

Course Schedule - Spring 2006

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
32198	lecture-discussion	11D	08:00 AM - 08:50 AM	TWRF	room 204 Noyes Laboratory	Hummel, T
32198: Physical Sciences course.						
32179	lecture-discussion	12D	09:00 AM - 09:50 AM	TWRF	room 204 Noyes Laboratory	Hummel, T
32179: Physical Sciences course.						
32182	lecture-discussion	13D	10:00 AM - 10:50 AM	TWRF	room 204 Noyes Laboratory	Hummel, T
32182: Physical Sciences course.						
32183	lecture-discussion	14D	11:00 AM - 11:50 AM	TWRF	room 204 Noyes Laboratory	Hummel, T
32183: Physical Sciences course.						
32186	lecture-discussion	15D	12:00 PM - 12:50 PM	TWRF	room 204 Noyes Laboratory	Hummel, T
32186: Physical Sciences course.						
32188	lecture-discussion	16D	01:00 PM - 01:50 PM	TWRF	room 204 Noyes Laboratory	Hummel, T
32188: Physical Sciences course.						
32201	lecture-discussion	17D	02:00 PM - 02:50 PM	TWRF	room 204 Noyes Laboratory	Hummel, T
32201: Physical Sciences course.						
32203	lecture-discussion	18D	03:00 PM - 03:50 PM	TWRF	room 204 Noyes Laboratory	Hummel, T
32203: Physical Sciences course.						
39081	lecture-discussion	21D	08:00 AM - 08:50 AM	TWRF	room 203 Noyes Laboratory	Hummel, T

39081: Physical Sciences course.						
32204	lecture-discussion	22D	09:00 AM - 09:50 AM	TWRF	room 203 Noyes Laboratory	Hummel, T
32204: Physical Sciences course.						
32190	lecture-discussion	23D	10:00 AM - 10:50 AM	TWRF	room 203 Noyes Laboratory	Hummel, T
32190: Physical Sciences course.						
32192	lecture-discussion	24D	11:00 AM - 11:50 AM	TWRF	room 203 Noyes Laboratory	Hummel, T
32192: Physical Sciences course.						
32193	lecture-discussion	25D	12:00 PM - 12:50 PM	TWRF	room 203 Noyes Laboratory	Hummel, T
32193: Physical Sciences course.						
32196	lecture-discussion	26D	01:00 PM - 01:50 PM	TWRF	room 203 Noyes Laboratory	Hummel, T
32196: Physical Sciences course.						
32206	lecture-discussion	27D	02:00 PM - 02:50 PM	TWRF	room 203 Noyes Laboratory	Hummel, T
32206: Physical Sciences course.						
39082	lecture-discussion	28D	03:00 PM - 03:50 PM	TWRF	room 203 Noyes Laboratory	Hummel, T
39082: Physical Sciences course.						
45290	lecture-discussion	29D	09:00 AM - 09:50 AM	TWRF	room 209 Noyes Laboratory	Adams, G
45290: Physical Sciences course.						
45290: Restricted to Transition Students only.						
44400	lecture-discussion	32D	09:00 AM - 09:50 AM	TWRF	room 152 Chemistry Annex	Hummel, T
44400: Physical Sciences course.						
44402	lecture-discussion	37D	02:00 PM - 02:50 PM	TWRF	room 152 Chemistry Annex	Hummel, T
44402: Physical Sciences course.						
44403	lecture-discussion	38D	03:00 PM - 03:50 PM	TWRF	room 152 Chemistry Annex	Hummel, T
44403: Physical Sciences course.						
32172	lecture	AL1	10:00 AM - 10:50 AM	TR	room 100 Noyes Laboratory	Miller, J
32172: Physical Sciences course.						

32134	quiz	AQA	09:00 AM - 09:50 AM	WF	room 8 Chemistry Annex	Miller, J
32134: Physical Sciences course.						
32143	quiz	AQB	10:00 AM - 10:50 AM	WF	room 8 Chemistry Annex	Miller, J
32143: Physical Sciences course.						
32146	quiz	AQC	11:00 AM - 11:50 AM	WF	room 8 Chemistry Annex	Miller, J
32146: Physical Sciences course.						
32149	quiz	AQD	12:00 PM - 12:50 PM	WF	room 8 Chemistry Annex	Miller, J
32149: Physical Sciences course.						
32151	quiz	AQE	01:00 PM - 01:50 PM	WF	room 8 Chemistry Annex	Miller, J
32151: Physical Sciences course.						
32153	quiz	AQF	02:00 PM - 02:50 PM	WF	room 8 Chemistry Annex	Miller, J
32153: Physical Sciences course.						
32155	quiz	AQG	03:00 PM - 03:50 PM	WF	room 8 Chemistry Annex	Miller, J
32155: Physical Sciences course.						
32157	quiz	AQH	10:00 AM - 10:50 AM	WF	room 152 Chemistry Annex	Miller, J
32157: Physical Sciences course.						
32159	quiz	AQI	11:00 AM - 11:50 AM	WF	room 152 Chemistry Annex	Miller, J
32159: Physical Sciences course.						
32162	quiz	AQJ	12:00 PM - 12:50 PM	WF	room 152 Chemistry Annex	Miller, J
32162: Physical Sciences course.						
32165	quiz	AQK	01:00 PM - 01:50 PM	WF	room 152 Chemistry Annex	Miller, J
32165: Physical Sciences course.						
32167	quiz	AQL	11:00 AM - 12:50 PM	WF	room 111 Noyes Laboratory	Adams, G
32167: Physical Sciences course.						
32167: 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).						

32169	quiz	AQM	09:00 AM - 10:50 AM	WF	room 111 Noyes Laboratory	Adams, G
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	01:00 PM - 02:50 PM	WF	room 111 Noyes Laboratory	Adams, G
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).						

