Report of Core Curriculum Committee
Semester Second Year 2022 - 23

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
TA111(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
HSS –I	HSS/ECO	HSS/ECO	HSS/ECO	HSS/ECO
HSS-2	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	LIF111, ESO206
CHM	CHM111, CHM112, CHM113, CSO201, CSO202, CSO203
CE	ESO208
CHE	ESC113
CSE	ESC111, ESC112, ESO207
EE	ESC201, ESO203
HSS	ELC111, ELC112, ELC113, HSS-I, ENG112, HSS-II,COM200,
ME	TA202
MSE	TA201
MTH	MTH113, MTH114, MSO201,
PHY	PHY111, PHY112, PHY113, PHY114, PHY115, 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
CHM111	Chemistry Laboratory	CHM
CHM112	General Chemistry: Physical Chemistry	CHM
CHM113	General Chemistry: Inorganic & Organic Chemistry	CHM
MTH113	Linear Algebra	MTH
MTH114	Ordinary Differential Equations	MTH
PHY111	Physics Laboratory	PHY
PHY112	Classical Dynamics	PHY
PHY113	Classical Electrodynamics	PHY
PHY114	Quantum Physics	PHY
PHY115	Oscillations And Waves	PHY
ESC111	Fundamentals Of Computing – I	CSE
ESC112	Fundamentals Of Computing – Ii	CSE
ESC113	Computer Methods For Engineers	CHE
LIF111	Introduction To Biology	BSBE
TA111	Engineering Graphics	CE, AE, ME
ETH111	Practical Ethics	By All dept.
ELC111	English Language & Communication (Basic) (Scheme)	DOAA
ELC112	English Language & Communication (Intermediate) (Scheme)	DOAA
ELC113	English Language & Communication (Advanced) (Scheme)	DOAA
ESC201	Electronics	EE
TA201	Manufacturing Lab	MSE
TA202	Mechanical Lab	ME
COM200	Communication	CE, IME, HSS, ES
HSS-I(2)	Humanities-I	HSS
ESO201	Thermodynamics	AE, CHE, ME
ESO202	Mechanics of Solids	AE, CE, ME
ESO203	Intro Electrical Engg.	EE
ESO207	Data Structures	CSE
HSO201A	Applied Probability And Statistics	ECO
MSO201A	Probability And Statistics	MTH, EE, CSE
PSO201A	Quantum Physics	PHY
HSO201A	Applied Probability And Statistics	ECO
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 2022-23

Course Group	Course No.	Course Name	Estimated Number of New Students	No. of Students Failed in 2021-22(II)	No. of Students Registered in 2021-22(II)	Final Estimate for 2022-23(II)
Second Semester Courses	CHM111	Chemistry Laboratory	625	-	-	625
	CHM112	General Chemistry: Physical Chemistry	625	-	-	625
	CHM113	General Chemistry: Inorganic & Organic Chemistry	625	-	-	625
	MTH113	Linear Algebra	1250	-	-	1250
	MTH114	Ordinary Differential Equations	1250	-	-	1250
	PHY111	Physics Laboratory	625	-	-	650
	PHY112	Classical Dynamics	342	-	-	342
	PHY113	Classical Electrodynamics	367	-	-	367
	PHY114	Quantum Physics	284	-	-	284
	PHY115	Oscillations And Waves	217	-	-	217
	ESC111	Fundamentals Of Computing - I	625	-	-	625
	ESC112	Fundamentals Of Computing - II	500	-	-	500
	ESC113	Computer Methods For Engineers	125	-	-	125
	LIF111	Introduction To Biology	625	-	-	625
	TA111	Engineering Graphics	625	-	-	625
	ETH111	Practical Ethics	625	-	-	625
	ELC111	English Language & Communication (Basic) (Scheme)		-	-	-
	ELC112	English Language & Communication (Intermediate) (Scheme)		-	-	-
	ELC113	English Language & Communication (Advanced) (Scheme)		-	-	-
Fourth Semester Courses	ESC201	Electronics	600	08	588	600
	TA201	Manufacturing Lab	600	04	570	600
	TA202	Mechanical Lab	650	26	632	650
	COM200	Communication Skill	425	02	384	425
Engineering Science	ESO201	Thermodynamics	210	41	201	210
	ESO202	Mechanics of Solids	275	65	271	275

options	ESO203	Intro Elect. Engineering	350	11	333	350
	ESO207	Data Structures	250	7	186	250
Science options	MSO201	Probability And Statistic	400	26	471	425
	PSO201	Quantum Physics Organic	150	15	170	150
	CSO202	Atoms, Molecules & Photons	200	01	192	200
	CSO203	Inorganic Molecules, Materials & Medicine	200	-	271	200
	HSO201	Applied Probability And Statistics	300	20	205	300

