, and bioremediation. 3 undergraduate hours. 4 graduate hours. Prerequisite: CHEM 312, CHEM 332, CHEM 360, or consent of instructor.

CRN	Type	Section	Time	Days	Location	Instructor
39152	lecture	A	02:00 PM - 03:20 PM	TR	room 163 Noyes Laboratory	Shapley, P
39152: 3 hours For CHEM majors only. This section is for undergraduate students.						
40330	lecture	B	02:00 PM - 03:20 PM	TR	room 163 Noyes Laboratory	Shapley, P
40330: 4 hours This section is for Graduate students. This section is for 4 hours credit.						

470 **Computational Chemical Biology** credit: 3 or 4 hours.

Hands-on introduction to the simulation of biological molecules and bioinformatics. Topics included the principles of molecular modeling, molecular dynamics and monte carlo simulations, structure prediction in the context of structural and functional genomics, and the assembly of integrated biological systems. Course counts towards the CSE option. Same as BIOP 470. Prerequisite: One semester of undergraduate biology and organic chemistry and statistical thermodynamics or consent of instructor. Recommended: proficiency in Matlab and CS 101 or equivalent.

CRN	Type	Section	Time	Days	Location	Instructor
39205	lecture	A	01:00 PM - 01:50 PM	MWF	room 162 Noyes Laboratory	Luthey-Schulten, Z
39205: 3 hours						

472 **Physical Biochemistry** credit: 3 hours.

Same as MCB 446 and BIOC 446. See BIOC 446.

CRN	Type	Section	Time	Days	Location	Instructor
31669	lecture	AL1	11:00 AM - 12:20 PM	TR	room 161 Noyes Laboratory	Nair, S; Crofts, A
31669: 3 hours						

480 **Polymer Chemistry** credit: 3 or 4 hours.

Same as MSE 457. See MSE 457.

CRN	Type	Section	Time	Days	Location	Instructor
41868	lecture-discussion	A	01:00 PM - 02:20 PM	TR	room 4101 Materials Science and Eng Bld	Economy, J
41868: This section is for Graduate Students only, you may choose either 3 or 4 credit hours.						
43533	lecture-discussion	B	01:00 PM - 02:20 PM	TR	room 4101 Materials Science and Eng Bld	Economy, J
43533: 3 hours This section is for Undergraduate students only.						

482 **Polymer Physical Chemistry** credit: 3 or 4 hours.

Same as MSE 458. See MSE 458.

CRN	Type	Section	Time	Days	Location	Instructor
38262	lecture-discussion	A3	10:30 AM - 11:50 AM	TR	room 4101 Materials Science and Eng Bld	Luijten, E
38262: 3 hours This section is for Undergraduate students only.						
38263	lecture-discussion	A4	10:30 AM - 11:50 AM	TR	room 4101 Materials Science and Eng Bld	Luijten, E
38263: This section is for Graduate Students only, you may choose either 3 or 4 credit hours.						

483 **Solid State Structural Anlys** credit: 4 hours.

Lectures and laboratory on various aspects of x-ray diffraction studies of solids; topics include the properties of crystals, symmetry, diffraction techniques, data collection methods, and the determination and refinement of crystal structures. Prerequisite: CHEM 442 or consent of instructor.

CRN	Type	Section	Time	Days	Location	Instructor
32740	laboratory	ABA	09:00 AM - 10:20 AM	R	room 212 Chemistry Annex	Girolami, G; Jew, R
32739	lecture	AL1	02:00 PM - 03:20 PM	MW	room 164 Noyes Laboratory	Girolami, G

492 **Special Topics in Chemistry** credit: 1 to 3 hours.

Open to advanced undergraduates and graduate students. Deals with subjects not ordinarily covered by regularly scheduled courses. Prerequisite: Credit or concurrent registration in any 400-level course in chemistry.

CRN	Type	Section	Time	Days	Location	Instructor
49123	lecture-discussion	CT	08:00 AM - 06:50 PM	MTWRF		Jakobsson, E; Dunning, T
49123: Academic Outreach Aprvl Reqd						
49123: 1 hours Chemistry and Comp Sci Educ Academic Outreach restrictions and assessments apply; see http://www.outreach.uiuc.edu .						

494 **Lab Safety Fundamentals** credit: 1 hours.

Same as MSE 492. See MSE 492.

CRN	Type	Section	Time	Days	Location	Instructor
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38355	lecture	A	07:00 PM - 08:50 PM	MW	room 228 Natural History Bldg	Shang, J
38355: Meets 10-Mar-08 - 30-Apr-08.						
38355: THIS CLASS MEETS ONLY FIVE TIMES EACH SEMESTER. THE FIRST CLASS MEETS ON MARCH 24, 2008. THIS CLASS IS RESTRICTED TO JUNIORS, SENIORS AND GRADUATE STUDENTS IN A SCIENCE CURRICULUM.						

