The MSc programme is constituted by one year of lectures followed by end of semester examinations, and another year of research ended by submission of a dissertation in any one of the five branches: Analytical, Applied, Inorganic, Organic, and Physical Chemistry.

MSc CURRICULUM

i) The program requires students to enroll full-time
ii) The duration of the program will be two calendar years or four semesters. Each Semester shall consist of 17 weeks of teaching and three weeks of examinations.
iii) The program will consist of two parts; part I (Course Work) and part II (Research and Dissertation).
iv) Part I of the program will be completed in two semesters and will consists of course work with nine courses.
v) One courses unit shall be equivalent to one contact hour per week per semester. One hour of lecturers shall be equivalent to one contact hour, Two hours of practical shall be equivalent to one contact hour and one tutorial hour shall be equivalent to one contact hour.
vi) There will be four compulsory courses which shall be completed in the first semester. The four courses CHM 7101, CHM 7102, CHM 7103 and CHM 7104 have been designed to give candidates a broad background knowledge on relevant topical issues in chemistry.
vii) Five courses shall be completed in the second semester. One compulsory course; and four other courses to be selected from any of the given areas in consultation with the supervisor(s), with at least three of the four from the area of specialization.
viii) In part II of the program, candidates will undertake individual research projects in their areas of specialization which will form the subject of a concise dissertation.
ix) The areas of specialization are:

Inorganic Chemistry, Analytical/Environmental Chemistry, Organic Chemistry, Physical Chemistry,
Applied Chemistry

COURSE WORK (PART I)

First Semester

COMPULSORY COURSES

Every candidate will be required to do the following courses in the first semester:

Code	Course title	Lecture hours	Practical hours	Course Units

CHM 7101	Research methodology	30	0	2
CHM 7102	Instrumentation	30	30	3
CHM 7103	Analytical Methods	30	30	3
CHM 7104	Laboratory management and quality assurance	30	0	2

b) Second Semester

In the second semester, every candidate will be required to take five courses from the list given under the five (II-VI) specialized areas of research below:

i) There will be one compulsory course selected from among courses in section I below. A student will be required to select a course depending on his/her intended area of specialization. The selected course within this section is anticipated to update the student on recent developments within the area of specialization as he/she intends to develop a research topic. This will mainly be a self reading course with occasional consultation of the lectures concerned and the students will be expected to present in monthly seminars as part of the progressive assessment.

ii) At least three courses must be drawn from one area of specialization (sections II, III, IV, V and VI) and where necessary the fourth course will be a related course selected from other areas. The table below gives the areas of specialization and the courses in each area.

I. RECENT TOPICS AND SEMINAR COURSE (Choose one)

Code	**Course title**	**Lecture hours**	**Practical hours**	**Course units**
CHM 7201	Special Topics in Organic Chemistry	30		2
CHM 7202	Special Topics in Inorganic Chemistry	30		2
CHM 7203	Special Topics in Analytical/Environmental Chemistry	30		2
CHM 7204	Special Topics in Physical Chemistry	30		2
CHM 7205	Special Topics in Applied Chemistry	30		2

II. INORGANIC CHEMISTRY

Code	Course title	Lecture hours	Practical hours	Course units
CHM 7206	Advanced chemistry of p-block elements	30		2
CHM 7207	Chemistry of metal clusters	30		2
CHM 7208	Coordination compounds & Redox reactions	30		2
CHM 7209	Advanced Organometallic & bioinorganic chemistry	30		2

III. ANALYTICAL/ENVIRONMENTAL CHEMISTRY

Code	Course Title	Lecture hours	Practical hours	Course units
CHM 7210	Atmospheric Chemistry	30		2
CHM 7211	Chemistry of water environment	30		2
CHM 7212	Land pollution	30		2
CHM 7213	Geochemistry	30		2

IV ORGANIC CHEMISTRY

Code	Course title	Contact hours	Practical hours	Course Units
CHM 7214	Advanced spectroscopy	30		2
CHM 7215	Organic synthesis	30		2
CHM 7216	Advanced Natural Products chemistry	30		2
CHM 7217	Synthesis of heterocyclic natural compounds	30		2

V PHYSICAL CHEMISTRY

Code	Course title	Lecture hours	Practical hours	Course units

CHM 7218	Advanced thermodynamics	30		2
CHM 7219	Advanced reaction kinetics	30		2
CHM 7220	Advanced topics in electro chemistry	30		2
CHM 7221	Advanced Polymer chemistry	30		2

VI APPLIED CHEMISTRY

Code	**Course Title**	**Contact hours**	**Practical hours**	**Course units**
CHM 7222	Ceramic, Glass & Cement chemistry	30		2
CHM 7223	Food & Fermentation chemistry	30		2
CHM 7224	Advanced inorganic chemical technology	30		2
CHM 7225	Geochemical techniques	30		2