Report of Core Curriculum Committee
Second (II) Semester of the Year 2021-22

1. Guidelines for Drawing Instructors and Tutors from Various Departments

1.1 List of Core Courses and respective Departments handling them as per MA Committee When Instructors are drawn from Multiple Departments

Course No. and Title	**Department**			
	2020-21 & 2021-22	2022-23 & 2023-24	2024-25 & 2025-26	2026-27 & 2027-28
TA101(Engineering Graphics)	ME	CE	AE	CE
ESO201(Thermodynamics)	CHE	ME	CHE	AE
ESO202(Solid Mechanics)	CE	AE	CE	ME
~~ESO204(Fluid Mechanics)~~	AE	CHE	ME	CHE
HSO201	ECO & CE	ECO	CE & ECO	--
HSS-I	HSS/ECO	HSS/ECO	HSS/ECO	HSS/ECO
HSS-II	HSS/ECO	HSS/ECO	HSS/ECO	HSS/ECO

1.2 List of Core Courses and respective Departments handling them as per MA Committee When Instructors are drawn from a Fixed Department

Department	**Course(s)**
BSBE	LIF101, ESO206
CHM	CHM101, CHM102, CHM102R, CSO201, CSO202, CSO203
CE	ESO208, HSO201A
CSE	ESC101, ESO207
EE	ESC201, ESO203
ES	ESO213
HSS	HSS-I, ENG112, HSS-II, COM200
ME	TA202, ESO209A
MSE	TA201, ESO205A
MTH	MTH101, MTH101R, MTH102, MTH102R, MSO201, MSO2020A, MSO203b
PHY	PHY101, PHY102, PHY103, PSO201
ECO	HSO201

1.3 List of Core Courses and Respective Departments that will provide Theory and Lab Tutors / Instructors

Course no.	Course Name	Departments That Provide Tutors / Lab Instructors
CHM101	Chemistry Lab	CHM
CHM102A	General Chemistry	CHM
MTH101	Mathematics-I	MTH
MTH102	Mathematics-II	MTH
PHY101	Physics Lab	PHY
PHY102	Physics-I	PHY
PHY103	Physics-II	PHY
ESC101	Intro to Computing	CSE
LIF101	Life Science	BSBE
TA101	Engineering Graphics	AE, CE, ME
HSS-I(1)	Humanities-I	HSS, ECO
ESC201	Electronics	EE
TA201	Manufacturing Lab	MSE
TA202	Mechanical Lab	ME
COM200	Communication Skills	CE, IME, HSS, ES, ECO
HSS-I(2)	Humanities-I	HSS
HSS-II	Humanities-II	HSS, ECO
ESO201	Thermodynamics	AE, CHE, ME
ESO202	Mechanics of Solids	AE, CE, ME
ESO203	Intro Electrical Engg.	EE
ESO207	Data Structures	CSE
MSO201A	Probability And Statistics	MTH, EE
PSO201A	Quantum Physics	PHY
HSO201A	Applied Probability and Statistics	ECO, CE
CSO201A	Organic Chemistry: Fundamentals and Applications	CHM
CSO202A	Atoms, Molecules and Photons	CHM
CSO203A	Inorganic Molecules, Materials & Medicine	CHM

Note: Table constructed using data from previous years.

2. Estimate of Number of Students in Core Courses in Second (II) Semester during the Year 2021-22

Course Group	Course No.	Course Name	Estimated Number of New Students	No. of Students Failed in 2020-21(II)	No. of Students Registered in 2020-21(II)	Final Estimate for 2021-22 – Sem. II
Second Semester Courses	CHM101	Chemistry Lab	600	00	457	600
	CHM102	Gen. Chemistry	1200	00	897	1200
	MTH102	Mathematics-II	1200	00	854	1200
	PHY101	Physics Lab	600	00	430	600
	PHY102	Physics-I	600	00	443	600
	PHY103	Physics-II	600	00	460	600
	ESC101	Computing	600	00	481	600
	LIF101	Life Sciences	600	00	436	600
	TA101	Engineering Graphics	600	00	433	600
Fourth Semester Courses	ESC201	Electronics	600	00	447	600
	TA201	Manufacturing Lab	600	00	NA	600
	TA202	Mechanical Lab	600	00	NA	600
	COM200	Communication Skill	400	00	335	400
Engineering Science options	ESO201	Thermodynamics	210	00	197	210
	ESO202	Mechanics of Solids	240	00	225	240
	ESO203	Intro Elect. Engineering	350	00	291	350
	ESO207	Data Structures	350	00	282	350
Science options	MSO201	Probability And Statistic	400	00	410	400
	PSO201	Quantum Physics	200	00	196	200
	~~CSO201~~	~~Organic Chemistry: Fund.& applications –~~	~~225~~	~~0~~	~~225~~	~~225~~
	CSO202	Atoms, Molecules & Photons	150	00	121	150
	CSO203	Inorganic Molecules, Materials & Medicine	210	0	196 (2018-19-II)	210
	HSO201	Applied Probability and Statistics	300	00	203	300
Repeat	MTH101	Mathematics-I	75	00	57 (2019-20-II)	75
HSS Courses	HSS-I	Humanities-I	600			600
	HSS-II	Humanities-II	1450			1450

