

BSC ANALYTICAL CHEMISTRY OUTLINE

BSC ANALYTICAL CHEMISTRY COURSE OUTLINE YEAR ONE

Course unit	Course title	Hours	Semester
SCH 101	General and Inorganic Chemistry	45	1
SCH 102	Introduction to Organic Chemistry, Chemistry of Alkanes and Cycloalkanes	45	2
SCH 103	General and Physical Chemistry	45	1
SCI 104	Foundations of Computer Science	45	1
SCA 101	Safety Methods in the Laboratory	45	1
SMA 101	Basic Mathematics	45	1
SMA 103	Calculus 1	45	1
SMA 104	Calculus 2	45	2
SCI 101	Elements of Physics I	45	2
CCS 001	Communication Skills	45	1
CCS 009	Elements of Economics	45	1
CCS 010	HIV and AIDS	45	2

BSC ANALYTICAL CHEMISTRY COURSE OUTLINE YEAR TWO

Course unit	Course title	Hours	Semester
SCH 201	Chemistry of the Main Block Elements	45	1
SCH 202	The Chemistry of Alkyl Halides, Alcohols, Ethers Alkenes, Alkynes and Aromatic Compounds	45	1
SCH 203	Thermodynamics I and Thermochemistry	45	1
SCH 204	Introduction to Reaction Kinetics and Electrochemistry	45	2
SCH 205	Group Theory and its Chemical Applications	45	2
SCH 206	Carbonyls, Organic Acids, Amines, Esters and Phenols	45	2
SCE 201	Introduction to Environmental Chemistry	45	1
SCI 202	Introduction to Unit Operations	45	1
SCI 203	Elements of Physics (II)	45	1
SCA 201	Quantitative Analysis	45	2
SMA 208	Ordinary Differential Equations	45	2
SMA 209	Elements of Algebra	45	1

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BSC ANALYTICAL CHEMISTRY COURSE OUTLINE YEAR THREE

Course unit	Course title	Hours	Semester
SCH 301	Theory of Spectroscopy	45	1
SCH 302	Stereochemistry and Synthesis of Organic Compounds	45	1
SCH 303:	Thermodynamics II and Phase Equilibria	45	1
SCH 304:	Coordination Chemistry	45	2
SCH 305:	Amino acids, Peptides, Proteins, Carbohydrates and Nucleic acids	45	2
SCA 301	<i>Instrumental Methods of Analysis I</i>	45	1
SCA 302	Instrumental Methods of Analysis II	45	2
SCA 305	Statistics for Chemists	45	2
ELECTIVES (PICK TWO)			
SCA 303	Separation Techniques and Chromatography	45	1
SCA 304	<i>Computer Applications in Chemistry</i>	45	2
SCE 304	Chemical Toxicology	45	1
SCH 306	Spectroscopy as Applied to Organic Chemistry	45	2

BSC ANALYTICAL CHEMISTRY COURSE OUTLINE YEAR FOUR

Course unit	Course title	Hours	Semester
SCH 401	Chemistry of Transition Elements	45	1
SCH 402	Heterocyclic Chemistry	45	1
SCH 403	Surface and Colloid Chemistry	45	2
SCH 404	Organometallic Chemistry	45	2
SCH 405	Further Chemical kinetics and Electrochemistry	45	1
SCA 401	Electroanalytical Chemistry	45	1
SCA 402	Quantitation and Analytical Chemistry of Pollutants	45	2
SCA 403	Nanochemistry: A Chemical Approach to Nanomaterials	45	1
ELECTIVES (PICK TWO)			
SCA 404	Thermal Analysis and Polymer Characterization Methods	45	1
SCA 405	Research Project in Analytical Chemistry	45	2
SCH 406	Solid State Chemistry	45	1
SCH 407	Statistical Thermodynamics	45	2
SCE 406	Hazardous Waste Management	45	2

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