

Department: CHEMISTRY
Program: CHEMISTRY - GRADUATE

Skill Set	Professional Application	Delivery of Skill Set Courses, extracurricular activities, etc. in which the skill set is introduced (I), reinforced (R), or mastered (M)
Core Skill: Communication and Critical Thinking	Communication scientific content orally, reading and understanding professional reports Assessing content of professional documents Quality insurance	CHEM 5305 (M) CHEM 5306 (M) CHEM 5365 (M) CHEM 5412 (M) CHEM 5130 (M) CHEM 5327 (M)
Core Skill: Empirical and Quantitative Skills	Set up experiments based on scientific laws. Formulation of working hypotheses. Select analytical methods. Uses statistics and mathematical-physical laws to solve problems	CHEM 5305 (M) CHEM 5306 (M) CHEM 5365 (M) CHEM 5412 (M) CHEM 5308 (M)
Core Skill: Personal Responsibility Social Responsibility	Conscious use of personal protection and safety precaution, knowledge of hazardous materials and waste management. Educate community and risk management.	CHEM 5305 (M) CHEM 5306 (M) CHEM 5365 (M) CHEM 5412 (M)
Core Skill: Team work and Leadership Skills	Working in research and development team Role model, team leader, and laboratory manager. Training employee procedures	CHEM 5305 (M) CHEM 5306 (M) CHEM 5365 (M) CHEM 5412 (M)
Discipline-related Skills: Technical Skills	Operating, maintaining, and troubleshooting of laboratory equipment. Set up experiments according to technical procedures. Use of science data bases Seeking technical data Application information technology	CHEM 5305 (M) CHEM 5306 (M) CHEM 5365 (M) CHEM 5412 (M) CHEM 5301 (M)
Discipline-related Skills: Problem solving Decision making	Understanding of causes and ability to apply scientific knowledge Judge situation and uses scientific data to provide solution and formulate recommendation	CHEM 5351 (M) CHEM 5341 (M) CHEM 5342 (M) CHEM 5343 (M)