

**Course Codes MSc Chemistry Program**  
**Session 2018-2020**

	Course Code	Course Title	Credit Hours
<b>Semester-I</b>	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
	MTH-506	Basic Mathematics for Chemistry	2 + 0
	FENG-510	Functional English-I	2 + 0
<b>Total</b>			18
<b>Semester-II</b>	CHM-515	Analytical Chemistry-II	2 + 1
	CHM-516	Inorganic Chemistry-II	2 + 1
	CHM-517	Organic Chemistry-II	3 + 1
	CHM-518	Physical Chemistry-II	3 + 1
	CHM-519	Industrial Chemistry	2 + 0
	FENG-520	Functional English-II	2 + 0
<b>Total</b>			18
<b>SPECIALIZATION(S)</b>			
<b>Specialization (Physical Chemistry)</b>			
<b>Semester-III</b>	CHM-610	Environmental Chemistry	3 + 0
	CHMP-611	Surface Chemistry	2 + 0
	CHMP-612	Solution Chemistry	2 + 0
	CHMP-613	Colloids and Surfactants	2 + 0
	CHMP-614	Chemical Kinetics	3 + 0
	CHMP-615	Chemical Thermodynamics	3 + 0
	CHMP-616 or CHMP-699	Physical Chemistry Laboratory-III (optional) or Thesis/Research Project in Physical Chemistry	0 + 3
<b>Total</b>			18

<b>Semester-IV</b>	CHMP-617	Electrochemistry	2 + 0
	CHMP-618	Nuclear and Radiation Chemistry	2 + 0
	CHMP-619	Polymer Chemistry	2 + 0
	CHMP-620	Molecular Spectroscopy	3 + 0
	CHMP-621	Quantum Chemistry	3 + 0
	CHMP-622 or CHMP-699	Advanced Physical Chemistry Laboratory-IV (optional) or Thesis/Research Project in Physical Chemistry	0 + 3
<b>Total</b>			15
<b>Specialization (Organic Chemistry)</b>			
<b>Semester-III</b>	CHM-610	Environmental Chemistry	3 + 0
	CHMO-611	Biochemistry	2 + 0
	CHMO-612	Spectroscopic Methods in Organic Chemistry-I	2 + 0
	CHMO-613	Chemistry of Heterocycles	2 + 0
	CHMO-614	Stereochemistry	3 + 0
	CHMO-615	Reaction Mechanism	3 + 0
	CHMO-616 or CHMO-699	Organic Chemistry Laboratory-III (optional) or Thesis/Research Project in Organic Chemistry	0 + 3
<b>Total</b>			18
<b>Semester-IV</b>	CHMO-617	Retrosynthesis	2 + 0
	CHMO-618	Name Reactions	2 + 0
	CHMO-619	Quantum Organic Chemistry	2 + 0
	CHMO-620	Spectroscopic Methods in Organic Chemistry-II	3 + 0
	CHMO-621	Chemistry of Natural Products	3 + 0
	CHMO-622 or CHMO-699	Advanced Organic Chemistry Laboratory-IV (optional) or Thesis/Research Project in Organic Chemistry	0 + 3
<b>Total</b>			15

## Specialization (**Inorganic Chemistry**)

<b>Semester-III</b>	CHM-610	Environmental Chemistry	3 + 0
	CHMI-611	Inorganic Chemistry-III	2 + 0
	CHMI-612	Bio-coordination Chemistry	2 + 0
	CHMI-613	Nuclear and Radiochemistry	2 + 0
	CHMI-614	Principles and Applications of Molecular Spectrophotometry	3 + 0
	CHMI-615	Coordination Chemistry	3 + 0
	CHMI-616 or CHMI-699	Inorganic Chemistry Laboratory-III (optional) or Thesis/Research Project in Inorganic Chemistry	0 + 3
<b>Total</b>			18
<b>Semester-IV</b>	CHMI-617	Inorganic Chemistry-IV	2 + 0
	CHMI-618	Inorganic Polymers	2 + 0
	CHMI-619	Organometallic Chemistry	2 + 0
	CHMI-620	Atomic Spectroscopy	3 + 0
	CHMI-621	Crystallography	3 + 0
	CHMI-622 or CHMI-699	Advanced Inorganic Chemistry Laboratory-IV (optional) or Thesis/Research Project in Inorganic Chemistry	0 + 3
	<b>Total</b>		