

II A MODEL PROGRAMME STRUCTURE FOR THE UNDERGRADUATE PROGRAMS IN UNIVERSITIES AND COLLEGES [SUBJECTS WITH PRACTICLES] WITH ONE MAJOR AND ONE MINOR: B.Sc (Honors) Chemistry

Sem.	Discipline Core (DSC) (L+T+P)	Discipline Elective(DSE) / Open Elective (OE)	Ability Enhancement Compulsory Courses (AECC), Languages (L+T+P)		Skill Enhancement Courses (SEC)			Total Credits
					Skill based (Credits) (L+T+P)	Value based (Credits) (L+T+P)		
I	DISCIPLINE A1 (4 + 2) DSC-1:Analytical and Organic Chemistry-I DSC lab-1:Analytical and Organic Practicals-I DISCIPLINE-B1(4+2)	OE – 1 (3 CREDITS) Chemistry in Daily Life	L1-1 (3), L2-1(3)		SEC-1: Digital Fluency (2)	Physical Education- Yoga-(1) (0+0+2)	Health &Wellness -(1) (0+0+2)	25
II	DISCIPLINE A2(4 + 2) DSC-2:Inorganic and Physical Chemistry-I DSC Lab -2:Inorganic and Physical Practicals-II DISCIPLINE-B2(4+2)	OE – 2 (3 CREDITS) Molecules of Life	L1-2(3), L2-2 (3) (3+1+0) (4 hrs each)	Environmental Studies (2)		Physical Education- Sports-(1) (0+0+2)	NCC/NSS/R&R(S&G)/ Cultural -(1) (0+0+2)	25
Exit option with Certificate (50 credits)								
III	DISCIPLINE A3(4 + 2) DSC-3:Analytical and Organic Chemistry-II DSC Lab-3: Analytical and Organic Practicals-II DISCIPLINE-B3 (4+2)	OE – 3 (3 CREDITS) Atomic Structure,Bonding and concepts in Organic Chemistry	L1-3 (3), L2-3(3) (4 hrs each)		SEC-2: Analytical and Clinical Biochemistry(2)	Physical Education- Sports-(1) (0+0+2)	NCC/NSS/R &R(S&G)/ Cultural -(1) (0+0+2)	25
IV	DISCIPLINE A4(4 + 2) DSC-4: Inorganic and Physical Chemistry-II DSC Lab-4:Inorganic and Physical Practicals=II DISCIPLINE-B4(4+2)	OE – 4 (3 CREDITS) Electrochemistry,Corrosion and Metallurgy.	L1-4 (3), L2-4(3) (3+1+0 each) (4 hrs each)	Constitution of India (2)		Physical Education- Sports-(1) (0+0+2)	NCC/NSS/R &R(S&G)/ Cultural -(1) (0+0+2)	25
Exit option with Diploma (100 credits) OR choose any one of the core subjects as major and other as minor								
Choose any one Discipline as Major, the other as the Minor								
V	DISCIPLINE A5 (3 + 2) DSC-5:Selected topics in Inorganic Chemistry DSC Lab-5: Inorganic Chemistry Practical's DISCIPLINE A6 (3 + 2) DSC-6: Selected topics in Organic Chemistry DSC Lab-6: Organic Chemistry Practical's	VOCATIONAL – 1 (3) Applications of Computers in Chemistry OR Industrial Chemicals and Environment			SEC-3: Water Harvesting and Waste disposal(2) (1+0+2)	Physical Education- Sports-(1) (0+0+2)	NCC/NSS/R &R(S&G)/ Cultural -(1) (0+0+2)	22

	DISCIPLINE B5 (3 + 2)							
VI	DISCIPLINE A7 (3 + 2) DSC-7: Selected topics in Physical Chemistry DSC Lab-7: Physical Chemistry Practicals. DISCIPLINE A8 (3 + 2) DSC-8: Spectroscopy DSC Lab-8 :Analytical and Industrial Chemistry Practicals DISCIPLINE B6 (3 + 2)	VOCATIONAL – 2 (3) Instrumental Methods of Analysis OR Drug design and Green Techniques INTERNSHIP (2)			SEC-4: Professional/ Societal Communication (2)	Physical Education- Sports-(1) (0+0+2)	NCC/NSS/R &R(S&G)/ Cultural -(1) (0+0+2)	24
Exit option with Bachelor of Arts, B.A. / Bachelor of Science, B. Sc. Basic Degree (144 credits) or continue studied with the major								
VII	DISCIPLINE A9 (3 + 2) DSC-9: Selected topics in Physical Chemistry DSC Lab-9: Physical chemistry practical DISCIPLINE A10 (3 + 2) DSC-10: Selected topics in Inorganic Chemistry DSC Lab-10: Inorganic chemistry Practical DISCIPLINE A11 (3) DSC-11: Selected topics in Organic Chemistry	Discipline A,E-1(3) Chemistry of Nano-materials Discipline A,E-2(3) Chemical Kinetics RESEARCH METHODOLOGY (3)						22
VIII	DISCIPLINE A12 (3+2) DSC-12: Selected topics in Physical Chemistry along with Spectroscopy DISIPLINE A13(3) DSC-13: Selected topics in Inorganic Chemistry along with Spectroscopy DISIPLINE A14(3) DSC-14: Selected topics in Organic Chemistry along with Spectroscopy	Discipline A,E-3(3) Polymer Chemistry OR Biophysical Chemistry RESEARCH PROJECT (6) *						20
Award of Bachelor of Science Honors, B.Sc. (Hons) degree in a discipline (with minimum 186 credits)								188

*In lieu of the research Project, two additional elective papers/ Internship may be offered.