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	11	08:00 AM - 10:50 AM	M	room 1 Chemistry Annex	Le, A; Kelter, P
32343: Physical Sciences course.						
44405	laboratory	12	08:00 AM - 10:50 AM	M	room 1 Chemistry Annex	Le, A; Kelter, P
44405: Physical Sciences course.						
44406	laboratory	19	08:00 AM - 10:50 AM	F	room 1 Chemistry Annex	Le, A; Kelter, P
44406: Physical Sciences course.						
32345	laboratory	21	11:00 AM - 01:50 PM	M	room 1 Chemistry Annex	Le, A; Kelter, P
32345: Physical Sciences course.						
44417	laboratory	22	11:00 AM - 01:50 PM	M	room 1 Chemistry Annex	Le, A; Kelter, P
44417: Physical Sciences course.						
32346	laboratory	23	11:00 AM - 01:50 PM	T	room 1 Chemistry Annex	Le, A; Kelter, P
32346: Physical Sciences course.						
32347	laboratory	25	11:00 AM - 01:50 PM	W	room 1 Chemistry Annex	Le, A; Kelter, P

32347: Physical Sciences course.						
32348	laboratory	27	11:00 AM - 01:50 PM	R	room 1 Chemistry Annex	Le, A; Kelter, P
32348: Physical Sciences course.						
32352	laboratory	31	02:00 PM - 04:50 PM	M	room 1 Chemistry Annex	Le, A; Kelter, P
32352: Physical Sciences course.						
32354	laboratory	32	02:00 PM - 04:50 PM	M	room 1 Chemistry Annex	Le, A; Kelter, P
32354: Physical Sciences course.						
32355	laboratory	33	02:00 PM - 04:50 PM	T	room 1 Chemistry Annex	Le, A; Kelter, P
32355: Physical Sciences course.						
32356	laboratory	34	02:00 PM - 04:50 PM	T	room 1 Chemistry Annex	Le, A; Kelter, P
32356: Physical Sciences course.						
32357	laboratory	35	02:00 PM - 04:50 PM	W	room 1 Chemistry Annex	Le, A; Kelter, P
32357: Physical Sciences course.						
39114	laboratory	36	02:00 PM - 04:50 PM	W	room 1 Chemistry Annex	Le, A; Kelter, P
39114: Physical Sciences course.						
32358	laboratory	37	02:00 PM - 04:50 PM	R	room 1 Chemistry Annex	Le, A; Kelter, P
32358: Physical Sciences course.						
32359	laboratory	38	02:00 PM - 04:50 PM	R	room 1 Chemistry Annex	Le, A; Kelter, P
32359: Physical Sciences course.						
32360	laboratory	51	08:00 AM - 10:50 AM	M	room 1 Chemistry Annex	Le, A; Kelter, P
32360: Physical Sciences course.						
44420	laboratory	59	08:00 AM - 10:50 AM	F	room 1 Chemistry Annex	Le, A; Kelter, P
44420: Physical Sciences course.						
32361	laboratory	61	11:00 AM - 01:50 PM	M	room 1 Chemistry Annex	Le, A; Kelter, P
32361: Physical Sciences course.						
44421	laboratory	62	11:00 AM - 01:50	M	room 1	Le, A; Kelter, P

			PM		Chemistry Annex	
44421: Physical Sciences course.						
32362	laboratory	63	11:00 AM - 01:50 PM	T	room 1 Chemistry Annex	Le, A; Kelter, P
32362: Physical Sciences course.						
32363	laboratory	65	11:00 AM - 01:50 PM	W	room 1 Chemistry Annex	Le, A; Kelter, P
32363: Physical Sciences course.						
32364	laboratory	67	11:00 AM - 01:50 PM	R	room 1 Chemistry Annex	Le, A; Kelter, P
32364: Physical Sciences course.						
32365	laboratory	71	02:00 PM - 04:50 PM	M	room 1 Chemistry Annex	Le, A; Kelter, P
32365: Physical Sciences course.						
32366	laboratory	72	02:00 PM - 04:50 PM	M	room 1 Chemistry Annex	Le, A; Kelter, P
32366: Physical Sciences course.						
32367	laboratory	73	02:00 PM - 04:50 PM	T	room 1 Chemistry Annex	Le, A; Kelter, P
32367: Physical Sciences course.						
32368	laboratory	74	02:00 PM - 04:50 PM	T	room 1 Chemistry Annex	Le, A; Kelter, P
32368: Physical Sciences course.						
32369	laboratory	75	02:00 PM - 04:50 PM	W	room 1 Chemistry Annex	Le, A; Kelter, P
32369: Physical Sciences course.						
32370	laboratory	76	02:00 PM - 04:50 PM	W	room 1 Chemistry Annex	Le, A; Kelter, P
32370: Physical Sciences course.						
32371	laboratory	77	02:00 PM - 04:50 PM	R	room 1 Chemistry Annex	Le, A; Kelter, P
32371: Physical Sciences course.						
35065	laboratory	78	02:00 PM - 04:50 PM	R	room 1 Chemistry Annex	Le, A; Kelter, P
35065: Physical Sciences course.						

