	CHEM 161	CHEM 161L	CHEM 162	CHEM 162L	CHEM 272	CHEM 272L	CHEM 273	CHEM 273L	CHEM 274	CHEM 274L	CHEM 351	CHEM 352	CHEM 352L	CHEM 361	CHEM 372	CHEM 380	CHEM 425	CHEM 425L	CHEM 427	CHEM 445	CHEM 445L	CHEM 462	CHEM 463L
Quantitative and qualitative description of atoms, ions, molecules and their mixtures.	I		D						D		A			A									
Quantitative and qualitative description of reactions of atoms, ions and molecules.	I		D										D A										A
Reactivity & energetics: equilibrium, thermodynamics and kinetics.	I		D						D		D		A		D			D				A	
Electronic configuration of atoms and molecules: quantum mechanics.			I		D		D				D	D	A	D								A	A
Fundamentals of carbon chemistry.					I		D										D	A		D	A		A
Stereochemistry as a foundation of structure and reactivity.					I	D								D	D					D	A	D	A
Mechanistic reasoning for prediction and analysis of reactivity.					I		D								D		D		D	D	A		A
Design and execution of synthetic schemes.							I	I						D			D A	A		D A	A	D A	A
Molecular structures from spectroscopic data.							I	D				D	D A					D			D A		D A
Make measurements & write laboratory reports.		I		D		D		D	D	D			A					A			A		A
Data analysis for production of analytically valid data.									I	D		D	D			D		D A			D A		D A
Documentation and interpretation of experimental results.		I		D		D		D		D			A			D		A			A		A