



# Course Competency Report by Code

Code: AIT2

## Organic Chemistry (AIT2)

Course of Study: COT1 - Organic Chemistry  
Course Level: Graduate  
Course Division: First Year Master's  
Discipline: Chemistry  
Course Type:  
Department: Science

COMPETENCY #	COMPETENCY NAME	COMPETENCY TEXT
208.1.1	Introduction to Organic Chemistry	The graduate constructs standards-based lessons on the history and nature of organic chemistry, demonstrates how organic chemistry relates to the world, and introduces students to careers in organic chemistry.
208.1.2	Carbon Compounds and Chemical Bonds	The graduate can calculate formal charges and organic shorthand notation, and demonstrate basic concepts of chemical bonding.
208.1.3	Organic Compounds	The graduate can solve problems using critical concepts of orbital structure, molecular formula, boiling, and solubility.
208.1.5	Stereochemistry Chiral Molecules	The graduate can apply concepts of stereochemistry to real-life situations, construct models of chiral and achiral molecules, and determine structure of molecules.
208.1.6	Alkanes and Cycloalkanes-Conformations	The graduate can analyze, draw, and solve problems concerning the conformations of alkanes and cycloalkanes.
208.1.7	Ionic Reactions, Nucleophilic Substitutions, and Elimination Reactions of Alkyl Halides	The graduate can determine the structures of compounds and solve reaction problems with alkenes.
208.1.9	Alcohols and Ethers	The graduate can solve reaction equations and draw structures for alcohols and ethers.
208.1.10	Mass Spectrometry and Other Lab Techniques in Organic Chemistry	The graduate can demonstrate how mass spectrometers work, how they provide key information about molecular structure, and demonstrate other important lab techniques.
208.1.13	Carboxylic Acids and Their Derivatives	The graduate can draw chemical structures of carboxylic acids and their derivatives, name, solve problems involving carboxylic acids, and use tests to distinguish acids.