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

Lecture and discussions. Section B (Biological Version): Chemistry of organic and biochemical systems, chemical

energetics and equilibrium, chemical kinetics, and reaction mechanisms. Section P (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	Harwood, W
32231: Physical Sciences course.						
32231: Designated for students in the Life Sciences and related areas.						
32211	quiz	AQA	09:00 AM - 09:50 AM	WF	room 300 Noyes Laboratory	Harwood, W
32211: Physical Sciences course.						
32213	quiz	AQB	10:00 AM - 10:50 AM	WF	room 300 Noyes Laboratory	Harwood, W
32213: Physical Sciences course.						
32216	quiz	AQC	11:00 AM - 11:50 AM	WF	room 300 Noyes Laboratory	Harwood, W
32216: Physical Sciences course.						
32218	quiz	AQD	12:00 PM - 12:50 PM	WF	room 300 Noyes Laboratory	Harwood, W
32218: Physical Sciences course.						
32220	quiz	AQE	01:00 PM - 01:50 PM	WF	room 300 Noyes Laboratory	Harwood, W
32220: Physical Sciences course.						
32222	quiz	AQF	02:00 PM - 02:50 PM	WF	room 300 Noyes Laboratory	Harwood, W
32222: Physical Sciences course.						
32224	quiz	AQG	01:00 PM - 02:50 PM	WF	room 209 Noyes Laboratory	Adams, G
32224: Physical Sciences course.						
32224: 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).						
32226	quiz	AQH	09:00 AM - 09:50 AM	WF	room 303 Noyes Laboratory	Harwood, W

32226: Physical Sciences course.						
32228	quiz	AQI	01:00 PM - 01:50 PM	WF	room 303 Noyes Laboratory	Harwood, W
32228: Physical Sciences course.						
32234	quiz	AQJ	02:00 PM - 02:50 PM	WF	room 303 Noyes Laboratory	Harwood, W
32234: Physical Sciences course.						
39107	quiz	AQK	11:00 AM - 11:50 AM	WF	room 303 Noyes Laboratory	Harwood, W
39107: Physical Sciences course.						
39108	quiz	AQL	12:00 PM - 12:50 PM	WF	room 303 Noyes Laboratory	Harwood, W
39108: Physical Sciences course.						
43149	quiz	AQM	10:00 AM - 10:50 AM	WF	room 303 Noyes Laboratory	Harwood, W
43149: Physical Sciences course.						
32261	lecture	BL1	10:00 AM - 10:50 AM	MW	room 100 Noyes Laboratory	Lehmann, V
32261: Physical Sciences course.						
32261: Designated for students in the Life Sciences and related areas.						
32236	quiz	BQA	09:00 AM - 10:50 AM	TR	room 111 Noyes Laboratory	Adams, G
32236: Physical Sciences course.						
32236: 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).						
32238	quiz	BQB	01:00 PM - 02:50 PM	TR	room 111 Noyes Laboratory	Adams, G
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	Lehmann, V
32239: Physical Sciences course.						
32241	quiz	BQD	11:00 AM - 11:50 AM	TR	room 304 Noyes Laboratory	Lehmann, V
32241: Physical Sciences course.						
32243	quiz	BQE	12:00 PM - 12:50 PM	TR	room 304 Noyes Laboratory	Lehmann, V

32243: Physical Sciences course.						
32245	quiz	BQF	01:00 PM - 01:50 PM	TR	room 304 Noyes Laboratory	Lehmann, V
32245: Physical Sciences course.						
32248	quiz	BQG	09:00 AM - 09:50 AM	TR	room 19 Noyes Laboratory	Lehmann, V
32248: Physical Sciences course.						
32251	quiz	BQH	10:00 AM - 10:50 AM	TR	room 19 Noyes Laboratory	Lehmann, V
32251: Physical Sciences course.						
32252	quiz	BQI	11:00 AM - 11:50 AM	TR	room 19 Noyes Laboratory	Lehmann, V
32252: Physical Sciences course.						
32254	quiz	BQJ	12:00 PM - 12:50 PM	TR	room 19 Noyes Laboratory	Lehmann, V
32254: Physical Sciences course.						
32256	quiz	BQK	01:00 PM - 01:50 PM	TR	room 19 Noyes Laboratory	Lehmann, V
32256: Physical Sciences course.						
32258	quiz	BQL	02:00 PM - 02:50 PM	TR	room 19 Noyes Laboratory	Lehmann, V
32258: Physical Sciences course.						
44422	quiz	BQX	10:00 AM - 10:50 AM	TR	room 304 Noyes Laboratory	Lehmann, V
44422: Physical Sciences course.						
32305	lecture	CL1	12:00 PM - 12:50 PM	TR	room 100 Noyes Laboratory	Harwood, W
32305: Physical Sciences course.						
32305: Designated for students in the Life Sciences and related areas.						
32293	quiz	CQA	09:00 AM - 09:50 AM	WF	room 304 Noyes Laboratory	Harwood, W
32293: Physical Sciences course.						
32298	quiz	CQB	10:00 AM - 10:50 AM	WF	room 304 Noyes Laboratory	Harwood, W
32298: Physical Sciences course.						
32300	quiz	CQC	11:00 AM - 11:50 AM	WF	room 304 Noyes Laboratory	Harwood, W
32300: Physical Sciences course.						

