

Program learning outcomes	Courses/Requirements related to these learning outcomes	Assessment method	Measures/Criteria, Rubric	Data collection	Assessment cycle
MA Chemistry					
Demonstrate advanced level knowledge in both (i) synthesis and materials chemistry and (ii) analytical and physical chemistry methods, with a higher level of knowledge expected in the student's area of focus.	<p>a) Courses</p> <p>Synthesis and Materials Courses: CHEM 5160 - Advanced Synthetic Chemistry CHEM 5440 - Bioorganic Chemistry CHEM 5450 - Advanced Organic Chemistry CHEM 5460 - Synthetic Organic Chemistry CHEM 5470 - Medicinal Chemistry CHEM 5550 - Organometallic Chemistry CHEM 5560 - Solid State Chemistry</p> <p>Analytical and Physical Methods Courses: CHEM 5230 - Mass Spectrometry CHEM 5250 - Bioanalytical Methods CHEM 5260 - Analytical Separations CHEM 5270 - Electroanalytical Chemistry CHEM 5330 - Advanced Physical Chemistry CHEM 5340 - Advanced Thermodynamics CHEM 5620 - Biophysical Chemistry CHEM 5630 - Chemical Biology and Biotechnology</p> <p>b) Final oral exam</p>	<p>a) For all, final score in class.</p> <p>b) Rubric being developed</p>	<p>a)</p> <p>>90% Exceeds expectations 70 - 89% Meets expectations 65 - 69% Approaching expectations <65% Not meeting expectations</p> <p>b)</p> <p>Rubric</p>	Every offering	1 course from each area will be assessed in Year 1 of a 3 year cycle
Use standard search tools and retrieval methods to obtain information about a topic, substance, technique, or an issue relating to chemistry and assess relevant studies from the chemical literature.	CHEM 5470 CHEM 5200 - Analytical Chemistry 2 CHEM 5270 CHEM 5630 CHEM 5970 - Research Topics CHEM 5980 - Graduate Reading Course	CHEM 5470 - Rubric is being developed CHEM 5200 - Rubric CHEM 5270 - Scoring system CHEM 5630 - Scoring system CHEM 5970 - Rubric being developed CHEM 5980 - Rubric being developed	Scores on rubric	Every offering	1 course will be assessed in Year 2 of a 3 year cycle
Communicate scientific findings from literature in writing and oral presentation.	Courses CHEM 5620 CHEM 5470 CHEM 5270 CHEM 5630 CHEM 5970 CHEM 5980	CHEM 5620 - Rubric CHEM 5470 - Rubric is being developed CHEM 5270 - Rubric to be developed CHEM 5630 - Scoring system CHEM 5970 - Rubric being developed CHEM 5980 - Rubric being developed	Scores on rubric	Every offering	1 course will be assessed in Year 3 of a 3 year cycle

<p>Apply learned chemical practices and theories to proposed problems.</p>	<p>a) Courses Synthesis and Materials Courses: CHEM 5160 - Advanced Synthetic Chemistry CHEM 5440 - Bioorganic Chemistry CHEM 5450 - Advanced Organic Chemistry CHEM 5460 - Synthetic Organic Chemistry CHEM 5470 - Medicinal Chemistry CHEM 5550 - Organometallic Chemistry CHEM 5560 - Solid State Chemistry</p> <p>Analytical and Physical Methods Courses: CHEM 5230 - Mass Spectrometry CHEM 5250 - Bioanalytical Methods CHEM 5260 - Analytical Separations CHEM 5270 - Electroanalytical Chemistry CHEM 5330 - Advanced Physical Chemistry CHEM 5340 - Advanced Thermodynamics CHEM 5620 - Biophysical Chemistry CHEM 5630 - Chemical Biology and Biotechnology</p> <p>b) Final oral exam</p>	<p>a) For all, final score in class b) Rubric being developed</p>	<p>a) >90% Exceeds expectations 70 - 89% Meets expectations 65 - 69% Approaching expectations <65% Not meeting expectations</p> <p>b) Rubric</p>	<p>Every offering</p>	<p>a) 1 course from each area will be assessed in Year 1 of a 3 year cycle b) Assessed in Year 2</p>
<p>Adhere to accepted ethical and professional standards in chemistry.</p>	<p>Will develop online module for students to complete concerning ethics</p>	<p>Score on quiz for online module</p>	<p>Must score >80% to meet expectations</p>	<p>Every offering</p>	<p>Assessed in Year 3</p>