3. Teaching Support Requirement

Course No.	Course Name	Units	No. of Students (Estimate)	Student per Section(Appx)	Number of Sections	Number of			Total Units (Inst.+tut/lab)
						Theory Tutors	Lab. Tutors	Instruction Units	
CHM101A	Chemistry lab	0-0-3[3]	600	38	16	0	16	1	1+16=17
CHM102A	Gen. Chemistry	2-1-0[8]	1200	40	30	30	0	3	3+30=33
MTH102A	Mathematics-II	3-1-0[11]	1200	100	12	12		4	12+4=16
PHY101A	Physics Lab	0-0-3[3]	600	38	16		16	1	1+16=17
PHY102A	Physics-I	3-1-0[11]	600	100	6	6		4	4+6=10
PHY103A	Physics-II	3-1-0[11]	600	100	6	6		4	4+6=10
ESC101A	Computing	3-1-3[14]	600	38	16	16	16	4	4+16=20
LIF101A	Life Science	2-0-0[6]	600	--	--	--	--	3	3+0=3
TA101A	Engineering Graphics	2-0-3[9]	600	38	16		16	3	3+16=19
ESC201A	Electronics	3-1-3[14]	600	30	20	20	20	4	4+20=24
TA201A	Manufacturing Lab	1-0-3[6]	600	120	5	--	5	2	2+5=7
TA202A	Mechanical Lab	1-0-3[6]	600	120	5	--	5	2	2+5=7
COM200	Communication Skill	1-0-2[5]	400	35	12		12	1	1+12=13
ESO201A	Thermodynamics	3-1-0[11]	210	35	6	6		2	2+6 = 8
ESO202A	Mechanics of Solids	3-1-0[11]	240	40	6	6		2	2+6=8
ESO203A	Intro Elect. Engineering	3-1-2[13]	350	35	10	10	10	2	2+10=12
ESO207A	Data Structure	3-0-0[09]	350	--	--	--	--	2	2+0=2
MSO201A	Probability and Statist	3-1-0[11]	400	100	4	4	--	2	2+4=6
PSO201A	Quantum Physics	2-1-0[8]	200	40	5	5	--	1.5	1.5+5=6.5
~~CSO201A~~	~~Org. Chem.: Fund. & applications~~	~~3-1-0[11]~~	~~225~~	~~38~~	~~6~~	~~6~~		~~2~~	~~2+6=8~~
CSO202A	Atoms, Molecules, Photons	3-1-0[11]	150	38	4	4		2	2+4=6
CSO203A	Inorg. Molecules, Mat. & Medicine	3-1-0[11]	210	35	6	6	--	2	2+6=8
HSO201A	Applied Prob. & Stat.	3-1-0[11]	300	100	3	3		2	2+3=5
MTH101R	Mathematics-I	3-1-0[11]	75	38	2	2	--	1.5	1.5+2=3.5
HSS-I	Humanities-I	3-1-0[11]	600	40	15			4	4+15=19
HSS-II	Humanities-II	3-0-0[9]	1450					4	4+0=4

Note:1. When a course has tutorials and lab, then the tutor is supposed to take care of both.

2. Instruction Units:

Only lab course: 1.0; Lecture Course (class size < 60): 1.0;

Lecture Course (60 _class size < 150): 1.5; Lecture Course (150 _class size < 600): 2.0 (3 lec/wk), 1.5 (2 lec/wk), 1.0 (1 lec/wk);

Lecture Course (600 _class size): 4.0 (3 lec/wk), 3.0 (2 lec/wk), 2.0 (1 lec/wk); Tutorials: 1.0

3. TA201 lab capacity is 90 and it is split into 3 sections. One instructor handles all the 3 sections simultaneously. In all other courses the section size may be increased by at most 5.

