

BACHELOR OF SCIENCE(HONORS)

CHEMISTRY

Programme Code: CHB
Duration: 3 Years

Teaching & Scheme of Examination

FROM SESSION: 2019-2020 Onwards



Department of Chemistry

Faculty of Science

CHHATRAPATI SHIVAJI MAHARAJ
UNIVERSITY PANVEL, NAVI MUMBAI

B.Sc. (Chemistry)

Teaching & Evaluation Scheme SEMESTER I

Course type	Course Code	Course Name	L	T	P	IA	UE	Total Marks	Credits
DSC	CHBC101	Inorganic Chemistry-I	4	0	0	30	70	100	4
DSC	CHBC102	Physical Chemistry-I	4	0	0	30	70	100	4
GE	**BG101	General Elective - I	4/5	0	0	30	70	100	4/5
AECC	ENBC101	English Communication	2	0	0	15	35	50	2
DSC	CHBC191	Inorganic Chemistry-I Lab.	0	0	4	15	35	50	2
DSC	CHBC192	Organic Chemistry-I Lab.	0	0	4	15	35	50	2
GE	**BG191	General Elective - I Lab	0	0/1	4/0	15	35	50	2/1
Total			14	0	12	150	350	500	20

Teaching & Evaluation Scheme SEMESTER II

Course type	Course Code	Course Name	L	T	P	IA	UE	Total Marks	Credits
DSC	CHBC201	Organic Chemistry-I	4	0	0	30	70	100	4
DSC	CHBC202	Analytical Chemistry-I	4	0	0	30	70	100	4
GE	**BG102	Generic Elective-II	4/5	0	0	30	70	100	4/5
AECC	ESBC201	Environmental Studies	2	0	0	15	35	50	2
DSC	CHBCP291	Organic Chemistry-I lab	0	0	4	15	35	50	2
DSC	CHBC292	Analytical Chemistry-I Lab	0	0	4	15	35	50	2
GE	**BGP291	General Elective - II Lab	0	0/1	4/0	15	35	50	2/1
Total			14	0	12	150	350	500	20

SEMESTER III
Teaching & Evaluation Scheme

Course type	Course Code	Course Name	L	T	P	IA	UE	Total Marks	Credits
DSC	CHBC301	Organic Chemistry-II	4	0	0	30	70	100	4
DSC	CHBC302	Analytical Chemistry-II	4	0	0	30	70	100	4
DSC	CHBC303	Physical Chemistry-II	4	0	0	30	70	100	4
GE	**BG103	Generic Elective -III	4/5	0	0	30	70	100	4/5
SEC	CHBS3**	Skill enhancement Course-I	2	0	0	15	35	50	2
DSC	CHBC391	Organic Chemistry-II Lab.	0	0	4	15	35	50	2
DSC	CHBC392	Analytical Chemistry-II Lab.	0	0	4	15	35	50	2
DSC	CHBC393	Physical Chemistry-II Lab.	0	0	4	15	35	50	2
GE	**BG193	Generic Elective -III Lab.	0	0/1	4/0	15	35	50	2/1
Total			16	0	16	180	420	600	26

Teaching & Evaluation Scheme
SEMESTER IV

Course type	Course Code	Course Name	L	T	P	IA	UE	Total Marks	Credits
DSC	CHBC401	Inorganic Chemistry-II	4	0	0	30	70	100	4
DSC	CHBC402	Physical Chemistry-III	4	0	0	30	70	100	4
DSC	CHBC403	Organic Chemistry-III	4	0	0	30	70	100	4
GE	**BG104	Generic Elective -IV	4/5	0	0	30	70	100	4/5
SEC	CHBS4**	Skill Enhancement Courses -2	2	0	0	15	35	50	2
DSC	CHBC491	Inorganic Chemistry-II Lab.	0	0	4	15	35	50	2
DSC	CHBC492	Physical Chemistry-III Lab.	0	0	4	15	35	50	2
DSC	CHBC493	Organic Chemistry-III Lab.	0	0	4	15	35	50	2
GE	**BG194	Generic Elective -IV Lab.	0	0/1	4/0	15	35	50	2/1
Total			16	0	16	180	420	650	26

**Teaching & Evaluation Scheme
SEMESTER V**

Course type	Course Code	Course Name	L	T	P	IA	UE	Total Marks	Credits
DSC	CHBC501	Inorganic Chemistry-III	4	0	0	30	70	100	4
DSC	CHBC502	Physical Chemistry-IV	4	0	0	30	70	100	4
DSE	CHBE50*	Discipline Specific Elective-I	4	0	0	30	70	100	4
DSE	CHBE50*	Discipline Specific Elective-II	4	0	0	30	70	100	4
DSC	CHBC591	Inorganic Chemistry-III	0	0	4	15	35	50	2
DSC	CHBC592	Physical Chemistry-IV	0	0	4	15	35	50	2
DSE	CHBE59*	Discipline Specific Elective-I	0	0	4	15	35	50	2
DSE	CHBE59*	Discipline Specific Elective-II	0	0	4	15	35	50	2
Total			16	0	16	180	420	600	24

