

DEPARTMENT OF CHEMISTRY

CHEMISTRY COURSES

Requirements For Chemistry Major/Minor Programmes

1. Courses For Chemistry Major

All core Chemistry Courses for all the years must be taken by students intending to major in Chemistry. In addition, a useful selection of Elective Courses should be made in order to augment the depth of the subject expected of a Major.

2. Courses For Chemistry Minor

Students intending to minor in Chemistry must currently fulfill the following:

- They must take all Year I core Chemistry Courses.
- They must earn at least 6 Credit Units from any Year II courses.
- They must earn at least 4 Credit Units from any Year III courses.

Year I: Semester I (Core Courses)		
Course Code	Course	CU
CHM 1101	Basic Inorganic Chemistry	3
CHM 1102	Basic Physical Chemistry	3
CHM 1103	Basic Elements in Computing	1
Electives		
CHM 1104	Mathematics for Chemists	3
Semester II		
CHM 1204	Basic Inorganic/Physical Practicals	2
CHM 1205	Basic Organic Chemistry	5
Year II: Semester I		
CHM 2106	Analytical Chemistry I	4
CHM 2107	Inorganic Chemistry I	3

CHM 2108	Organic Chemistry I	3
Semester II		
CHM 2211	Transition Metal Chemistry	3
CHM 2212	Organic Chemistry II	2
CHM 2213	Electrochemistry	2
CHM 2214	Physical Chemistry I	4
CHM 2215	Spectroscopy	3
CHM 2214	Physical Chemistry I	4
CHM 2216	Inorganic Energetics	3
CHM 2217	Reaction Kinetics	3
CHM 2219	Chemical Reaction Engineering	3
CHM 2251	Basic Inorganic Chemistry II	3
Year III: Semester I		
CHM 3121	Organic Chemistry III	2
CHM 3122	Colloid Science	2
CHM 3156	Quantum Chemistry	3
Semester II		
CHM 3226	Research Project	4
CHM 3227	Analytical Chemistry II	2
CHM 3228	Application of Group Theory in Chemistry	2
CHM 3229	Organic Chemistry IV	2
CHM 3230	Insecticide Chemistry	2
CHM 3231	Advanced Physical Chemistry Practicals	2
CHM 3232	Polymer Chemistry	2
CHM 3233	Advanced Inorganic Topics	2
CHM 3234	Advanced Organic Topics	2
CHM 3235	Determination of Chemical Structure	2
CHM 3250	Advanced Physical Chemistry	4
CHM 3251	Aromatic Chemistry II	4
CHM 3252	Special and Magneto Chemistry	2
CHM 3253	Advanced Inorganic Topics	3

BACHELOR OF SCIENCE INDUSTRIAL CHEMISTRY (BIC) PROGRAMME

Objectives

The course has had its main objectives of training industrial chemists with adequate skills, knowledge and attitude in meeting the challenges of developing and increasing industrial output in Uganda. By restructuring

the two year programme into a three year degree programme.

- To provide sufficiently trained industrial chemists with skills to meet the challenges of Industrial development.

- ii) To expand the curriculum of Industrial oriented training offered by the University to upcoming young scientists.
- iii) To impact industrial design skills.
- iv) To provide technical and managerial skills in industrial development and management.

Programme Structure Curriculum

The course for Bachelor of Science (Industrial Chemistry) will run for three academic years (6 semesters) and will follow the format offered by the Department of Chemistry.

Year I: Semester I (Core Courses)		
Course Code	Course	CU
ICH 1101	Introduction to Computing	3
ICH 1102	Introduction to Industrial Chemistry	3
ICH 1103	Mathematics for Chemical Engineers I	3
ICH 1104	Industrial Stoichiometry	3
ICH 1105	Fundamentals of Electrical Engineering	2
CHM 1101	Basic Inorganic Chemistry	3
CHM 1102	Basic Physical Chemistry	3
ICH 1138	Basic Environmental	3
Semester II Core Courses		
ICH 1206	Fluid Mechanics	3
ICH 1207	Heat Transfer	3
ICH 1208	Basic Industrial Drawing	3
ICH 1209	Thermodynamics	3
ICH 1210	Chemical Engineering Laboratory	2
ICH 1204	Basic Physical/ Inorganic Practicals	2
ICH 1205	Basic Organic Chemistry	5
ICH 1311	Workshop Practice	3
YEAR II: Semester I		
ICH 2100	Thermodynamics	3
ICH 2112	Mass Transfer I	2
ICH 2113	Mathematics for Chemical Engineers II	3

ICH 2114	Introductory Economics	3
ICH 2115	Chemical Reaction Engineering	3
ICH 2116	Energy Technology	3
ICH 2117	Industrial Management	3
ICH 2120	Instrumental Analysis	3
Semester II		
ICH 2215	Chemical Reaction Engineering	3
ICH 2217	Industrial Management	3
ICH 2218	Chemical Engineering Thermodynamics	3
ICH 2219	Economics for Chemical Engineers	3
ICH 2220	Industrial Law	3
ICH 2221	Materials Science	3
ICH 2222	Industrial Microbiology	4
ICH 2323	Industrial Training	3
Year III: Semester I		
ICH 3124	Reactor Design	3
ICH 3125	Chemical Plant Design	3
ICH 3126	Separation Processes	3
ICH 3127	Biotechnology	3
ICH 3128	Mathematics for Chemical Engineers III	3
ICH 3129	Mass Transfer II	2
ICH 3130	Industrial Waste Management	2
ICH 3131	Organic Chemical Technology	3
ICH 3132	Inorganic Chemical Technology	3
ICH 3158	Industrial Waste Management	3
Semester II		
ICH 3230	Process Control and Analysis	4
ICH 3231	Transport Phenomena	3
ICH 3232	Research Project	5
ICH 3233	Inorganic Chemical Technology	3
ICH 3234	Organic Chemical Technology	2
ICH 3235	Industrial Waste Management	3
ICH 3236	Electrochemical and Electrothermal Processes	3
ICH 3237	Cleaner Technology	2
ICH 3250	Industrial Microbiology	3