4. Department/IDP-wise Breakup of Instructor's and/or Tutors for Core Courses in Second (II) Semester during the Year 2021-22

Course No.	Course Name	Units Reqd	AE	BSBE	CHE	CE	CSE	EE	IME	ME	MSE	CHM	MTH	PHY	HSS	ES	ECO	TOTAL
CHM 101	Chemistry Lab	17.0										1+16						**1+16**
CHM 102	Gen. Chemistry	33.0										3+30						**3+30**
MTH 102	Mathematics-II	16.0											4+12					**4+12**
PHY101	Physics Lab	17.0												1+16				**1+16**
PHY102	Physics-I	10.0												4+6				**4+6**
PHY103	Physics -II	10.0												4+6				**4+6**
ESC101	Fund. Of	20.0					4+16											**4+16**
LIF101	Life Sciences	3.0		3+0														**3+0**
TA101	Engineering	19	0+3			0+6				3+7								**3+16**
ESC201	Electronics	24.0						4+20										**4+20**
TA201	Manufact. Proc.	7.0									2+5							**2+5**
TA202	Manufact. Proc.	7.0								2+5								**2+5**
COM200	Communication	13.0							0+9						1+1	0+1	0+1	**1+12**
ESO201	Thermodynamics	8.0	0+2		2+3					0+1								**2+6**
ESO202	Mechanics of	8.0	0+2			2+3				0+1								**2+6**
ESO203	Intro. Electrical	12.0						2+10										**2+10**
ESO207	Data Structures	2.0					2+0											**2+0**
MSO201	Probability &	6.0		0+1			0+1	0+2					2+0					**2+4**
PSO201	Quantum Physics	6.5									0+2			1.5+3				**1.5+5**
~~CSO201~~	~~Org. Chem.: Fund.~~	~~8.0~~										~~2+6~~						**~~2+6~~**
CSO202	Atoms,	6.0			0+3							2+1						**2+4**
CSO203A	Inorg.Molecules,	8.0										2+6						**2+6**
HSO201	Applied Prob. &	5.0				2+1											0+2	**2+3**
MTH101R	Mathematics-I	3.5											1.5+2					**1.5+2**
HSS-I	Humanities-I	19.0													2+15		2+0	**4+15**
HSS-II	Humanities-II	4													2+0		2+0	**4+0**
Total Load Assigned		**284**	**7**	**4**	**8**	**14**	**23**	**38**	**9**	**19**	**9**	**61**	**21.5**	**41.5**	**21**	**1**	**7**	**284**
Approximate Faculty Strength			**28**	**19**	**23**	**40**	**32**	**46**	**17**	**41**	**26**	**37**	**47**	**41**	**28**	**10**	**13**	**448**
Ratio of Load Assigned : Faculty			**0.25**	**0.21**	**0.35**	**0.35**	**0.72**	**0.83**	**0.55**	**0.46**	**0.35**	**1.65**	**0.46**	**1.01**	**0.75**	**0.1**	**0.54**	

Units are assigned as 'm + n', where 'm' indicate instructor units and 'n' indicates tutor units.

$ The unit assigned is halved for half semester courses

Economic Sciences shall offer one HSS I and one HSS II each semester

Appendix

Important Information Regarding Individual Section Sizes for Various Courses and Work Load

1. Tutorial section sizes have been fixed based on last year's CCC data/report and with inputs from respective HODs.
2. One tutor will be assigned per section (normally 38 students) for PHY101 and CHM101 laboratory sessions.
3. One tutor will be assigned per day (i.e., per four sections, i.e., ~ 120 students) for TA201 and TA202 labs.
4. Tutors assigned for ESC101, ESC201, ESO203 and ESO205 tutorials will also take care of the laboratory sessions of the same sections.
5. Increasing the number of sections in any course is undesirable.
6. Student number in each section may be increased slightly, i.e., up to 40 in sections normally having 35 students and up to 110 in sections normally having 100 students to prevent increase in the number of sections.
7. The total registration in some courses has to be restricted considering seating capacity of the lecture hall assigned for the course.
8. The number of sections in some ESO/SO courses may be reduced in certain cases after registration, in case the number of students registered is less than expected.

Colour code explanation:

Grey: Odd semester courses
Red: not offered in next semester

Dr. Niraj Sinha
Chairperson, CCC

Dr. Anand Singh
Chairperson, SUGC