3. Teaching Support Requirement

Course No.	Course Name	Units	No. of Students (Estimate)	Student per Section(Appx)	Number of			Total Units (Inst.+tut/lab)
					Theory Tutors	Lab. Tutors	Instruction Units	
CHM111	Chemistry Laboratory	0-0-3[3]	625	32	-	20	1	1+20=21
CHM112	General Chemistry: Physical	2-1-0[8]	625	100	6	-	3	3+6=9/2
CHM113	General Chemistry: Inorganic &	2-1-0[8]	625	100	6	-	3	3+6=9/2
MTH113	Linear Algebra	3-1-0[6]	1250	100	12	-	4	4+12=16/2
MTH114	Ordinary Differential Equations	3-1-0[6]	1250	100	12		4	4+12=16/2
PHY111	Physics Laboratory	0-0-3[3]	625	32		20	1	1+20=21
PHY112	Classical Dynamics	3-1-0[11]	342	100	3	-	2	2+3=5
PHY113	Classical Electrodynamics	3-1-0[11]	367	100	4	-	2	2+4=6
PHY114	Quantum Physics	3-1-0[11]	284	100	3	-	2	2+3=5
PHY115	Oscillations And Waves	3-1-0[11]	217	100	2	-	2	2+2=4
ESC111	Fundamentals Of Computing - I	3-1-3[7]	625	32	20	20	4	4+20+20=44/2
ESC112	Fundamentals Of Computing - Ii	3-1-3[7]	520	32	17	17	2	2+17+17=36/2
ESC113	Computer Methods For Engineers	3-1-3[7]	105	33	3	3	1.5	1.5+3.0=4.5
LIF111	Introduction To Biology	2-0-0[6]	625	-			3.0	03.0
TA111	Engineering Graphics	2-0-3[9]	625	32		20	2.0	2+20=22
ETH111	Practical Ethics	1-0-0[3]	625	32	20		2.0	2+20=22'
ELC111	Eng. Language & Com. (Basic)	2-1-1[9]	Instructor for ELC111/112/113 will be provided by the DOAA office. However, all the departments need to provide TAs to manage this course.					
ELC112	Eng. Lang. & Com.(Intermediate)	2-1-1[9]						
ELC113	Eng. Lang. & Com. (Advanced)	2-1-1[9]						
ESC201A	Electronics	3-1-3[14]	600	30	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]**	**650**	**120**	**5**	**5**	**2**	**2+5=7**
COM200	**Communication Skill**	**1-0-2[5]**	**425**	**35**		**12**	**1**	**1+12=13**
ESO201A	**Thermodynamics**	**3-1-0[11]**	**210**	**35**	**6**	**-**	**2**	**2+6=8**
ESO202A	**Mechanics of Solids**	**3-1-0[11]**	**275**	**40**	**7**		**2**	**2+7=9**
ESO203A	**Intro Elect. Engineering**	**3-1-2[13]**	**350**	**35**	**10**	**10**	**2**	**2+10=12**
ESO207A	**Data Structure**	**3-0-0[09]**	**250**				**2**	**2+0=2**
MSO201A	**Probability and Statist**	**3-1-0[11]**	**400**	**100**	**4**		**2**	**2+4=6**
PSO201A	**Quantum Mechanics**	**2-1-0[8]**	**150**	**38**	**4**		**1.5**	**1.5+4=5.5**
CSO202A	**Atoms, Molecules, Photons**	**3-1-0[11]**	**200**	**35**	**6**		**2**	**2+6=8**
CSO203A	**Inorg. Molecules, Mat. & Medicine**	**3-1-0[11]**	**200**	**35**	**6**		**2**	**2+6=8**
HSO201A	**Applied Prob. & Stat.**	**3-1-0[11]**	**300**	**100**	**3**		**2**	**2+3=5**
HSS-I	**Humanities-I**	**3-1-0[11]**	**600**	**40**	**15**		**4**	**4+15**
HSS-II	**Humanities -II**	**3-0-0[9]**	**1450**	**-**			**4**	**4+0**

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

†It should be counted as 20 units only though calculation also includes 2 instruction units as per the formula.