32301	quiz	CQD	12:00 PM - 12:50 PM	WF	room 304 Noyes Laboratory	Harwood, W
32301: Physical Sciences course.						
32302	quiz	CQE	01:00 PM - 01:50 PM	WF	room 304 Noyes Laboratory	Harwood, W
32302: Physical Sciences course.						
32303	quiz	CQF	11:00 AM - 11:50 AM	WF	room 9 Chemistry Annex	Harwood, W
32303: Physical Sciences course.						
32306	quiz	CQG	12:00 PM - 12:50 PM	WF	room 9 Chemistry Annex	Harwood, W
32306: Physical Sciences course.						
39109	quiz	CQH	09:00 AM - 09:50 AM	WF	room 9 Chemistry Annex	Harwood, W
39109: Physical Sciences course.						
39110	quiz	CQI	10:00 AM - 10:50 AM	WF	room 9 Chemistry Annex	Harwood, W
39110: Physical Sciences course.						
39111	quiz	CQJ	01:00 PM - 01:50 PM	WF	room 9 Chemistry Annex	Harwood, W
39111: Physical Sciences course.						
43150	quiz	CQK	02:00 PM - 02:50 PM	WF	room 304 Noyes Laboratory	Harwood, W
43150: Physical Sciences course.						
43151	quiz	CQL	02:00 PM - 02:50 PM	WF	room 9 Chemistry Annex	Harwood, W
43151: Physical Sciences course.						
32309	lecture	DL1	01:00 PM - 01:50 PM	MW	room 100 Noyes Laboratory	Vaden, T
32309: Physical Sciences course.						
32309: Designated for most engineering students.						
32307	quiz	DQA	09:00 AM - 09:50 AM	TR	room 300 Noyes Laboratory	Vaden, T
32307: Physical Sciences course.						
32310	quiz	DQB	10:00 AM - 10:50 AM	TR	room 300 Noyes Laboratory	Vaden, T
32310: Physical Sciences course.						
32311	quiz	DQC	11:00 AM - 11:50 AM	TR	room 300 Noyes	Vaden, T

			AM		Laboratory	
32311: Physical Sciences course.						
32313	quiz	DQD	12:00 PM - 12:50 PM	TR	room 300 Noyes Laboratory	Vaden, T
32313: Physical Sciences course.						
32314	quiz	DQE	01:00 PM - 01:50 PM	TR	room 300 Noyes Laboratory	Vaden, T
32314: Physical Sciences course.						
32316	quiz	DQF	02:00 PM - 02:50 PM	TR	room 300 Noyes Laboratory	Vaden, T
32316: Physical Sciences course.						
32318	quiz	DQG	01:00 PM - 02:50 PM	TR	room 209 Noyes Laboratory	Adams, G
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	Vaden, T
32320: Physical Sciences course.						
32321	quiz	DQI	10:00 AM - 10:50 AM	TR	room 9 Chemistry Annex	Vaden, T
32321: Physical Sciences course.						
32322	quiz	DQJ	11:00 AM - 11:50 AM	TR	room 9 Chemistry Annex	Vaden, T
32322: Physical Sciences course.						
32323	quiz	DQK	12:00 PM - 12:50 PM	TR	room 9 Chemistry Annex	Vaden, T
32323: Physical Sciences course.						
32324	quiz	DQL	01:00 PM - 01:50 PM	TR	room 9 Chemistry Annex	Vaden, T
32324: Physical Sciences course.						
32326	quiz	DQM	02:00 PM - 02:50 PM	TR	room 9 Chemistry Annex	Vaden, T
32326: Physical Sciences course.						
41121	quiz	DQN	02:00 PM - 02:50 PM	TR	room 5 FAR - Food Service Bldg	Vaden, T
41121: Physical Sciences course.						

41121: Restricted to WIMSE students only.

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	12E	08:00 AM - 10:50 AM	T	room 101 Chemistry Annex	Denofrio, L; Flener, C
32417: Physical Sciences course.						
32417: Engineering version.						
32372	laboratory	12L	08:00 AM - 10:50 AM	T	room 201 Chemistry Annex	Denofrio, L; Flener, C
32372: Physical Sciences course.						
32372: Biological Version: For students in the Life Sciences and related areas.						
32419	laboratory	14E	08:00 AM - 10:50 AM	R	room 101 Chemistry Annex	Denofrio, L; Flener, C
32419: Physical Sciences course.						
32419: Engineering version.						
32373	laboratory	14L	08:00 AM - 10:50 AM	R	room 201 Chemistry Annex	Denofrio, L; Flener, C
32373: Physical Sciences course.						
32373: Biological Version: For students in the Life Sciences and related areas.						
32420	laboratory	15E	08:00 AM - 10:50 AM	F	room 101 Chemistry Annex	Denofrio, L; Flener, C
32420: Physical Sciences course.						
32420: Engineering version.						
32374	laboratory	15L	08:00 AM - 10:50 AM	F	room 201 Chemistry Annex	Denofrio, L; Flener, C
32374: Physical Sciences course.						
32374: Biological Version: For students in the Life Sciences and related areas.						
32375	laboratory	22L	08:00 AM - 10:50 AM	T	room 201 Chemistry Annex	Denofrio, L; Flener, C
32375: Physical Sciences course.						

32375: Biological Version: For students in the Life Sciences and related areas.						
43153	laboratory	24E	08:00 AM - 10:50 AM	R	room 101 Chemistry Annex	Denofrio, L; Flener, C
43153: Physical Sciences course.						
43153: Engineering version.						
43154	laboratory	25E	08:00 AM - 10:50 AM	F	room 101 Chemistry Annex	Denofrio, L; Flener, C
43154: Physical Sciences course.						
43154: Engineering version.						
32377	laboratory	25L	08:00 AM - 10:50 AM	F	room 201 Chemistry Annex	Denofrio, L; Flener, C
32377: Physical Sciences course.						
32377: Biological Version: For students in the Life Sciences and related areas.						
32378	laboratory	41L	11:00 AM - 01:50 PM	M	room 201 Chemistry Annex	Denofrio, L; Flener, C
32378: Physical Sciences course.						
32378: Biological Version: For students in the Life Sciences and related areas.						
32379	laboratory	42L	11:00 AM - 01:50 PM	T	room 201 Chemistry Annex	Denofrio, L; Flener, C
32379: Physical Sciences course.						
32379: Biological Version: For students in the Life Sciences and related areas.						
32380	laboratory	43L	11:00 AM - 01:50 PM	W	room 201 Chemistry Annex	Denofrio, L; Flener, C
32380: Physical Sciences course.						
32380: Biological Version: For students in the Life Sciences and related areas.						
32381	laboratory	44L	11:00 AM - 01:50 PM	R	room 201 Chemistry Annex	Denofrio, L; Flener, C
32381: Physical Sciences course.						
32381: Biological Version: For students in the Life Sciences and related areas.						
32382	laboratory	51L	11:00 AM - 01:50 PM	M	room 201 Chemistry Annex	Denofrio, L; Flener, C
32382: Physical Sciences course.						
32382: Biological Version: For students in the Life Sciences and related areas.						
32383	laboratory	52L	11:00 AM - 01:50 PM	T	room 201 Chemistry Annex	Denofrio, L; Flener, C
32383: Physical Sciences course.						