499 **Senior Thesis** credit: 2 to 6 hours.

Research with thesis, under the direction of a senior staff member in chemistry. Normally the student takes two terms of CHEM 499 in the senior year. CHEM 499 is recommended for all those who plan to do research and graduate study, and it or BIOC 492 is a prerequisite for graduation with distinction in chemistry. In the term preceding their initial enrollment, those interested in taking the course should consult with their advisers and with the graduate adviser for the area of interest in which they plan to work. A maximum of 10 hours may be counted toward graduation and a thesis must be presented for credit to be received. No graduate credit.

CRN	Type	Section	Time	Days	Location	Instructor
10508	independent study		ARRANGED			
10508: Departmental Approval Required						

515 **Inorganic Chemistry Seminar** credit: 1 hours.

Required of all graduate students whose major is inorganic chemistry.

CRN	Type	Section	Time	Days	Location	Instructor
32746	lecture-discussion	A	04:00 PM - 05:20 PM	T	room 112 Chemistry Annex	Rauchfuss, T

516 **Physical Inorganic Chemistry** credit: 4 hours.

Includes group theory and use of physical methods to provide information about the geometry, electronic structures, and reactivity of inorganic compounds in solution; emphasizes NMR and ESR. Prerequisite: CHEM 444.

CRN	Type	Section	Time	Days	Location	Instructor
32747	lecture	A	10:30 AM - 11:50 AM	TR	room 162 Noyes Laboratory	Boulatov, R

517 **Advanced Inorganic Chem Lab** credit: 1 to 3 hours.

Specialized laboratory techniques; more difficult inorganic syntheses. Prerequisite: Credit or concurrent registration in one of the lecture courses in inorganic chemistry in the 500 series.

CRN	Type	Section	Time	Days	Location	Instructor
32742	laboratory	A	01:00 PM - 04:50 PM	W	room 219 Noyes Laboratory	Rauchfuss, T
	lecture-discussion	A	01:00 PM - 01:50 PM	T	room 162 Noyes Laboratory	Rauchfuss, T
32743	laboratory	B	01:00 PM - 04:50 PM	R	room 219 Noyes Laboratory	Rauchfuss, T
	lecture-discussion	B	01:00 PM - 01:50 PM	T	room 162 Noyes Laboratory	Rauchfuss, T

522 **Experimental Spectroscopy** credit: 4 hours.

Principles and applications of spectroscopic measurements and instrumentation. Atomic and molecular absorption, emission, fluorescence, and scattering, emphasizing physical interpretation of experimental data. Prerequisite: General physics and chemistry equivalent to a major in physical sciences for a bachelor's degree.

CRN	Type	Section	Time	Days	Location	Instructor
32748	lecture	1	09:00 AM - 10:20 AM	TR	room 171 Roger Adams Laboratory	Scheeline, A

32748: There will be extra lectures scheduled during January and early February, as class will not be held 2/19 - 3/2.

524 **Electrochemical Methods** credit: 4 hours.

Structure of the metal solution interface. Electrochemical and physical methods for probing metal/solution interface. Electroanalysis. Principles of electrochemical instrumentation for electroanalysis. Electrode materials. Electrochemical surface science and electrocatalysis. Prerequisite: General physics and chemistry equivalent to a major for a bachelor's degree.

CRN	Type	Section	Time	Days	Location	Instructor
32749	lecture	A	11:00 AM - 11:50 AM	MWF	room 171 Roger Adams Laboratory	Wieckowski, A

525 **Analytical Chemistry Seminar** credit: 1 hours.

Required of all graduate students whose major is analytical chemistry.

CRN	Type	Section	Time	Days	Location	Instructor
32750	lecture-discussion	A	04:00 PM - 05:20 PM	F	room 116 Roger Adams Laboratory	Bailey, R

530 **Structure and Spectroscopy** credit: 4 hours.

Advanced survey of organic chemistry with emphasis on structure and spectroscopy. Prerequisite: CHEM 332 or CHEM 436.

CRN	Type	Section	Time	Days	Location	Instructor
43148	lecture	A	10:00 AM - 10:50 AM	MWF	room 162 Noyes Laboratory	Hartwig, J
	lecture	A	07:00 PM - 08:20 PM	M	room 162 Noyes Laboratory	Hartwig, J
: 4 hours						

535 **Organic Chemistry Seminar** credit: 2 hours.

Current literature in organic chemistry. Prerequisite: Consent of instructor.

