

VANITA VISHRAM WOMEN'S UNIVERSITY
SCHOOL OF SCIENCE AND TECHNOLOGY
DEPARTMENT OF CHEMISTRY



BACHELOR OF SCIENCE (B.Sc.) HONOURS CHEMISTRY
PROGRAMME

under Learning Outcomes-based Curriculum Framework (LOCF)
for Under Graduate (UG) Education

Core Courses (CC), Ability Enhancement Compulsory Courses (AECC),
Generic Elective Courses (GE)

Course Structure is applicable to the students seeking admission in the following programmes

B.A. /B.Com./B.B.A./B.Sc./B.C.A. under LOCF
w.e.f. the Academic Year 2021-2022

1. Preamble – VVWU

Vanita Vishram Women's University (VVWU) is the First-ever Women's University of Gujarat approved by the Government of Gujarat under the provisions of the Gujarat Private Universities Act, 2009. It is a University committed to achieve Women's Empowerment through Quality Education, Skill Development, and by providing employment opportunities to its girl students through its model curriculum, integration of technology in pedagogy and best-in-class infrastructure. The focus is on prioritizing practical component and experiential learning supported through academia-industry linkages, functional MoUs, skill development training, internships etc. It aims at providing opportunities to the girl students for holistic development and self-reliance.

VISION

Empowerment of women through quality education and skill development, so as to make them strong pillars of stability in the society.

MISSION

To provide Education & Professional Training to all women for their all-round development, so as to enable them to become economically independent and socially empowered citizens.

2. Introduction of the Programme

It is a three-year undergraduate course offered after completion of 10+2 schooling. The course aims to provide broad and balanced knowledge in chemistry in addition to understanding of key chemical concepts, principles and theories. It will provide knowledge and skill to the students' thus enabling them to undertake further studies in chemistry, in related areas or multidisciplinary areas that can be helpful for self-employment / entrepreneurship. The course is designed to provide intellectual and laboratory skills according to the UGC module for CHOICE BASED CREDIT SYSTEM (CBCS) pertaining to B.Sc. Chemistry (Honours).

3. Programme Specific Objectives (PSOs)

- To provide knowledge of chemistry with board and balanced aspects
- Development of laboratory analysis skills.
- To develop critical thinking approaches for problem solving.
- To provide skill base training to hold out in the current competitive environment.
- Multidisciplinary approach for overall development.

4. Programme Specific Outcomes (PSOs)

- Identifying chemistry related problems, analysis and application of data using appropriate methodologies.
- Finding opportunity to apply subject-related skills for acquiring jobs and self-employment.
- Understanding new frontiers of knowledge in chemistry for professional development.
- Applying subject knowledge for solving societal problems related to application of chemistry in day to day life.
- Applying subject knowledge for sustainable environment friendly green initiatives.

5. Structure of the Programme

B.Sc. CHEMISTRY HONOURS STRUCTURE AND DISTRIBUTION OF COURSES

Semester	CC Total Credits (84)	DSE Total Credits (24)	GE Total Credits (24)	SEC Total Credits (08)	AECC Total Credits (08)	Total Credits
1	CH11010 CH11020 CH11030 CH11040	--	CH13010 CH13020 (For non-chemistry discipline)	--	EN12010 BT12010	84 + 24 + 24 + 08 + 08 = 148
2	CH11050 CH11060 CH11070 CH11080	--	CH13030 CH13040 (For non-chemistry discipline)	--	EN12020 BT12030	
3	CH11090 CH11100 CH11110 CH11120 CH11130 CH11140	--	CH13050 CH13060 (For non-chemistry discipline)	CH11410 (CH11420)	--	
4	CH11150 CH11160 CH11170 CH11180 CH11190 CH11200	--	CH13070 CH13080 (For non-chemistry discipline)	CH11430 CH11440	--	
5	CH11210 CH11220 CH11230 CH11240	CH12010 CH12020 OR CH12030 OR	--	--	--	

		CH12040 CH12050 CH12060				
6	CH11250 CH11260 CH11270 CH11280	CH12070 OR CH12080 OR CH12090 CH12100	--	--	--	

6. Structure of the Course

B.Sc Chemistry Honours				
Core Course	Discipline Specific Elective	Skill Enhancement Course	Generic Elective	Ability Enhancement Course
SEMESTER-1				
Inorganic and Physical Chemistry-I (CH11010) Inorganic Chemistry Practical-I (CH11020)			Fundamentals of Chemistry-I (For non-chemistry discipline) (CH31010) Fundamentals of Chemistry-I Practical (CH31020) OR Chemistry in Daily Life-I (CH31090) Chemistry in Daily Life-I Practical (CH31100)	Communication Skills in English - I (EN12010) Environmental Studies - I (BT12010)
Organic Chemistry-I (CH11030) Organic Chemistry Practical-I (CH11040)				
SEMESTER-2				
Inorganic and Physical Chemistry-II (CH11050) Inorganic and Physical Chemistry Practical-II (CH11060)			Fundamentals of Chemistry-II (For non-chemistry discipline) (CH31030) Fundamentals of Chemistry-II Practical (CH31040) OR Chemistry in Daily Life-II (CH31110) Chemistry in Daily Life-II Practical (CH31120)	Communication Skills in English - II (EN12020) Environmental Studies-II (BT12020) OR Good Laboratory Practices (CH12010) OR Chemistry in Everyday Life (CH12020)
Organic Chemistry-II (CH11070) Organic Chemistry Practical-II (CH11080)				

SEMESTER-3				
Inorganic Chemistry-III (CH11090) Inorganic Chemistry Practical-III (CH11100)		Industrial Chemistry-I (CH11410) Analytical Chemistry-I (CH11420)	Medicinal Chemistry (For non-chemistry discipline) (CH13050) Medicinal Chemistry Practical (CH13060)	
Organic Chemistry-III (CH11110) Organic Chemistry Practical-III (CH11120)				
Physical Chemistry-III (CH11130) Physical Chemistry Practical-III (CH11140)				
SEMESTER-4				
Inorganic Chemistry-IV (CH11150) Inorganic Chemistry Practical-IV (CH11160)		Industrial Chemistry-II (CH11430) Analytical Chemistry-II (CH11440)	Colour Chemistry (For non-chemistry discipline) (CH13070) Colour Chemistry Practical (CH13080)	
Organic Chemistry-IV (CH11170) Organic Chemistry Practical-IV (CH11180)				
Physical Chemistry-IV (CH11190) Physical				

Chemistry Practical-V (CH11200)				
SEMESTER-5				
Advance Organic Chemistry-I (CH11210) Organic Chemistry Practical-V (CH11220)	Physical Chemistry (CH12010) Organometallics and Bioinorganic Chemistry (CH12020) OR Introduction to Nanochem. & applications (CH12030) OR Advance Material Chemistry (CH12040)			
Analytical Chemistry-I (CH11230) Analytical Chemistry Practical-V (CH11240)	Inorganic Chemistry Practical-V (CH12050) Physical Chemistry Practical-V (CH12060)			
SEMESTER-6				
Advance Organic Chemistry-II (CH11250) Organic Chemistry Practical-VI (CH11260)	Inorganic Spectroscopy (CH12070) OR Environmental Chemistry (CH12080) OR Biochemistry (CH12090) and Seminar (CH12100)			

Analytical Chemistry-II (CH11270) Physical Analytical Chemistry Practical-VI (CH11280)	Spectroscopy Practical-VI (CH12110)			
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