

Department of Chemistry

B.Sc. (Hons.) Chemistry Curriculum

*(Applicable to the students admitted from AY: 2024
onwards)*



**School of Engineering and Sciences
SRM University AP, Andhra Pradesh**

ABBREVIATIONS

AEC	Ability Enhancement Courses
VAC	Value Added Courses
SEC	Skill Enhancement Courses
FIC	Foundation & Interdisciplinary Courses
OE	Open Elective
RDIP	Research / Design / Industrial Practice / Project / Thesis / Internship
CE	Core Elective
CC	Core Course
SE	Stream Elective
TE	Technical Elective

SEMESTER – I							
S. No	Category	Sub-Category	Course Title	L	T/D	P/Pr	C
1	AEC	U AEC	Art of Listening, Speaking, and Reading Skills	1	0	1	2
2	VAC	U VAC	Environmental Science	2	0	0	2
3	SEC	S SEC	Analytical Reasoning and Aptitude Skills	1	1	1	3
4	FIC	S FIC	Emerging Technologies	2	0	0	2
5	FIC	S FIC	Chemical Basis of Life	2	0	1	3
6	FIC	S FIC	Mathematics for the Physical World	2	1	0	3
7	FIC	S FIC	Fundamentals of Computing	2	0	1	3
Semester Total				12	2	4	18

SEMESTER - II							
S. No	Category	Sub-Category	Course Title	L	T/D	P/Pr	C
1	AEC	U AEC	Effective Writing and Presentation Skills	1	0	1	2
2	VAC	U VAC	Universal Human Values and Ethics	2	0	0	2
3	SEC	S SEC	Entrepreneurial Mindset	2	0	0	2
4	FIC	S FIC	Principles of Management	3	0	0	3
5	FIC	S FIC	Psychology for Everyday Living	3	0	0	3
6	Core	CC	Inorganic chemistry 1: Concepts in inorganic chemistry	3	0	1	4
7	Core	CC	Physical chemistry 1: Atomic structure and states of matter	3	0	1	4
Semester Total				17	0	3	20

SEMESTER - III							
S.No	Category	Sub-Category	Course Title	L	T/D	P/Pr	C
1	AEC	U AEC	Problem-Solving Skills	1	0	1	2
2	VAC	U VAC	Co-Curricular Activities	0	0	2	2*
3	VAC	U VAC	Community Service and Social Responsibility	0	0	2	2*
4	SEC	S SEC	Digital Literacy	1	1	0	2
5	Core	CC	Fundamentals of Organic Chemistry	3	0	1	4
6	Core	CC	Chemistry of Elements	3	0	1	4
7	Core	CC	Chemical Thermodynamics and Chemical Kinetics	3	0	1	4
8	Elective	OE	Open Elective	3	0	0	3
Semester Total				14	1	8	19

SEMESTER – IV							
S. No	Category	Sub-Category	Course Title	L	T/D	P/Pr	C
1	AEC	U AEC	Creativity and Critical thinking Skills	1	0	1	2
2	VAC	U VAC	Co-Curricular Activities	0	0	2	2*
3	VAC	U VAC	Community Service and Social Responsibility	0	0	2	2*
4	SEC	D SEC	Leadership for Professionals	2	0	0	2
5	Core	CC	Basic Concepts in Analytical Chemistry	3	1	0	4
6	Core	CC	Transition Metal and Bioinorganic Chemistry	3	0	1	4
7	Core	CC	Chemistry of Functional Groups in Organic Molecules: Structure and Reactivity	3	0	1	4
8	Core	CC	Chemistry of Solutions	3	0	1	4
9	Elective	OE	Open Elective	3	0	0	3
Semester Total				18	1	8	23

SEMESTER - V							
S. No	Category	Sub-Category	Course Title	L	T/D	P/Pr	C
1	VAC	UVAC	Co-Curricular Activities	0	0	2	2*
2	VAC	U VAC	Community Service and Social Responsibility	0	0	2	2*
3	SEC	E SEC	Career Skills-1	3	0	0	3
4	Core	CC	Aromatic Compounds and Heterocycles	3	0	1	4
5	Core	CC	Spectroscopy and Statistical Thermodynamics	4	0	0	4
6	Core	CC	Principles of Instrumental Analysis	4	0	0	4
7	Core	CC	The Quantum World: An Introduction to Quantum Chemistry	4	0	0	4
8	Elective	OE	Open Elective / Minor	3	0	0	3
Semester Total				21	0	5	22

SEMESTER - VI							
S. No	Category	Sub-Category	Course Title	L	T/D	P/Pr	C
1	VAC	U VAC	Co-Curricular Activities	0	0	2	2
2	VAC	U VAC	Community Service and Social Responsibility	0	0	2	2
3	SEC	E SEC	Career Skills-II	3	0	0	3
4	Core	CC	Introduction to Modern Organic Synthesis	3	0	1	4
5	Core	CC	Supervised Learning	0	0	4	4
6	Elective	CE	Polymer Materials	4	0	0	4
7	Elective	CE	Structural Methods and Analysis	4	0	0	4
8	Elective	OE	Open Elective / Minor	3	0	0	3
Semester Total				17	0	9	26

SEMESTER - VII							
S.No	Category	Sub-Category	Course Title	L	T/D	P/Pr	C
1	Elective	CE	Core Elective	4	0	0	4
2	Elective	CE	Core Elective	4	0	0	4
3	Elective	CE	Core Elective	4	0	0	4
4	RDIP	RDIP	Project - I	0	0	5	5
5	Elective	OE	Open Elective	3	0	0	3
Semester Total				15	0	5	20

SEMESTER - VIII							
S.No	Category	Sub-Category	Course Title	L	T/D	P/Pr	C
1	RDIP	RDIP	Project - II	0	0	12	12
Semester Total				0	0	12	12

Core Elective							
S. No	Category	Sub-Category	Course Title	L	T/D	P/Pr	C
1	Elective	CE	Polymer Materials	4	0	0	4
2	Elective	CE	Structural Methods and Analysis	4	0	0	4
3	Elective	CE	Selected Topics in Organic Synthesis	4	0	0	4
4	Elective	CE	Chemistry on Computers: Molecular Modelling	4	0	0	4
5	Elective	CE	Chemistry in Life and Medicine	4	0	0	4

Minor/ Open Electives							
S. No	Category	Sub-Category	Course Title	L	T/D	P/Pr	C
1	OE	OE	Principles of Chemistry - I	3	0	0	3
2	OE	OE	Principles of Chemistry - II	3	0	0	3
3	OE	OE	Introduction to Computational Chemistry	3	0	0	3
4	OE	OE	Fundamental of Nanoscience	3	0	0	3
5	OE	OE	Renewable Energy	3	0	0	3
6	OE	OE	Environmental Chemistry	3	0	0	3
7	OE	OE	Supramolecular Architectures: Engineering Logic Gates, Sensors, Devices and Machines	3	0	0	3
8	OE	OE	Chemistry in Machines, Materials and Computers	3	0	0	3

Career Skill							
S. No	Category	Sub-Category	Course Title	L	T/D	P/Pr	C
1	SEC	E SEC	Career Skills for Life Sciences	3	0	0	3
2	SEC	E SEC	ENTREPRENEURIAL MINDSET	3	0	0	3
3	SEC	E SEC	DIGITAL LITERACY	3	0	0	3
4	SEC	E SEC	LEADERSHIP FOR PROFESSIONALS	3	0	0	3
5	SEC	E SEC	DATA ANALYSIS FOR CHEMISTS	3	0	0	3