Templates for programs Mathematics and Scientific Computing (MTH)

Template for BS program in Mathematics and Scientific Computing

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)	SCHEME-4 HSS-II (9)	MTH305 (11)	SCHEME-5 HSS-II (9)	SCHEME-6 HSS-II (9)
MTH 111 (6)	MTH 113 (6)	MTH201 (11)	ESC201 (14)	MTH421 (11)	MTH424 (11)	DE-4 (9)	DE-6 (9)
MTH 112 (6)	MTH 114 (6)	MTH302 (11)	MTH204 (11)	MTH403 (11)	MTH430 (10)	DE-5 (9)	OE-4 (9)
PHY 115 (11)	PHY 114 (11)	E/SO-1: MSO205 (11)	MTH301 (11)	E/SO-3: ESO207 (12)	DE-2 (9)	OE-1 (9)	OE-5 (9)
PHY 111 (3)	CHM 111 (3)	E/SO-2 (9-11)	MTH308 (10)	DE-1 (9)	DE-3 (9)	OE-2 (9)	OE-6 (9)
TA 111 (9)	ESC 111 (7)					OE-3 (9)	
CHM 112 (4)	ESC 112 (7)						
CHM 113 (4)	LIF111 (6)						
PE111 (3)	PE112 (3)						
55	52	51-55	55-57	52	50	54	45

Note:
1.) UGPs are NOT mandatory. However, depending on the consent of supervisor(s), a student may take up to 3 UGPs of 09 credits each against DE/OE (UGP will be counted as OE if taken outside the department as consented by the DUGC) requirements. A student can also take a 4th UGP, that however will NOT be counted towards fulfilling the graduation requirements.
2.) DC courses of BS/SDS will be counted as Open Elective only for BS/MTH.

Credit table for BS program in Mathematics and Scientific Computing		
Course type	Allowable Credit	Credits in the department
Institute Core (IC)	112	112
E/SO	18-45	32-34
Department	144-179	162 (108 DC + 54 DE)
Open electives (OE)	51-57	54
SCHEME	54-58	54-58
Total for 4-year BT/BS	391-420	414-420

Template for the BSH program in Mathematics and Scientific Computing

Template for 3rd to 8th semester for BSH program in Mathematics and Scientific Computing					
Semester 3	Semester 4	Semester 5	Semester 6	Semester 7	Semester 8
SCHEME-2 EME (9-11)	SCHEME-3 HSS-I (9-11)	SCHEME-4 HSS-II (9)	MTH305 (11)	SCHEME-5 HSS-II (9)	SCHEME-6 HSS-II (9)
MTH201 (11)	ESC201 (14)	MTH421 (11)	MTH424 (11)	DE-4 (9)	UGP-2 (9)
MTH302 (11)	MTH204 (11)	MTH403 (11)	MTH430 (10)	OE-1 (9)	OE-4 (9)
E/SO-1: MSO205 (11)	MTH301 (11)	E/SO-3: ESO207 (12)	DE-2 (9)	OE-2 (9)	OE-5 (9)
E/SO-2 (9-11)	MTH308 (10)	DE-1 (9)	DE-3 (9)	OE-3 (9)	OE-6 (9)
				UGP-1 (9)	
			DEH-1 (9)	DEH-2 (9)	DEH-3 (9)
51-55	55-57	52	59	63	54

– CPI criterion for BSH: 8.5

Notes:

– UGP-1 and UGP-2 are mandatory UGPs.
– A student may take additional UGP-3 of 09 credits against DE/OE (UGP will be counted as OE if taken outside the department as consented by the DUGC) requirements. A student can also take a 4th UGP that however will NOT be counted towards fulfilling the graduation requirements.
– For BSH, student has to do 27 credits of DEH courses from the Honors course basket given below.
– DC courses of BS/SDS will be counted as Open Elective only for BS/MTH.

Template for BSM program in Mathematics and Scientific Computing

Template for 3rd to 8th semester for BSM program in Mathematics and Scientific Computing					
Semester 3	Semester 4	Semester 5	Semester 6	Semester 7	Semester 8
SCHEME-2 EME (9-11)	SCHEME-3 HSS-I (9-11)	SCHEME-4 HSS-II (9)	MTH305 (11)	SCHEME-5 HSS-II (9)	SCHEME-6 HSS-II (9)
MTH201 (11)	ESC201 (14)	MTH421 (11)	MTH424 (11)	OE-1 (9)	OE-3 (9)
MTH302 (11)	MTH204 (11)	MTH403 (11)	MTH430 (10)	OE-2 (9)	MTB-4 (9)
E/SO-1: MSO205 (11)	MTH301 (11)	E/SO-3: ESO207 (12)	DE-2 (9)	MTB-1 (9)	MTB-5 (9)
E/SO-2 (9-11)	MTH308 (10)	DE-1 (9)	DE-3 (9)	MTB-2 (9)	MTB-6 (9)
				MTB-3 (9)	
51-55	55-57	52	50	54	45

DC courses of BS/SDS will be counted as Open Elective only for BS/MTH.

Template for five-year dual-degree program Mathematics and Scientific Computing

BS-MS PG Part – Category A (from the same program)			
COURSES			
Semester 9		Semester 10	
MS Project (PGP-1, PGP-2)	18	MS Project (PGP-3, PGP-4)	18
DE PG - 1	09	DE PG - 3	09
DE PG - 2	09	DE PG - 4	09
OE PG – 1/DE PG-5	09	OE PG – 2/DE PG-6	09
Total	45		45

Minimum credits in MS part for graduation: 90
18 OE credits may be waived off in the UG requirements
DC courses of BS/SDS will be counted as Open Elective only for BS/MTH.

BS-MS PG Part – Category B (from other programs)					
UG pre-requisites		PG Requirements			
Odd Semester	Even Semester	IX Semester		X Semester	
MTH201 (11)	MTH204 (11)	MS Project (PGP-1, PGP-2)	18	MS Project (PGP-3, PGP-4)	18
MTH302 (11)	MTH301 (11)	DE PG - 1	09	DE PG - 3	09
MTH305 (11)	MTH308 (10)	DE PG - 2	09	DE PG - 4	09
MTH403 (11)	MTH421 (11)	OE PG – 1/DE PG-5	09	OE PG – 2/DE PG-6	09
MTH424 (11)	MTH430 (10)				
55	53		45		45

36 OE credits may be waived off in the UG requirements
Pre-requisite courses are mandatory requirements for DD-B
DC courses of BS/SDS will be counted as Open Elective only for BS/MTH.

Template for double major: second major in Mathematics and Scientific Computing

Double Major	
Odd Semester	Even Semester
Pre-Requisites	
ESO 207 (12)	MSO201 (11) or MSO 205 (11) – Introduction to Probability Theory (Odd Semester)
Mandatory MTH Courses	
MTH201 (11)	MTH204 (11)
MTH302 (11)	MTH301 (11)
MTH305 (11)	MTH308 (10)
MTH403 (11)	MTH421 (11)
MTH424 (11)	MTH430 (10)
55	53

36 OE credits may be waived off in the UG requirements
Pre-requisite courses are mandatory requirements for DM