32383: Biological Version: For students in the Life Sciences and related areas.						
32384	laboratory	54L	11:00 AM - 01:50 PM	R	room 201 Chemistry Annex	Denofrio, L; Flener, C
32384: Physical Sciences course.						
32384: Biological Version: For students in the Life Sciences and related areas.						
32385	laboratory	61L	11:00 AM - 01:50 PM	M	room 201 Chemistry Annex	Denofrio, L; Flener, C
32385: Physical Sciences course.						
32385: Biological Version: For students in the Life Sciences and related areas.						
43156	laboratory	62L	11:00 AM - 01:50 PM	M	room 201 Chemistry Annex	Denofrio, L; Flener, C
43156: Physical Sciences course.						
43156: Biological Version: For students in the Life Sciences and related areas.						
32425	laboratory	71E	02:00 PM - 04:50 PM	M	room 101 Chemistry Annex	Denofrio, L; Flener, C
32425: Physical Sciences course.						
32425: Engineering version.						
32386	laboratory	71L	02:00 PM - 04:50 PM	M	room 201 Chemistry Annex	Denofrio, L; Flener, C
32386: Physical Sciences course.						
32386: Biological Version: For students in the Life Sciences and related areas.						
32426	laboratory	72E	02:00 PM - 04:50 PM	T	room 101 Chemistry Annex	Denofrio, L; Flener, C
32426: Physical Sciences course.						
32426: Engineering version.						
32387	laboratory	72L	02:00 PM - 04:50 PM	T	room 201 Chemistry Annex	Denofrio, L; Flener, C
32387: Physical Sciences course.						
32387: Biological Version: For students in the Life Sciences and related areas.						
32428	laboratory	73E	02:00 PM - 04:50 PM	W	room 101 Chemistry Annex	Denofrio, L; Flener, C
32428: Physical Sciences course.						
32428: Engineering version.						
32388	laboratory	73L	02:00 PM - 04:50 PM	W	room 201 Chemistry Annex	Denofrio, L; Flener, C
32388: Physical Sciences course.						

32388: Biological Version: For students in the Life Sciences and related areas.						
32430	laboratory	74E	02:00 PM - 04:50 PM	R	room 101 Chemistry Annex	Denofrio, L; Flener, C
32430: Physical Sciences course.						
32430: Engineering version.						
32389	laboratory	74L	02:00 PM - 04:50 PM	R	room 201 Chemistry Annex	Denofrio, L; Flener, C
32389: Physical Sciences course.						
32389: Biological Version: For students in the Life Sciences and related areas.						
32432	laboratory	75E	02:00 PM - 04:50 PM	F	room 101 Chemistry Annex	Denofrio, L; Flener, C
32432: Physical Sciences course.						
32432: Engineering version.						
32439	laboratory	81E	02:00 PM - 04:50 PM	M	room 101 Chemistry Annex	Denofrio, L; Flener, C
32439: Physical Sciences course.						
32439: Engineering version.						
32390	laboratory	81L	02:00 PM - 04:50 PM	M	room 201 Chemistry Annex	Denofrio, L; Flener, C
32390: Physical Sciences course.						
32390: Biological Version: For students in the Life Sciences and related areas.						
32440	laboratory	82E	02:00 PM - 04:50 PM	T	room 101 Chemistry Annex	Denofrio, L; Flener, C
32440: Physical Sciences course.						
32440: Engineering version.						
32391	laboratory	82L	02:00 PM - 04:50 PM	T	room 201 Chemistry Annex	Denofrio, L; Flener, C
32391: Physical Sciences course.						
32391: Biological Version: For students in the Life Sciences and related areas.						
32441	laboratory	83E	02:00 PM - 04:50 PM	W	room 101 Chemistry Annex	Denofrio, L; Flener, C
32441: Physical Sciences course.						
32441: Engineering version.						
32392	laboratory	83L	02:00 PM - 04:50 PM	W	room 201 Chemistry Annex	Denofrio, L; Flener, C
32392: Physical Sciences course.						

