

Templates for programs Chemistry (CHM)

Template for BS program in Chemistry

Semester 1	Semester 2	Semester 3	Semester 4	Semester 5	Semester 6	Semester 7	Semester 8
SCHEME-1 (9) ELC111/ELC112/ELC113 *	ETH111 (3) **	SCHEME-2 EME (9-11)	SCHEME-3 HSS-I (9-11)	CHM303 (9)	SCHEME * HSS-II (9)	SCHEME * HSS-II (9)	SCHEME * HSS-II (9)
MTH 111 (6)	MTH 113 (6)	CHM201 (9)	ESC201 (14)	CHM305 (6)	CHM322 (9)	DE-2 (9)	UGP-4 (9) (CHM492)/DE-4 (9)
MTH 112 (6)	MTH 114 (6)	CHM221 (9)	CHM202 (9)	CHM321 (9)	CHM342 (9)	UGP-3 (9) (CHM491)/DE-3 (9)	OE-3 (9)
PHY 112 (11)	PHY 113 (11)	CHM241 (9)	CHM222 (9)	CHM345 (9)	CHM344 (6)	OE-1 (9)	OE-4 (9)
PHY 111 (3)	CHM 111 (3)	E/SO (≥ 9) Or Two E/SO (≥ 6)*	CHM242 (9)	CHM361 (6)	CHM402 (9)	OE-2 (9)	OE-5 (9)
TA 111 (9)	ESC 111 (7)			UGP-1 (4) (CHM391)	CHM324 (6)		OE-6 (9)
CHM 112 (4)	ESC 112 (7)			E/SO (≥ 9)	UGP-2 (9) (CHM392)/DE-1 (9)		
CHM 113 (4)	LIF111 (6)						
PE111 (3)	PE112 (3)						
55	52	45-50	50-52	52	57	45	54

*If students are taking ESOs with credit ≥ 6 , then it can be taken over two semesters. One UGP is compulsory. Students may choose one out of three nine credit UGPs

Credit table for BS program in Chemistry		
Course type	Allowable Credit	Credits in the department
Institute Core (IC)	112	112
E/SO	18-45	18-21
Department requirements	144-179	172 (136 DC + 36 DE)
Open electives (OE)	51-57	54
SCHEME	54-58	54-58
Total for 4-year BT/BS	391-420	410-417

Template for BSH Program in Chemistry

Template for 3 rd to 8 th semester for BSH program in Chemistry					
Semester 3	Semester 4	Semester 5	Semester 6	Semester 7	Semester 8
SCHEME-2 EME (9-11)	SCHEME-3 HSS-I (9-11)	CHM303 (9)	SCHEME HSS-II (9)	SCHEME HSS-II (9)	SCHEME HSS-II (9)
CHM201 (9)	ESC201 (14)	CHM305 (6)	CHM322 (9)	DE-2 (9)	UGP-4 (9)** (CHM492)/DE-4 (9)
CHM221 (9)	CHM202 (9)	CHM321 (9)	CHM342 (9)	UGP-3 (9)*** (CHM491)/DE-3 (9)	OE-3 (9)
CHM241 (9)	CHM222 (9)	CHM345 (9)	CHM344 (6)	OE-1 (9)	OE-4 (9)
E/SO (≥ 9) Or Two E/SO (≥ 6)*	CHM242 (9)	CHM361 (6)	CHM402 (9)	OE-2 (9)	OE-5 (9)
		UGP-1 (4) (CHM391)	CHM324 (6)		OE-6 (9)
		E/SO (≥ 9)	UGP-2 (9)** (CHM392)/DE-1 (9)		
			DEH-1 (9)	DEH-2 (9)	DEH-3 (9)
45-50	50-52	52	66	54	63

Footnote:

- *If students are taking ESOs with credit ≥ 6, then it can be taken over two semesters.
 - ** Two UGPs are compulsory for BSH, and students may choose two out of the three nine credit UGPs.
- Honors course basket (list of courses)
- For BSH, student must do 27 credits of CHM6XXA courses except CHM609A, CHM629A, CHM649A, from the following basket as DEH
 - CHM602A, CHM611A, CHM612A, CHM632A, CHM656A, CHM662A, CHM681A, CHM621A, CHM622A, CHM626A, CHM627A, CHM637A, CHM650A, CHM664A, CHM685A, CHM667A, CHM679A, CHM683A, CHM684A, CHM689A, CHM695A, CHM696A, CHM699A, CHM648A, CHM631A, CHM646A, CHM651A, CHM654A, CHM668A, CHM691A, CHM655, CHM682A, CHM645
- CPI criteria for BSH: 8.5