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 2022-23**

Course Number	Course Name	Unit Req	AE	BSBE	CHE	CE	CSE	EE	IME	ME	MSE	CHM	MTH	PHY	HSS	ES	ECO	SEE	DP	CGS	SSA	TOTAL
CHM111A	Chemistry Laboratory	1+20=21										1+20										1+20=21
CHM112A (M)	General Chemistry; Physical Chemistry	3+6=9/2										3+6										3+6=9/2
CHM113A (M)	General Chemistry : Inorg. & Org. Chem	3+6=9/2										3+6										3+6=9/2
MTH113A (M)	Linear Algebra	4+12 =16/2											4+12									4+12 =16/2
MTH114A (M)	Ordinary Differential Equations	4+12 =16/2											4+12									4+12 =16/2
PHY111A	Physics Laboratory	1+20=21												1+20								1+20=21
PHY112A	Classical Dynamics	2+3=5												2+3								2+3=5
PHY113A	Classical Electrodynamics	2+4=6												2+4								2+4=6
PHY114A	Quantum Physics	2+3=5												2+3								2+3=5
PHY115A	Oscillations And Waves	2+2=4												2+2								2+2=4
ESC111A (M)	Fundamentals Of Computing – I	4+20+20 =44/2					4+20															4+20+20 =44/2
ESC112A (M)	Fundamentals Of Computing – II	2+17+17 =36/2					2+17															2+17+17 =36/2
ESC113A (M)	Computer Methods For Engineers	1.5+3+3 =4.5/2			1.5+3																	1.5+3+3 =4.5
LIF111A	Introduction To Biology	3+0=3		3+0																		3
TA111A	Engineering Graphics	2+20	0+5			2+6				0+9												2+20
ETH111A	Practical Ethics	20	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	20
ELC111	Eng. Language & Com. (Basic)																					
ELC112	Eng. Lang. & Com.(Intermediate)																					
ELC113	Eng. Lang. & Com. (Advanced)																					
ESC201A	Electronics	4+20=24						4+20														4+20=24
TA201A	Manufact. Proc. (MSE)	2+5=7									2+5											2+5=7
TA202A	Manufact. Proc. (ME)	2+5=7								2+5												2+5=7
COM200	Communication Skills	1+12=13							0+9						1+1	0+1	0+1					1+12=13
ESO201A	Thermodynamics	2+6=8	0+2		0+1					2+3												2+6=8
ESO202A	Mechanics of Solids	2+7=9	2+3			0+2				0+2												2+7=9

ESO203A	**Intro. Electrical Engg.**	**2+10=12**						**2+10**														**2+10=12**
ESO207A	**Data Structures**	**2+0=2**					**2+0**															**2+0=2**
MSO201A	**Probability & Statistics**	**2+4=6**					**0+2**	**0+2**					**2+0**									**2+4=6**
PSO201A	**Quantum Mechanics**	**1.5+4=5.5**									**0+2**			**1.5+2**								**1.5+4=5.5**
CSO202A	**Atoms, Molecules, Photons**	**2+6=8**										**2+6**										**2+6=8**
CSO203A	**Inorg. Molecules, Mat. Medicine**	**2+6=8**										**2+6**										**2+6=8**
HSO201A	**Applied Prob. & Stat.**	**2+3=5**				**0+1**											**2+2**					**2+3=5**
HSS-I	**Humanities-I**	**4+15=19**													**2+15**		**2+0**					**4+15=19**
HSS- II	**Humanities -II**	**4+0=4**													**2+0**		**2+0**					**4+0=4**
Total Load Assigned		**314**	**13**	**04**	**7**	**12**	**45**	**40**	**10**	**24**	**10**	**47**	**19**	**46**	**22**	**02**	**10**	**01**	**01**	**01**	**01**	**314**
Approximate Faculty Strength		**468**	**28**	**19**	**23**	**40**	**32**	**46**	**17**	**41**	**26**	**37**	**47**	**41**	**28**	**10**	**13**	**07**	**05**	**05**	**03**	**468**
Ratio of Load Assigned : Faculty		**0.67**	**0.46**	**0.21**	**0.3**	**0.3**	**1.4**	**0.9**	**0.6**	**0.6**	**0.4**	**1.3**	**0.4**	**1.1**	**0.8**	**0.2**	**0.77**	**0.1**	**0.2**	**0.2**	**0.3**	**0.67**

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

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 32 students) for PHY111 and CHM111 laboratory sessions.
3. Tutors assigned for ESC111, ESC112, tutorials will also take care of the laboratory sessions of the same sections.
4. Increasing the number of sections in any course is undesirable.
5. Student number in each section may be increased slightly, i.e., up to 40 in sections normally having 35 students and up to 120 in sections normally having 100 students to prevent increase in the number of sections.
6. The total registration in some courses has to be restricted considering seating capacity of the lecture hall assigned for the course.

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