

**Course Codes MSc Chemistry Program**  
**Session 2015-2017**

	Course Code	Course Title	Credit Hours
<b>Semester-I</b>	CHM-511	Analytical Chemistry-I	3 + 1
	CHM-512	Inorganic Chemistry-I	3 + 1
	CHM-513	Organic Chemistry-I	3 + 1
	CHM-514	Physical Chemistry-I	3 + 1
	CHM-515	Mathematics for Chemistry	1 + 0
<b>Total</b>			17
<b>Semester-II</b>	CHM-521	Analytical Chemistry-II	3 + 1
	CHM-522	Inorganic Chemistry-II	3 + 1
	CHM-523	Organic Chemistry-II	3 + 1
	CHM-524	Physical Chemistry-II	3 + 1
<b>Total</b>			16
<b>SPECIALIZATION(S)</b>			
<b>Specialization (Physical Chemistry)</b>			
<b>Semester-III</b>	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 Thesis/Research Project in Physical Chemistry	0 + 3
	CHM(PHY)-699		
	FENG-510	Functional English-I	2 + 0
<b>Total</b>			20
<b>Semester-IV</b>	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) or Thesis/Research Project in Physical Chemistry	0 + 3
	CHM(PHY)-699		
	FENG-520	Functional English-II	2 + 0
<b>Total</b>			17
<b>Specialization (Organic Chemistry)</b>			
<b>Semester-III</b>	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) or Thesis/Research Project in Organic Chemistry	0 + 3
	CHM(ORG)-699		
	FENG-510	Functional English-I	2 + 0
<b>Total</b>			20
<b>Semester-IV</b>	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) or Thesis/Research Project in Organic Chemistry	0 + 3
	CHM(ORG)-699		
		FENG-520	Functional English-II
<b>Total</b>			17

## Specialization (**Inorganic Chemistry**)

<b>Semester-III</b>	CHM-631	Environmental Chemistry	3 + 0
	CHM(INORG)-632	Inorganic Polymers	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 or CHM(INORG)-699	Inorganic Chemistry Laboratory-III (optional) or Thesis/Research Project in Inorganic Chemistry	0 + 3
	FENG-510	Functional English-I	2 + 0
	<b>Total</b>		
<b>Semester-IV</b>	CHM(INORG)-641	Inorganic Chemistry-III	2 + 0
	CHM(INORG)-642	Inorganic Chemistry-IV	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 or CHM(INORG)-699	Advanced Inorganic Chemistry Laboratory-IV (optional) or Thesis/Research Project in Inorganic Chemistry	0 + 3
	FENG-520	Functional English-II	2 + 0
	<b>Total</b>		