

Course Codes MSc Chemistry Program
Session 2016-2018

	Course Code	Course Title	Credit Hours
Semester-I	CHM-511	Analytical Chemistry-I	2 + 1
	CHM-512	Inorganic Chemistry-I	2 + 1
	CHM-513	Organic Chemistry-I	3 + 1
	CHM-514	Physical Chemistry-I	3 + 1
	CHM-515	Basic Mathematics for Chemistry	2 + 0
	FENG-510	Functional English-I	2 + 0
Total			18
Semester-II	CHM-521	Analytical Chemistry-II	2 + 1
	CHM-522	Inorganic Chemistry-II	2 + 1
	CHM-523	Organic Chemistry-II	3 + 1
	CHM-524	Physical Chemistry-II	3 + 1
	CHM-525	Industrial Chemistry	2 + 0
	FENG-520	Functional English-II	2 + 0
Total			18
SPECIALIZATION(S)			
Specialization (Physical Chemistry)			
Semester-III	CHM-631	Environmental Chemistry	3 + 0
	CHM(PHY)-632	Solid State Chemistry	2 + 0
	CHM(PHY)-633	Solution Chemistry	2 + 0
	CHM(PHY)-634	Colloids and Surfactants	2 + 0
	CHM(PHY)-635	Chemical Kinetics	3 + 0
	CHM(PHY)-636	Chemical Thermodynamics	3 + 0
	CHM(PHY)-637	Physical Chemistry Laboratory-III (optional) or	0 + 3
	CHM(PHY)-699	Thesis/Research Project in Physical Chemistry	
Total			18

Semester-IV	CHM(PHY)-641	Electrochemistry	2 + 0
	CHM(PHY)-642	Nuclear and Radiation Chemistry	2 + 0
	CHM(PHY)-643	Polymer Chemistry	2 + 0
	CHM(PHY)-644	Molecular Spectroscopy	3 + 0
	CHM(PHY)-645	Quantum Chemistry	3 + 0
	CHM(PHY)-646	Advanced Physical Chemistry Laboratory-IV (optional)	0 + 3
	CHM(PHY)-699	or Thesis/Research Project in Physical Chemistry	
Total			15
Specialization (Organic Chemistry)			
Semester-III	CHM-631	Environmental Chemistry	3 + 0
	CHM(ORG)-632	Biochemistry	2 + 0
	CHM(ORG)-633	Spectroscopic Methods in Organic Chemistry-I	2 + 0
	CHM(ORG)-634	Chemistry of Heterocycles	2 + 0
	CHM(ORG)-635	Stereochemistry	3 + 0
	CHM(ORG)-636	Reaction Mechanism	3 + 0
	CHM(ORG)-637	Organic Chemistry Laboratory-III (optional)	0 + 3
	CHM(ORG)-699	or Thesis/Research Project in Organic Chemistry	
Total			18
Semester-IV	CHM(ORG)-641	Retrosynthesis	2 + 0
	CHM(ORG)-642	Name Reactions	2 + 0
	CHM(ORG)-643	Quantum Organic Chemistry	2 + 0
	CHM(ORG)-644	Spectroscopic Methods in Organic chemistry-II	3 + 0
	CHM(ORG)-645	Chemistry of Natural Products	3 + 0
	CHM(ORG)-646	Advanced Organic Chemistry Laboratory-IV (optional)	0 + 3
	CHM(ORG)-699	or Thesis/Research Project in Organic Chemistry	
Total			15

Specialization (**Inorganic Chemistry**)

Semester-III	CHM-631	Environmental Chemistry	3 + 0
	CHM(INORG)-632	Inorganic Chemistry-III	2 + 0
	CHM(INORG)-633	Bio-coordination Chemistry	2 + 0
	CHM(INORG)-634	Nuclear and Radiochemistry	2 + 0
	CHM(INORG)-635	Principles and Applications of Molecular Spectrophotometry	3 + 0
	CHM(INORG)-636	Coordination Chemistry	3 + 0
	CHM(INORG)-637	Inorganic Chemistry Laboratory-III (optional) or	0 + 3
	CHM(INORG)-699	Thesis/Research Project in Inorganic Chemistry	
Total			18
Semester-IV	CHM(INORG)-641	Inorganic Chemistry-IV	2 + 0
	CHM(INORG)-642	Inorganic Polymers	2 + 0
	CHM(INORG)-643	Organometallic Chemistry	2 + 0
	CHM(INORG)-644	Atomic Spectroscopy	3 + 0
	CHM(INORG)-645	Crystallography	3 + 0
	CHM(INORG)-646	Advanced Inorganic Chemistry Laboratory-IV (optional) or	0 + 3
	CHM(INORG)-699	Thesis/Research Project in Inorganic Chemistry	
Total			15