32392: Biological Version: For students in the Life Sciences and related areas.						
32442	laboratory	84E	02:00 PM - 04:50 PM	R	room 101 Chemistry Annex	Denofrio, L; Flener, C
32442: Physical Sciences course.						
32442: Engineering version.						
32393	laboratory	84L	02:00 PM - 04:50 PM	R	room 201 Chemistry Annex	Denofrio, L; Flener, C
32393: Physical Sciences course.						
32393: Biological Version: For students in the Life Sciences and related areas.						
32446	laboratory	85E	02:00 PM - 04:50 PM	F	room 101 Chemistry Annex	Denofrio, L; Flener, C
32446: Physical Sciences course.						
32446: Engineering version.						
39117	laboratory	86L	02:00 PM - 04:50 PM	T	room 201 Chemistry Annex	Denofrio, L; Flener, C
39117: Physical Sciences course.						
39117: Biological Version: For students in the Life Sciences and related areas.						
39119	laboratory	88L	02:00 PM - 04:50 PM	R	room 201 Chemistry Annex	Denofrio, L; Flener, C
39119: Physical Sciences course.						
39119: Biological Version: For students in the Life Sciences and related areas.						
32394	laboratory	91L	02:00 PM - 04:50 PM	M	room 201 Chemistry Annex	Denofrio, L; Flener, C
32394: Physical Sciences course.						
32394: Biological Version: For students in the Life Sciences and related areas.						
32395	laboratory	92L	02:00 PM - 04:50 PM	T	room 201 Chemistry Annex	Denofrio, L; Flener, C
32395: Physical Sciences course.						
32395: Biological Version: For students in the Life Sciences and related areas.						
32396	laboratory	93L	02:00 PM - 04:50 PM	W	room 201 Chemistry Annex	Denofrio, L; Flener, C
32396: Physical Sciences course.						
32396: Biological Version: For students in the Life Sciences and related areas.						
32397	laboratory	94L	02:00 PM - 04:50 PM	R	room 201 Chemistry Annex	Denofrio, L; Flener, C
32397: Physical Sciences course.						

32397: Biological Version: For students in the Life Sciences and related areas.						
32443	laboratory	95L	02:00 PM - 04:50 PM	F	room 201 Chemistry Annex	Denofrio, L; Flener, C
32443: Physical Sciences course.						
32443: Biological Version: For students in the Life Sciences and related areas.						
32444	laboratory	96L	02:00 PM - 04:50 PM	F	room 201 Chemistry Annex	Denofrio, L; Flener, C
32444: Physical Sciences course.						
32444: Biological Version: For students in the Life Sciences and related areas.						
43157	laboratory	98L	02:00 PM - 04:50 PM	F	room 201 Chemistry Annex	Denofrio, L; Flener, C
43157: Physical Sciences course.						
43157: Biological Version: For students in the Life Sciences and related areas.						

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
39202: Physical Sciences course.						
39201	lecture	AL1	11:00 AM - 11:50 AM	T	room 161 Noyes Laboratory	Adams, G
39201: Physical Sciences course.						

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

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

CRN	Type	Section	Time	Days	Location	Instructor
10505	independent study		ARRANGED			
10505: Departmental Approval Required						
41974	conference	K	ARRANGED			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 161 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	W	room 161 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.						
32559	discussion-recitation	M	ARRANGED			Adams, G
32559: 1 hours for Merit and Transition workshop students only.						
PEND	discussion-recitation	P	03:00 PM - 03:50 PM	F		
PEND: 1 hours Topic: Chemical Perspectives. First Year Discovery Program Course. Designed for freshman students concurrently enrolled in at least one General Chemistry course (Chem 102-Chem 203) who are interested in state-of-the-art Chemistry and faculty research. Students should enroll in only one Discovery course. Students who enroll in more than one Discovery course may be dropped from the additional Discovery courses. For course descriptions, see the Discovery Program booklet. This class will be held in ROOM A414 CLSL (Chemical Life Sciences Laboratory).						
32560	conference	S	05:00 PM - 06:20 PM	T	room 217 Noyes Laboratory	Miller, J
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	Yerkes, C
32457: Physical Sciences course.						
32447	quiz	AQA	09:00 AM - 09:50 AM	WF	room 19 Noyes Laboratory	Yerkes, C
32447: Physical Sciences course.						
32448	quiz	AQB	10:00 AM - 10:50 AM	WF	room 19 Noyes Laboratory	Yerkes, C
32448: Physical Sciences course.						
32449	quiz	AQC	11:00 AM - 11:50 AM	WF	room 19 Noyes Laboratory	Yerkes, C
32449: Physical Sciences course.						
32450	quiz	AQD	12:00 PM - 12:50 PM	WF	room 19 Noyes Laboratory	Yerkes, C
32450: Physical Sciences course.						
32452	quiz	AQF	11:00 AM - 11:50 AM	WF	room 301 Noyes Laboratory	Yerkes, C
32452: Physical Sciences course.						
32453	quiz	AQG	12:00 PM - 12:50 PM	WF	room 301 Noyes Laboratory	Yerkes, C
32453: Physical Sciences course.						
32455	quiz	AQI	01:00 PM - 01:50 PM	WF	room 19 Noyes Laboratory	Yerkes, C
32455: Physical Sciences course.						
32455: Designated for James Scholars.						
32458	quiz	AQJ	11:00 AM - 12:50 PM	WF	room 209 Noyes Laboratory	Adams, G
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).						

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. 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	Decoste, D
32544: Designated for James Scholars. James Scholars course.						
32550	laboratory	AB2	01:00 PM - 04:50 PM	R	room 310 Chemistry Annex	Decoste, D
32551	laboratory	AB3	01:00 PM - 04:50 PM	R	room 310 Chemistry Annex	Decoste, D
44424	laboratory	AB5	08:00 AM - 11:50 AM	F	room 310 Chemistry Annex	Decoste, D
32545	lecture	AL1	02:00 PM - 02:50 PM	T	room 100 Noyes Laboratory	Decoste, D
32542	laboratory	BB1	01:00 PM - 04:50 PM	T	room 310 Chemistry Annex	Decoste, D
32542: James Scholars course. Designated for James Scholars.						
32543	laboratory	BB2	01:00 PM - 04:50 PM	T	room 310 Chemistry Annex	Decoste, D
43166	laboratory	BB3	08:00 AM - 11:50 AM	M	room 310 Chemistry Annex	Decoste, D
32546	laboratory	BB4	08:00 AM - 11:50 AM	M	room 310 Chemistry Annex	Decoste, D
32547	laboratory	BB5	01:00 PM - 04:50 PM	M	room 310 Chemistry Annex	Decoste, D
32549	lecture	BL1	02:00 PM - 02:50 PM	R	room 100 Noyes Laboratory	Decoste, D