CRN	Type	Section	Time	Days	Location	Instructor
32752	lecture-discussion	A	04:00 PM - 05:20 PM	MR	room 116 Roger Adams Laboratory	Baranger, A
	lecture-discussion	A	07:30 PM - 09:50 PM	W	room 116 Roger Adams Laboratory	Baranger, A
: Current literature in organic chemistry. Prerequisite: Graduate student standing and consent of instructor.						

536 **Organic Chemistry Research** credit: 1 hours.

Lecture course on research techniques in organic chemistry. Approved for both letter and S/U grading. Prerequisite: Consent of instructor.

CRN	Type	Section	Time	Days	Location	Instructor
32753	lecture	A	09:00 AM - 10:50 AM	S	room 163 Noyes Laboratory	Burke, M

538 **Topics in Organic Chemistry** credit: 2 to 4 hours.

Advanced course dealing with a subject not ordinarily covered by regularly scheduled courses, such as natural product synthesis and biosynthesis, organic photochemistry, chemistry of special families of organic compounds, etc. May be repeated. Prerequisite: CHEM 532 and CHEM 534, one of which may be taken concurrently.

CRN	Type	Section	Time	Days	Location	Instructor
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43147	lecture	A	11:00 AM - 11:50 AM	MWF	room 163 Noyes Laboratory	Denmark, S
43147: 4 hours						

542 **Quantum Mech and Spectroscopy** credit: 4 hours.
Continuation of CHEM 540. Prerequisite: CHEM 540.

CRN	Type	Section	Time	Days	Location	Instructor
32738	lecture	A	09:00 AM - 10:20 AM	MWF	room 164 Noyes Laboratory	Dlott, D; Makri, N

545 **Physical Chemistry Seminar** credit: 1 or 2 hours.
Required of all graduate students whose major is physical chemistry. Approved for both letter and S/U grading.
Prerequisite: Consent of instructor.

To be taken by physical chemistry graduate students during any semester. A seminar will be presented to fulfill a Ph.D. requirement.

CRN	Type	Section	Time	Days	Location	Instructor
32754	lecture-discussion	A	04:00 PM - 05:20 PM	W	room 112 Chemistry Annex	McCall, B

572 **Enzyme Reaction Mechanisms** credit: 3 or 4 hours.
Introduction to the catalytic strategies used by enzymes for accelerating chemical reactions using a combination of kinetics, enzymology, and structural information. Application of gene databases to infer evolutionary relationships among catalytic mechanisms. Same as MCB 553. Prerequisite: Two semesters of undergraduate organic chemistry (CHEM 232 or CHEM 236 and CHEM 332 or CHEM 436) or consent of instructor.

CRN	Type	Section	Time	Days	Location	Instructor
32756	lecture-discussion	A	08:30 AM - 10:20 AM	TR	room 162 Noyes Laboratory	Gerlt, J; Van Der Donk, W
32756: 3 hours						
43995	lecture-discussion	B	08:30 AM - 10:20 AM	TR	room 162 Noyes Laboratory	Gerlt, J; Van Der Donk, W
43995: 4 hours This section will require students to write an additional paper.						

573 **Isotopically Labeled Compounds** credit: 0 to 4 hours.
Variable credit course consisting of 2 parts: First half is a practical study of the most commonly used radioisotopes, including procedures for their safe handling; Last half of course covers the synthesis and analysis of isotopically labeled compounds using both radioisotopes and stable isotopes. Course credit is 2 hours (for the first half only) or

4 hours (for the entire course). Prerequisite: CHEM 436.

CRN	Type	Section	Time	Days	Location	Instructor
32762	laboratory	ABA	01:00 PM - 04:50 PM	W	room 325 Noyes Laboratory	Katzenellenbogen, J; Mayne, C
32763	lecture	AL1	10:00 AM - 11:50 AM	TR	room 163 Noyes Laboratory	Katzenellenbogen, J
32763: 4 hours Students interested in the synthesis and analysis of isotopically labeled compounds should sign up for lecture AL1 and laboratory ABA for 4 hours credit.						
38701	laboratory	BBA	01:00 PM - 04:50 PM	W	room 325 Noyes Laboratory	Katzenellenbogen, J; Mayne, C
38701: Meets 14-Jan-08 - 07-Mar-08.						
38700	lecture	BL1	10:00 AM - 11:50 AM	TR	room 163 Noyes Laboratory	Katzenellenbogen, J
38700: 2 hours Students interested in general methods and applications of isotopes in chemistry and biology should sign up for lecture BL1 and laboratory BBA for 2 hours credit. Meets 14-Jan-08 - 07-Mar-08.						

575 **Chemical Biology Seminar** credit: 1 hours.

Required of all graduate students whose major is Chemical Biology. Prerequisite: Consent of instructor.