**Teaching & Evaluation Scheme
SEMESTER VI**

Course type	Course Code	Course Name	L	T	P	IA	UE	Total Marks	Credits
DSC	CHBC601	Inorganic Chemistry-IV	4	0	0	30	70	100	4
DSC	CHBC602	Organic Chemistry-IV	4	0	0	30	70	100	4
DSE	CHBE60*	Discipline Specific Elective-III	4	0	0	30	70	100	4
DSE	CHBE60*	Discipline Specific Elective-IV	4	0	0	30	70	100	4
DSC	CHBC691	Inorganic Chemistry-IV Lab	0	0	4	15	35	50	2
DSC	CHBC692	Organic Chemistry-IV Lab	0	0	4	15	35	50	2
DSE	CHBE69*	Discipline Specific Elective-III Lab	0	0	4	15	35	50	2
DSE	CHBE69*	Discipline Specific Lab Elective-IV	0	0	4	15	35	50	2
Total			16	0	16	180	420	600	24

Ability Enhancement Compulsory Courses (AECC)

Semester	Offering Department	Course Code (T+P)	Course Name	(L-T-P)	Credits
I	English	ENBC101	English Communication	2-0-0	2
II	Basic Sciences	ESBC201	Environmental Studies	2-0-0	6

List of Generic Electives Available for students of B.Sc. (Hons.) Chemistry

Semester	Offering Department	Course Code (T+P)	Course Name	(L-T-P)	Credits
I	Mathematics	MTBG101	Algebra	5-1-0	6
II	Mathematics	MTBG201	Differential Calculus & Vector Calculus	5-1-0	6
III	Mathematics	MTBG301	Differential Equation	5-1-0	6
IV	Mathematics	MTBG401	Real Analysis	5-1-0	6
I	Physics	PHBG102+ PHBG192	Mechanics	4-0-4	6
II	Physics	PHBG202+ PHBG292	Thermal Physics	4-0-4	6
III	Physics	PHBG302+ PHBG392	Waves and Optics	4-0-4	6
IV	Physics	PHBG402+ PHBG492	Elements of Modern Physics	4-0-4	6

List of Generic Electives offered by Department of Chemistry for students in B.Sc. (Hons.) Mathematics, and B.Sc. (Hons.) Physics

Semester	Course Code (T+P)	Course Name	(L-T-P)	Credits
I	CHBG101 + CHBG191	Inorganic Chemistry-I	4-0-4	6
II	CHBG201+ CHBG291	Organic Chemistry-I	4-0-4	6
III	CHBG301+ CHBG391	Organic Chemistry-II	4-0-4	6
IV	CHBG401+ CHBG491	Inorganic Chemistry-II	4-0-4	6

Department-Specific Electives offered by Department of Chemistry for students in B.Sc. (PCM)

Semester	Course Code (T+P)	Course Name	(L-T-P)	Credits
V	CHBC501+PHBC591	Organic Spectroscopy	4-0-4	6
V	CHBC502+ CHBC592	Industrial Chemistry	4-0-4	6
VI	CHBC602+CHBC692	Polymer Chemistry	4-0-4	6
VI	CHBC603+CHBC693	Novel Inorganic Solid	4-0-4	6

List of Department-Specific Electives (DSE-1 to DSE-4) offered by Department of Chemistry for students in B.Sc. (Hons.) (4 to be selected, 2 in each of 5th and 6th semester)

Semester	Course Code (T+P)	Course Name	(L-T-P)	Credits
V	CHBE501+CHBE591	Organic Spectroscopy	4-0-4	6
V	CHBE502+CHBE592	Industrial Chemistry	4-0-4	6
V	CHBE503+CHBE593	Analytical Chemistry-III	4-0-4	6
V	CHBE504+CHBE594	Green chemistry	4-0-4	6
VI	CHBE601	Research Methodology for chemistry	5-1-0	6
VI	CHBE602+CHBE692	Polymer Chemistry	4-0-4	6
VI	CHBE603+CHBE693	Novel Inorganic Solids	4-0-4	6
VI	CHBE604+CHBE694	Application of Computers in Chemistry	4-0-4	6

* Optional Dissertation or project work in place of one Discipline Specific Elective paper (DSE-4)(6 credits) in 6th Semester

List of Skill Enhancement Course (SEC-1 & SEC-2) offered by Department of Chemistry (Any 2 to be selected)

Semester	Course Code	Course Name	(L-T-P)	Credits
III	CHBS301	IT Skills for Chemists	2-0-0	2
III	CHBS302	Chemical Tech & Society	2-0-0	2
III	CHBS303	Chemo informatics	2-0-0	2
IV	CHBS401	Analytical Clinical Biochemistry	2-0-0	2
IV	CHBS402	Green Methods in Chemistry	2-0-0	2
IV	CHBS403	Pharmaceutical chemistry	2-0-0	2

Department Specific Course (DSC), Department Specific Elective (DSE), Generic Elective Course (GE), Skill Enhancement Course (SEC), Ability Enhancement Core Course (AECC)