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 467 Noyes Laboratory	Miller, L
32583	laboratory	AB2	08:00 AM - 11:50 AM	T	room 467 Noyes Laboratory	Miller, L
32585	laboratory	AB3	08:00 AM - 11:50 AM	T	room 250 Noyes Laboratory	Miller, L
32587	laboratory	AB4	01:00 PM - 04:50 PM	T	room 467 Noyes Laboratory	Miller, L
32590	laboratory	AB5	09:00 AM - 12:50 PM	W	room 467 Noyes Laboratory	Miller, L
32592	laboratory	AB6	01:00 PM - 04:50 PM	W	room 467 Noyes Laboratory	Miller, L
32595	laboratory	AB7	08:00 AM - 11:50 AM	R	room 467 Noyes Laboratory	Miller, L
32597	laboratory	AB8	01:00 PM - 04:50 PM	R	room 467 Noyes Laboratory	Miller, L
44520	laboratory	AB9	08:00 AM - 11:50 AM	R	room 250 Noyes Laboratory	Miller, L
32573	lecture	AL1	08:00 AM - 08:50 AM	R	room 124 Burrill Hall	Beak, P; Miller, L
32576	lecture	AL2	03:00 PM - 03:50 PM	R	room 100 Gregory Hall	Beak, P; Miller, L
32578	lecture	AL3	01:00 PM - 01:50 PM	F	room 124 Burrill Hall	Beak, P; Miller, L

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 232 and CHEM 236. 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
32603	discussion-recitation	ADA	12:00 PM - 01:50 PM	M	room 111 Noyes Laboratory	Adams, G
32603: 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).						
32605	discussion-recitation	ADB	10:00 AM - 10:50 AM	T	room 301 Noyes Laboratory	Silverman, S

32607	discussion-recitation	ADC	12:00 PM - 12:50 PM	T	room 162 Noyes Laboratory	Silverman, S
32600	lecture	AL1	09:00 AM - 09:50 AM	MWF	room 161 Noyes Laboratory	Silverman, S

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
32616	laboratory	ABA	01:00 PM - 04:50 PM	T	room 250 Noyes Laboratory	Hergenrother, P
32618	laboratory	ABB	01:00 PM - 04:50 PM	W	room 250 Noyes Laboratory	Hergenrother, P
32622	laboratory	ABC	01:00 PM - 04:50 PM	R	room 250 Noyes Laboratory	Hergenrother, P
32612	lecture	AL1	09:00 AM - 09:50 AM	T	room 161 Noyes Laboratory	Hergenrother, P

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 both letter and S/U grading. Prerequisite: Acceptance into the School of Chemical Sciences Cooperative Education Program.

CRN	Type	Section	Time	Days	Location	Instructor
32565	discussion-recitation	A	ARRANGED			Williams, D

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 both letter and S/U grading. Prerequisite: Acceptance into the School of Chemical Sciences Cooperative Education Program.

CRN	Type	Section	Time	Days	Location	Instructor
32568	practice	A	ARRANGED			Williams, D

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 both letter and S/U grading. 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			Williams, D
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	Wilson, R
32634	laboratory	ABB	01:00 PM - 04:50 PM	W	room 157 Noyes Laboratory	Wilson, R
32635	laboratory	ABC	01:00 PM - 04:50 PM	R	room 157 Noyes Laboratory	Wilson, R
32638	quiz	AQA	04:00 PM - 04:50 PM	M	room 161 Noyes Laboratory	Wilson, R

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
32626: Advanced Composition course.						
32630	laboratory	AB2	01:00 PM - 04:50 PM	R	room 219 Noyes Laboratory	Rauchfuss, T
32630: Advanced Composition course.						
45258	laboratory	AB3	01:00 PM - 04:50 PM	F	room 219 Noyes Laboratory	Rauchfuss, T
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
32671	lecture	W	08:00 AM - 08:50 AM	MWF	room 100 Noyes Laboratory	Moore, J

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	08:00 AM - 08:50 AM	TR	room 217 Noyes Laboratory	Forbes, A

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

Same as PHYS 404. See PHYS 404.

CRN	Type	Section	Time	Days	Location	Instructor
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38607	lecture	AC	04:00 PM - 05:50 PM	MW	room 136 Loomis Laboratory	Van Harlingen, D
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	Van Harlingen, D
36672: 4 hours Graduate students register for lecture AG (36672) and for one of the laboratory (L) sections.						
36674	laboratory	L1	08:00 AM - 10:50 AM	TR	room 5106 Engineering Sciences Bldg	Bahr, D
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	Stehno, M

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	Gin, D

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	Gin, M
32678	laboratory	ABD	01:00 PM - 04:50 PM	R	room 219 Noyes Laboratory	Gin, M
	laboratory	ABD	02:00 PM - 05:50 PM	T	room 219 Noyes Laboratory	Gin, M
32673	lecture	ALA	01:00 PM - 01:50 PM	T	room 161 Noyes Laboratory	Gin, M

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 161 Noyes Laboratory	Luthey-Schulten, Z

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
39141	lecture	A	09:00 AM - 09:50 AM	MWF	room 162 Noyes Laboratory	Oldfield, E
32681	lecture	B	10:00 AM - 10:50 AM	MWF	room 217 Noyes Laboratory	Dlott, D

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
32735	laboratory	AB1	01:00 PM - 04:50 PM	R	room ARR Noyes Laboratory	McDonald, J
32735: This lab will be held in 459 Noyes.						
32733	laboratory	AB2	01:00 PM - 04:50 PM	T	room ARR Noyes Laboratory	McDonald, J
32733: This lab will be held in 459 Noyes.						
32732	laboratory	AB3	06:00 PM - 09:50 PM	T	room ARR Noyes Laboratory	McDonald, 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 ARR Noyes Laboratory	McDonald, J
32736: This lab will be held in 459 Noyes.						
41588	laboratory	AB3	01:00 PM - 04:50 PM	T	room ARR Noyes Laboratory	McDonald, J
41588: This lab will be held in 459 Noyes.						
41589	laboratory	AB4	06:00 PM - 09:50 PM	T	room ARR Noyes Laboratory	McDonald, J
41589: This lab will be held in 459 Noyes.						
32737	quiz	AQ1	ARRANGED			McDonald, J
32737: Check with TA in your lab section.						