CRN	Type	Section	Time	Days	Location	Instructor
32760	lecture-discussion	A	12:00 PM - 01:50 PM	R	room 217 Noyes Laboratory	Silverman, S
32760: Current literature in chemical biology. Prerequisite: Graduate student standing and consent of instructor.						

582 **Chemical Kinetics & Catalysis** credit: 4 hours.

Same as CHBE 551. See CHBE 551.

CRN	Type	Section	Time	Days	Location	Instructor
40645	lecture	A	03:00 PM - 03:50 PM	MWF	room G48 Foreign Languages Bldg	Masel, R

585 **Materials Chemistry Seminar** credit: 1 hours.

Required of all Chemistry graduate students whose major area is Materials Chemistry.

CRN	Type	Section	Time	Days	Location	Instructor
39853	lecture-discussion	A	04:00 PM - 05:20 PM	R	room 112 Chemistry Annex	Girolami, G

588 **Physical Methods Mat Chem** credit: 4 hours.

Physical Methods for Materials Chemistry. Includes physical techniques for characterization in Materials Chemistry, including thermal analysis, electron microscopy, microprobe analysis and electron spectroscopies, adsorption and surface area measurements, and X-ray powder diffraction.

CRN	Type	Section	Time	Days	Location	Instructor
43049	lecture-discussion	A	08:30 AM - 09:50 AM	TR	room 163 Noyes Laboratory	Suslick, K

590 **Special Topics in Chemistry** credit: 1 to 4 hours.

Designed for students majoring or minoring in chemistry who wish to undertake individual studies of a non-research nature under the direction of a faculty member of the department. Approved for both letter and S/U grading.

Prerequisite: Consent of instructor and written approval of department head. Staff for the course is the same as for CHEM 599.

CRN	Type	Section	Time	Days	Location	Instructor
10512	independent study		ARRANGED			
10512: Departmental Approval Required						
47164	laboratory	L	08:00 AM - 11:50 AM	MW	room 263 Noyes Laboratory	Van Der Donk, W
47164: 4 hoursINTRO to CB LAB. Report to class MARCH 3. Laboratory course in advanced state-of-the-art experimental techniques used to investigate problems at the interface of chemistry and biology. Graduate students only. Two semesters of undergraduate organic chemistry required. Offered the second half of the semester.Meets 10-Mar-08 - 30-Apr-08.						
45799	lecture	N1	01:00 PM - 01:50 PM	MWF	room 163 Noyes Laboratory	Rienstra, C
45799: 2 hoursNMR of Macromolecules: Survey and Practice (2 credit hours) This course is offered the first half of the semester. This course covers modern applications of multidimensional solution and solid-state protein NMR, emphasizing review of the recent literature, qualitative discussion and applications to biochemical structure and function. Students will learn practical aspects of data acquisition, processing, interpretation and structure determination, including hands-on experience with data processing and structure determination software (NMRPipe, Sparky, NMRView, XPLOR-NIH, CNS). This course is suitable for advanced undergraduates or graduate students in all areas of Chemistry, Biophysics, Biochemistry and related disciplines in the life sciences. Prerequisites: familiarity with basic principles of protein structure, such as from an undergraduate biochemistry course.Meets 14-Jan-08 - 07-Mar-08.						
45800	lecture	N2	01:00 PM - 01:50 PM	MWF	room 163 Noyes Laboratory	Rienstra, C

45800: 2 hours NMR of Macromolecules: Time-Dependent Theory (2 credit hours) This course is offered the second half of the semester. This course covers advanced NMR theory from the perspective of time-dependent quantum mechanics, from construction of the spin Hamiltonian and the phenomenological Bloch equations to formalized product operator and coherent averaging (average Hamiltonian) theories. Students will develop the ability to analyze NMR experiments in the modern literature and to design new pulse sequences through both analytic and numerical theory, including the use of software such as Mathematica, SIMPSON and SPINEVOLUTION. This course is suitable for advanced undergraduates or graduate students in Physical Chemistry, Chemical Physics, Physics or Biophysics. Prerequisite: CHEM540 (graduate-level Quantum Mechanics) or consent of instructor. Students are encouraged to enroll concurrently in CHEM542 (Quantum Mechanics and Spectroscopy). Meets 10-Mar-08 - 30-Apr-08.

599 **Thesis Research** credit: 0 to 16 hours.

Candidates for the master's degree who elect research are required to present a thesis. A thesis is always required of students working toward the degree of Doctor of Philosophy. Not all candidates for thesis work necessarily are accepted. Any student whose major is in a department other than chemistry or chemical engineering must receive permission from the head of the Department of Chemistry to register in this course. Approved for S/U grading only.

During Summer terms, this course can only be taken for 0 to 8 hours.

CRN	Type	Section	Time	Days	Location	Instructor
10514	independent study		ARRANGED			
10514: Departmental Approval Required						