

**SCHEME
OF
EXAMINATION**

Under Choice Based Credit System (CBCS)

For

B.Sc. (Hons.) Chemistry - 3 Years

(w.e.f. Session 2019-20)



**UTTARANCHAL UNIVERSITY,
DEHRADUN**

**Evaluation Scheme of Examination for B.Sc. (Hons.) Chemistry
(With effective from Session 2019-20) CBCS system**

SEMESTER-I						
S.N.	Paper Code	Subject	L-T-P	Credit	Max Marks	
					Ext.	Int.
1.1	TBHC 101	Inorganic Chemistry –I	4-0-0	4	60	40
1.2	TBHC 102	Physical Chemistry –I	4-0-0	4	60	40
1.3	TBHG 103	Generic elective -1	4-0-0	4	60	40
1.4	TBEC104/ TBES104	English Communication/ Environmental Science	2-0-0	2	60	40
1.5	PBHC 101	Inorganic Chemistry –I Lab	0-0-4	2	25	25
1.6	PBHC 102	Physical Chemistry –I Lab	0-0-4	2	25	25
1.7	PBHG 103	Generic elective -1 Lab	0-0-4	2	25	25
1.8	PBHA-105	Educational Visit & Activity	0-0-2	1	00	50
Total for I semester			14-0-14	21	600	
SEMESTER-II						
S.N.	Paper Code	Subject	L-T-P	Credit	Max Marks	
					Ext.	Int.
2.1	TBHC-201	Organic Chemistry –I	4-0-0	4	60	40
2.2	TBHC-202	Physical Chemistry –II	4-0-0	4	60	40
2.3	TBHG-203	Generic Elective (Concept of programming)-2	4-0-0	4	60	40
2.4	TBES204/ TBEC204	Env. Science / English Communication	2-0-0	2	60	40
2.5	PBHC-201	Organic Chemistry –I Lab	0-0-4	2	25	25
2.6	PBHC-202	Physical Chemistry –II Lab	0-0-4	2	25	25
2.7	PBHC-203	Generic Elective (Concept of programming)-2 Lab	0-0-4	2	25	25
2.8	TBHE-205	Human ethics and professional values	2-0-0	2	60	40
Total for II semester			16-0-12	22	650	

SEMESTER – III						
S.N.	Paper Code	Subject	L-T-P	Credit	Max Marks	
					Ext.	Int.
3.1	TBHC 301	Inorganic Chemistry –II	4-0-0	4	60	40
3.2	TBHC 302	Organic Chemistry -II	4-0-0	4	60	40
3.3	TBHC 303	Physical Chemistry –III	4-0-0	4	60	40
3.4	TBHG 304	Generic Elective-3	4-0-0	4	60	40
3.5	TBHC-305	SEC-1	2-0-0	2	60	40
3.6	PBHC 301	Inorganic Chemistry –II Lab	0-0-4	2	25	25
3.7	PBHC 302	Organic Chemistry -II Lab	0-0-4	2	25	25
3.8	PBHC 303	Physical Chemistry –III Lab	0-0-4	2	25	25
3.9	PBHS-306	Scientific Activity	0-0-2	1	00	50
Total for III Semester			18-0-14	25	700	
SEMESTER-IV						
S.N.	Paper Code	Subject	L-T-P	Credit	Max Marks	
					Ext.	Int.
4.1	TBHC 401	Inorganic Chemistry –III	4-0-0	4	60	40
4.2	TBHC 402	Organic Chemistry -III	4-0-0	4	60	40
4.3	TBHC 403	Physical Chemistry –IV	4-0-0	4	60	40
4.4	TBHG -404	Generic Elective-4	4-0-0	4	60	40
4.5	TBHC 405	SEC-II	2-0-0	2	60	40
4.6	PBHC 401	Inorganic Chemistry –III Lab	0-0-4	2	25	25
4.7	PBHC 402	Organic Chemistry -III Lab	0-0-4	2	25	25
4.8	PBHC 403	Physical Chemistry –IV Lab	0-0-4	2	25	25
4.9	ADP 404	PDP*	2-0-0	0	00	50*
Total for IV semester			20-0-12	24	650	

*This is a qualifying paper each student has to score min 50% marks for award of degree