Template for BSM program in Chemistry

Template for 3 rd to 8 th semester for BSM program in Chemistry					
Semester 3	Semester 4	Semester 5	Semester 6	Semester 7	Semester 8
SCHEME-2 EME (9-11)	SCHEME-3 HSS-I (9-11)	CHM303 (9)	SCHEME HSS-II (9)	SCHEME HSS-II (9)	SCHEME HSS-II (9)
CHM201 (9)	ESC201 (14)	CHM305 (6)	CHM322 (9)		OE-3 (9)
CHM221 (9)	CHM202 (9)	CHM321 (9)	CHM342 (9)		
CHM241 (9)	CHM222 (9)	CHM345 (9)	CHM344 (6)	OE-1 (9)	MTB-3 (9)
E/SO (≥ 9) Or Two E/SO (≥ 6)*	CHM242 (9)	CHM361 (6)	CHM402 (9)	OE-2 (9)	MTB-4 (9)
		UGP-1 (4) (CHM391)	CHM324 (6)	MTB-1 (9)	MTB-5 (9)
		E/SO (≥ 9)	UGP-2 (9) (CHM392)/DE-1 (9)	MTB-2 (9)	MTB-6 (9)
45-50	50-52	52	5 7	4 5	54

Footnote: *If students are taking ESOs with credit ≥ 6 , then it can be taken over two semesters.

Template for five-year dual degree program in Chemistry

Bachelors-Masters (five-year Dual-degree) program (Category A)			
UG Pre-requisites		PG Components	
Odd Semesters	Even Semesters	Semester 9	Semester 10
CHM503A (6)	CHM443 (6)	CHM611A (9)	MS Project (48)
CHM423 (6)		CHM621A (9)	
		CHM631A (9)	
		DE PG-1 (9)	
		DE PG-2 (9)	
		DE PG-3 (9)	
18	00	54	48

The student needs to finish three courses (CHM503A, CHM443A, CHM423A) as mentioned in the table in odd semester for converting to BS-MS.

— BTH/BSH and BTM/BSM students should be considered eligible for PG programs at par with the students from existing 4-year programs.

If all the necessary courses as per BS template (semester 3rd to semester 8th) are satisfied, then the department permits the BSH and BSM students to convert to BS-MS.

Bachelors-Masters (five-year Dual-degree) program (Category B).		
Mandatory UG Components	PG Components	
	Semester 9	Semester 10
CHM DE-1 (9)	MS Project-1 (24)	MS Project-2 (24)
CHM DE-2 (9)	CHM305 (6)	CHM344 (6)
CHM DE-3 (9)	CHM DE-6 (9)	CHM324 (6)
CHM DE-4 (9)	CHM DE-7 (9)	CHM DE-8 (9)
CHM DE-5 (9)		CHM DE-9 (9)
45	48	54

- Only course required to be taken during semester 3rd to semester 8th are marked in the column “Mandatory UG Components”. No additional pre-requisites are necessary.

Template for double major: second major in Chemistry

Odd semester courses	Even semester courses
CHM201 (9)	CHM202 (9)
CHM221 (9)	CHM222 (9)
CHM241 (9)	CHM242 (9)
CHM303 (9)	CHM324 (6)
CHM305 (6)	CHM342 (9)
CHM321 (9)	CHM344 (6)
51	48

Minors in Chemistry

Physical Chemistry	Inorganic Chemistry	Organic Chemistry
CHM221 (9)	CHM241 (9)	CHM201 (9)
CHM222 (9)	CHM242 (9)	CHM202 (9)
	CHM345 (9)	CHM303 (9)
Any two courses from the following: CHM321 (9) CHM322 (9) CHM621A (9) CHM622A (9) CHM626A (9) CHM636A (9) CHM637A (9) CHM650A (9) CHM664A (9) CHM685A (9) CHM689A (9) CHM695A (9) CHM696A (9) CHM697A (9)	Any one course from the following: CHM342 (9) CHM616A (9) CHM631A (9) CHM646A (9) CHM647A (9) CHM651A (9) CHM654A (9) CHM668A (9) CHM691A (9)	Any one course from the following: CHM402 (9) CHM481 (9) CHM602A (9) CHM611A (9) CHM612A (9) CHM662A (9)
36	36	36