450 **Astrochemistry** Credit: 4 hours.

Covers the foundations of astrochemistry, a young field at the intersection between chemistry and astronomy. Topics to be discussed include the interstellar medium, atomic and molecular physics, interstellar chemistry, molecular astronomy, and unresolved enigmas in the field. Same as ASTR 450. Prerequisite: CHEM 442 and CHEM 444, or PHYS 427 and PHYS 486, or equivalent experience in quantum mechanics, thermodynamics, and statistical mechanics.

CRN	Type	Section	Time	Days	Location	Instructor
43169	lecture-discussion	A	09:00 AM - 10:20 AM	TR	room 134 Astronomy Bldg	McCall, B

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 162 Noyes Laboratory	Shapley, P
39152: 3 hours This section is for undergraduate students.						
40330	lecture	B	02:00 PM - 03:20	TR	room 162 Noyes	Shapley, P

			PM		Laboratory	
40330: 4 hours This section is for Graduate students. This section is for 4 hours credit.						

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 124 Burrill Hall	Gennis, R; 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	09:30 AM - 10:50 AM	MW	room 4101 Materials Science and Eng Bld	Economy, J
43533	lecture-discussion	B	09:30 AM - 10:50 AM	MW	room 4101 Materials Science and Eng Bld	Economy, J
43533: 3 hours						

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		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	Hellwig, H
32741	laboratory	ABB	09:00 AM - 10:20 AM	F	room 212 Chemistry Annex	Hellwig, H
32739	lecture	AL1	02:00 PM - 03:20 PM	MW	room 161 Noyes Laboratory	Hellwig, H

494 Lab Safety Fundamentals Credit: 1 hours.

Same as MSE 492. See MSE 492.

CRN	Type	Section	Time	Days	Location	Instructor
38355	lecture	A	07:00 PM - 08:50 PM	MW	room 228 Natural History Bldg	Shang, J
38355: Meets 27-Mar-06 - 19-Apr-06.						
38355: THIS CLASS MEETS ONLY FIVE TIMES EACH SEMESTER. THE FIRST CLASS MEETS ON MARCH 27, 2006. 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	Boulatov, R

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	Shapley, J

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	Bohn, P

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	Gewirth, 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	Wieckowski, A

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	09:00 AM - 09:50 AM	MWF	room 165 Everitt Elec and Comp Engr Lab	White, M
	lecture	A	07:00 PM - 08:20 PM	M	room 217 Noyes Laboratory	White, M
: 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	Coates, R
	lecture-discussion	A	07:30 PM - 09:50 PM	W	room 116 Roger Adams Laboratory	Coates, R

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 161 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
43147	lecture	A	11:00 AM - 11:50 AM	MWF	room 161 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	Gruebele, M

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	Lisy, J

548 Molecular Electronic Structure Credit: 4 hours.

Theoretical basis of the electronic structure of atoms and molecules; molecular orbital concepts and self-consistent field theory; angular momentum and the full rotation group; electron correlation effects; and applications to electronic spectroscopy of organic molecules, detailed descriptions of chemical reactions, and molecular properties. Prerequisite: CHEM 540.

CRN	Type	Section	Time	Days	Location	Instructor
32755	lecture-discussion	A	11:00 AM - 11:50 AM	MWF	room 164 Noyes Laboratory	Martinez, T

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	09:00 AM - 10:50 AM	TR	room 106B1 Engineering Hall	Gerlt, J
32756: 3 hours						
43995	lecture-discussion	B	09:00 AM - 10:50 AM	TR	room 106B1 Engineering Hall	Gerlt, J
43995: 4 hours This section will require students to write an additional paper.						

574 Genomics, Proteomics, Bioinfo Credit: 3 or 4 hours.

Survey of contemporary methods, applications, and implications of postgenomic biology, including genome sequencing, global RNA analysis, and proteomics. Same as MCB 554. Prerequisite: One year of undergraduate organic chemistry and one semester of biochemistry, or consent of instructor.

CRN	Type	Section	Time	Days	Location	Instructor
32758	lecture-discussion	A	04:00 PM - 05:20 PM	TR	room 161 Noyes Laboratory	Kelleher, N
32758: 3 hours						
41449	lecture-discussion	B	04:00 PM - 05:20 PM	TR	room 161 Noyes Laboratory	Kelleher, N
41449: 4 hours Additional work is required for 4 hours of credit.						

575 Chemical Biology Seminar Credit: 1 hours.

Required of all graduate students whose major is Chemical Biology. Approved for S/U grading only. Prerequisite: Consent of instructor.

CRN	Type	Section	Time	Days	Location	Instructor
32760	lecture-discussion	A	12:00 PM - 01:50 PM	R	room 161 Noyes Laboratory	Lu, Y

585 Materials Chemistry Seminar Credit: 1 hours.

Required of all Chemistry graduate students whose major area is Materials Chemistry. Approved for S/U grading only.

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

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 162 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						

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						