SEMESTER – V						
S.N.	Paper Code	Subject	L-T-P	Credit	Max Marks	
					Ext.	Int.
5.1	TBHC 501	Organic Chemistry –IV	4-0-0	4	60	40
5.2	TBHC 502	Physical Chemistry –V	4-0-0	4	60	40
5.3	TBHC 503	DSE-1	4-0-0	4	60	40
5.4	TBHG 504	DSE-2	4-0-0	4	60	40
5.5	PBHC 501	Organic Chemistry –IV Lab	0-0-4	2	25	25
5.6	PBHC 502	Physical Chemistry –V Lab	0-0-4	2	25	25
5.7	PBHC 503	DSE-1 Lab	0-0-4	2	25	25
5.8	PBHG 504	DSE-2 Lab	0-0-4	2	25	25
5.9	PBSM-505	Seminar/SWAYAM/ MOOC course	0-0-4	2	00	50
Total for V semester			16-0-20	26	650	
SEMESTER-VI						
S.N.	Paper Code	Subject	L-T-P	Credit	Max Marks	
					Ext.	Int.
6.1	TBHC 601	Inorganic Chemistry –IV	4-0-0	4	60	40
6.2	TBHC 602	Organic Chemistry -V	4-0-0	4	60	40
6.3	TBHC 603	DSE-3	4-0-0	4	60	40
6.4	DBHC 604/ TBHC 604	DSE-4 (Dissertation)/ Theory (Adv. Spectroscopy)	0-0-12 4-0-0	6 4	100 60	50 40
6.5	PBHC 601	Inorganic Chemistry –IV Lab	0-0-4	2	25	25
6.6	PBHC 602	Organic Chemistry -V Lab	0-0-4	2	25	25
6.7	PBHC 603	DSE-3 Lab	0-0-4	2	25	25
6.9	PBHC 604	Advanced Spectroscopy Lab	0-0-4	2	25	25

6.8	ADP-605	Aptitude & Reasoning Skills	2-0-0	1	00	50
Total for VI semester			14-0-24 or 18-0-16	25	650	
Total for 1 to 6 Sem.				143	3900	

GE- Generic Elective, **SEC-**Skill Enhancement Course, **DSE-** Discipline Specific Elective

Generic Electives: (Papers offered from Computer science discipline)

1. Fundamental of computers
2. Concepts of Programming
3. Operating system & UNIX
4. DBMS and Networking Concepts

Generic Electives: (Papers offered from Mathematics discipline)

1. Basic Mathematics & Statistics
2. Algebraic Mathematics

Generic Electives: (Papers may be opted from the papers offered from other discipline)

SKILL ENHANCEMENT COURSES: (2 Papers to be selected) – SEC 1 to SEC 2

SEC 1 code- TBHC-305(i)

1. IT Skills for Chemists (i=1)
2. Analytical Chemistry & Applications (2)
3. Chemical Technology & Society (3)
4. Chemoinformatics (4)
5. Business Skills for Chemists(5)
6. Intellectual Property Rights (6)
7. Analytical Clinical Biochemistry (7)
8. **SWAYAM /MOOC/Any other (8)**

SEC II (TBHC-405(code)

1. Green Methods in Chemistry (1)
2. Pharmaceutical Chemistry (2)
3. Chemistry of Cosmetics & Perfumes(3)
4. Chemistry of fuels (4)
5. Pesticide Chemistry(5)
6. **Any SWAYAM /MOOC** course or any other (6)

DISCIPLINE SPECIFIC ELECTIVES: (4 Papers to be selected) – DSE 1 to DSE 4

DSE-1 (TBHC-503-(i) (i-code)

1. Polymer Chemistry (1) code as 503(1)
2. Molecular Modeling& Drug Design(2)
3. Applications of Computers in Chemistry (3)

DSE-II (TBHC-504-(i))

1. Chromatographic techniques (1) code as 504 (1)
2. Instrumental Methods of Analysis (2)
3. Novel Inorganic Solids (3)
4. Inorganic Materials of Industrial Importance(4)

DSE-III (TBHC-603-(i)

1. Green Chemistry (1)
2. Industrial Chemicals & Environment (2)
3. Research Methodology for Chemistry(3)

DSE-IV (TBHC-604)

1. Dissertation
2. Chem. Subject : Advanced Spectroscopy or any other paper decided by Departmental /BOS committee

