

I= Introduced
 R= Reinforced
 M= Mastered

Program Learning Outcomes: Chem 221, Chem 231, Chem 255, Chem 256A, Chem 256B, Chem 311

125/126 127/128 221 231 255 256A 256B Chem 311 Date: 10-4-2021

1	Students will demonstrate knowledge in organic chemistry and at least two of analytical, biochemistry, inorganic, and physical.	I	I	R	M	R	M	M	M	M	M	M

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	Students will demonstrate problem-solving skills, chemical information skills (including reading the lit), and computer/computational skills.	I	I	R	R	R	R	M	R	R	M	R
4	Students will demonstrate an ability to conduct experiments, as well as analyze and interpret data.	N/A	I	R	R	R	R	M	R	R	M	N/A

5

Students will show proficiency in scientific communication including laboratory notebooks, laboratory

	and of the importance of inclusive excellence in chemistry.												
7	Students will demonstrate an understanding of the connections between chemistry and other science disciplines.	I	N/A	N/A	R	R	R	M	M	M	M	R	R
8	Students will have a successful transition to their post-college activities.	I	I	R	R	R	R	M	M	M	R	R	R/M
		Chem 331	Chem 332	Chem 335	Chem 343	Chem 344	Chem 345	Chem 346	Chem 350 NMR Spectroscopy	Chem 352 Organic Mechanisms	Chem 352 Organometallics	Chem 354 Comp Chem Modeling	Chem 490 (Research)

1 Students will demonstrate knowledge in organic chemistry and at least two of analytical, biochemistry, inorganic,

Program Learning Outcomes: Assessment Tools

Program Name: Chemistry B.A.

Date: 10-4-2021

<p>Program Learning Outcomes</p> <p>Knowledge, skill, or behavior students can demonstrate upon program completion</p>	<p>Measurement Tool</p>	<p>Timeline/Frequency of Assessment</p>	<p>Target</p>	<p>Review</p>
<p>1 Students will demonstrate knowledge in organic chemistry and at least two of analytical, biochemistry, inorganic, and physical.</p>	<p>ACS Exams: Chem 125/6 and 131 Gen Chem Chem 231 Organic Chem 314 Biochem Chem 322 Inorganic Chem 331 Analytical Chem 344 Physical Chem</p>	<p>Exams will be given every year, and subdisciplines will report their data (class averages) once every five years (see Review column on right for subdisciplinary reporting schedule).</p>	<p>125/6: average above 50%ile 231: average above 80%ile 314: average above 65%ile 322: average above 60%ile 331: average above 80%ile 343: median above 60%ile 344: median above 70%ile</p>	<p>Cycle through subdisciplines (ABIOP12.7 or nBTm(3)8.7(3)-4.7(1A)2.7(c)-2</p>

		Chem 322: Inorganic lit discussions (reading the lit) Chem 345/346: PChem - Data analysis for lab reports		demonstrates their chem info skills 322: All students will successfully answer questions linked to literature discussion 345/346: All students will pass lab demonstrating proficiency in basic computer skills	2024 Organic 2025 Physical
4	Students will demonstrate an ability to conduct experiments, as well as analyze and interpret data.	Chem 324: Inorganic proposal for research project and report Chem 315: Biochem lab CUREs - students address written questions about design and propose/choose substrates to test for enzyme activity	Subdisciplines will report results every five years.	324: All students write novel and lit-supported proposal 315: 90% of students produce workable protein purification and assay procedure	Review during sub disciplinary review year

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Students will show proficiency in scientific communication including laboratory notebooks, laboratory reports, journal

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Summer Research: Responsible
conduct of research workshop
Department DEI work: Faculty will
include examples of diverse
scientists and their work in their
courses; the department will plan
informal opportunities (or "un-
office hours") to gather with
students in settings that are
especially welcoming to
underrepresented students

students successfully complete one
memo (of two possible memos)
that includes the critical
comparison of two analytical
techniques and makes
recommendation