PROGRAMME STRUCTURE BACHELOR OF SCIENCE IN CHEMISTRY ACADEMIC SESSION 2021/22 (132 CREDITS)			
1. UNIVERSITY COURSES (10-20%)			**14**
Course Code	*Course Name*		*Credit*
GIG1012 GLT1017	Philosophy and Current Issues/ Basic Malay Language*		2
GIG1013	Appreciation of Ethics and Civilisations		2
GIG1003	Basic Entrepreneurship Enculturation		2
GLTxxxx	English Language / Foreign Language (student whose native language is English)		4
GKA/GKI/ GKK/GKP/ GKS/GKU 1001	Co-Curriculum		4
2. CORE COURSES (50-60%)			**77**
Course Code	*Course Name*		*Credit*
LEVEL 1			**26**
SIX1015	Science, Technology and Society		2
SIX1016	Statistics		3
SIC1001	Principles of Chemistry		2
SIC1006	Computer Programming for the Sciences		3
SIC1007	Inorganic Chemistry I		3
SIC1008	Organic Chemistry I		3
SIC1009	Physical Chemistry I		3
SIC1010	Mathematics in Chemistry		2
SIC1011	Safety and Basic Laboratory Techniques***		3
Course Code	*Course Name*	*Pre-Requisite(s)*	*Credit*
SIC1012	Laboratory Skills**	*SIC1011*	2
LEVEL 2			**25**
SIC2016	Inorganic Chemistry II	*SIC1001 and SIC1007* *Taken concurrently with* *SIC2017*	3
SIC2017	Practical of Inorganic Chemistry II**	*SIC1007 and SIC1012* *Taken concurrently with* *SIC2016*	2
SIC2018	Organic Chemistry II	*SIC1001 and SIC1008* *Taken concurrently with* *SIC2019*	3
SIC2019	Practical of Organic Chemistry II**	*SIC1008 and SIC1012* *Taken concurrently with* *SIC2018*	2
SIC2020	Physical Chemistry II	*SIC1001, SIC1009 and* *SIC1010* *Taken concurrently with* *SIC2021*	3
SIC2021	Practical of Physical Chemistry II**	*SIC1009 and SIC1012* *Taken concurrently with* *SIC2020*	2
SIC2022	Basic Analytical Chemistry***	*SIC1001, SIC1007 and* *SIC1012*	3
SIC2023	Molecular Spectroscopy	*SIC1001, SIC1009 and* *SIC1010*	3

SIC2024	Spectroscopic Methods in Organic Chemistry	SIC1008 Taken concurrently with SIC2018	2
SIC2025	Chemistry and Society	SIC1001, SIC1007, SIC1008, SIC1009, and SIC1010	2
LEVEL 3			**26**
SIC3020	Inorganic Chemistry III	SIC2016 Taken concurrently with SIC3021	2
SIC3021	Practical of Inorganic Chemistry III**	SIC 2016 and SIC2017 Taken concurrently with SIC3020	2
SIC3022	Organic Chemistry III	SIC2018 Taken concurrently with SIC3023	2
SIC3023	Practical of Organic Chemistry III**	SIC2018 and SIC2019 Taken concurrently with SIC3022	2
SIC3024	Physical Chemistry III	SIC2020 Taken concurrently with SIC3025	2
SIC3025	Practical of Physical Chemistry III**	SIC2020 and SIC2021 Taken concurrently with SIC3024	2
SIC3026	Industrial Training	SIC2016, SIC2018, SIC2020 and SIC2022	8
SIC3027	Research Project	SIC2016, SIC2018, SIC2020 and SIC2022	6
PURE CHEMISTRY PACKAGE			
3. ELECTIVE COURSES (25-30%)			**41**
STUDENT HOLISTIC EMPOWERMENT (8 Credit) ONE course MUST be taken from each cluster			

Cluster	*Course Name*	*Credit*
Cluster 1	Thinking Matters: Mind & Intellect	2
Cluster 2	Emotional & Spiritual Intelligence: Heart & Soul	2
Cluster 3	Technology/Artificial Intelligence and Data Analytics: I-technie	2
Cluster 4	Global Issue and Community Sustainability: Making the World a Better Place	2
PROGRAMME ELECTIVE (33 Credit)		

Course Code	*Course Name*	*Pre-Requisite(s)*	*Credit*
SIC3028	Advanced Analytical Chemistry***	SIC2022	3
SIC3029	Polymer Chemistry***	SIC2020 and SIC2021	3
SIC3030	Heterocyclic and Medicinal Chemistry	SIC2018	3
SIC3031	Electrochemistry	SIC2016	3
SIC3032	Environmental Chemistry***	SIC2022	3
SIC3033	Natural Products and Biosynthesis	SIC2018	3
SIC3034	Organic Synthesis	SIC2018	2
SIC3035	Mechanistic Organic Chemistry	SIC2018	3
SIC3036	Physical Organic Chemistry	SIC2018	3
SIC3037	Bioinorganic Chemistry	SIC2016	2
SIC3038	Nuclear Chemistry	SIC2016	2
SIC3039	Materials Chemistry	SIC2016 and SIC2020	3

SIC3040	Chemometrics***	*SIC2020*	3
SIC3041	Computational Chemistry***	*SIC2020*	3
SIC3042	Colloid Chemistry***	*SIC2020 and SIC2021*	3

APPLIED CHEMISTRY PACKAGE			

3. ELECTIVE COURSES (25-30%)			41

STUDENT HOLISTIC EMPOWERMENT (8 Credit)
ONE course MUST be taken from each cluster

Cluster	*Course Name*	*Credit*
Cluster 1	Thinking Matters: Mind & Intellect.	2
Cluster 2	Emotional & Spiritual Intelligence: Heart & Soul.	2
Cluster 3	Technology/Artificial Intelligence and Data Analytics: I-technie.	2
Cluster 4	Global Issue and Community Sustainability: Making the World a Better Place.	2

PROGRAMME ELECTIVE (33 Credit)

Course Code	*Course Name*	*Pre-Requisite(s)*	*Credit*
SIC3040	Chemometrics***	*SIC2020*	3
SIC3041	Computational Chemistry***	*SIC2020*	3
SIC3042	Colloid Chemistry***	*SIC2020 and SIC2021*	3
SIC3043	Analytical Chemistry and Instrumentation***	*SIC2022*	3
SIC3044	Industrial Chemistry	*SIC2016*	3
SIC3045	Industrial Polymer Chemistry***	*SIC2020 and SIC2021*	3
SIC3046	Oleochemistry	*SIC2018*	3
SIC3047	Petrochemistry	*SIC2016 and SIC2018*	3
SIC3048	Process Chemistry	*SIC3044*	3
SIC3049	Food Chemistry	*SIC2018*	2
SIC3050	Natural Products and Biotechnological Processes	*SIC2018*	2
SIC3051	Applied Electrochemistry	*SIC2020*	3
SIC3052	Catalysis	*SIC2016*	2
SIC3053	Quality Assurance in Chemical Laboratory	*SIC2022*	2
SIC3054	Environmental Pollution and Waste Management***	*SIC2022*	3
SIC3055	Liquid Crystals	*SIC2020*	2

* For non-Malaysian

** Practical course

*** With practical component