

Report of Core Curriculum Committee for 2016-17-II Semester

October 18, 2016

1. Guidelines for Drawing Instructors and Tutors from Various Departments

1.1 Instructor from Multi-Department

Course No. and Title	Department			
	2010-11 & 2011-12	2012-13 & 2013-14	2014-15 & 2015-16	2016-17 & 2017-18
TA101 (Engineering Graphics)	CE	ME	CE	AE
ESO201 (Thermodynamics)	AE	CHE	ME	CHE
ESO202 (Solid Mechanics)	ME	CE	AE	CE
ESO204 (Fluid Mechanics)	CHE	AE	CHE	ME

1.2 Instructor from a fixed Department

Department	Course(s)
BSBE	LIF101, ESO206
CHM	CHM101, CHM102, CHM102R, CSO201, CSO202
CE	ESO208
CSE	ESC101, ESO207
EE	ESC201, ESO203
HSS	HSS-I, ENG112, ENG112R, HSS-II, HSO201A
ME	TA202, ESO209
MSE	TA201, ESO205
MTH	MTH101, MTH101R, MTH102, MTH102R, MSO201, MSO202a, MSO203b
PHY	PHY101, PHY102, PHY103, PSO201

1.3 Tutors from Various Departments

Course no.	Course Name	Departments in which the Course is Compulsory	Departments that can Provide tutors
CHM101	Chemistry Lab	All	CHM
CHM102	General Chemistry	All	CHM
MTH101	Mathematics-I	All	MTH
MTH102	Mathematics-II	All	MTH
PHY101	Physics Lab	All	PHY
PHY102	Physics-I	All	PHY
PHY103	Physics-II	All	PHY
ESC101	Intro Computing	All	CSE
LIF101	Life Science	All	BSBE
TA101	Engineering Graphics	All	AE, CE, ME
ENG112	English Language	-	HSS
HSS-I(1)	Humanities-I	-	HSS
ESC201	Electronics	All	EE
TA201	Manufacturing Lab	All	MSE
TA202	Mechanical Lab	All	ME
COM200	Communication	All	CE, IME, HSS, ES
HSS-I(2)	Humanities-I	-	HSS
ESO201	Thermodynamics	AE, CHE, ME	AE, CHE, ME
ESO202	Mechanics of Solids	AE, CE, MSE, ME	AE, CE, MSE, ME
ESO203	Intro electrical engg.	EE, ME	EE, ME
ESO204	Mechanics of Fluids	AE, CE	AE, CE
ESO205	Nature of Materials	CHE, MSE	CHE, MSE
ESO206	Biotechnology	BSBE	BSBE
ESO207	Data Structures	CSE, MTH	CSE, MTH
ESO208	Numerical Methods	CHE, CE, MSE	CHE, CE, MSE
ESO209	Dynamics	AE, ME	AE, ME
MSO201*	Probability and Statistics	BSBE, CSE, EE, MTH	BSBE, CSE, EE, MTH
MSO202a	Complex Analysis	AE, EE, ME	AE, EE, ME, MTH
MSO203b	Partial Diff. Eqns	AE, CE, EE, ME, MSE	AE, CE, EE, ME, MSE, MTH
PSO201	Quantum Physics	PHY, MSE	PHY, MSE
CSO201	Basic Organic Chemistry	-	CHM, BSBE
CSO202	Atoms, Molecules, Photons	-	CHM, CHE
HSO201A	Applied Probability & Statistics	HSS,CE	HSS,CE

* As per input from head MTH, CE, HSS

2. Estimate of the Number of Students in Courses in 2016-17 II

Course Group	Course No.	Course Name	Estimated Number of New Students	No. of Students Failed in 2016-17 (II)	No. of Students Registered in 2016-17 (II)	Final Estimate for 2016-17 – Sem. II
Second Semester Courses	CHM101	Chemistry Lab	420	4		420
	CHM102	Gen. Chemistry	840	15		850
	MTH102	Mathematics-II	840	47		900
	PHY101	Physics Lab	420	02		425
	PHY102	Physics-I	420	59		425
	PHY103	Physics-II	420	103		575
	ESC101	Computing	420	102		540
	LIF101	Life Sciences	420	30		450
	TA101	Engineering Graphics	420	24		420
Fourth Semester Courses	ESC201	Electronics	420	27		425
	TA201	Manufacturing Lab	420	11		425
	TA202	Mechanical Lab	420	45		420
	COM200	Communication Skill	420	30		440
Engineering Science Options	ESO201	Thermodynamics	150		109	120
	ESO202	Mechanics of Solids	245		239	210
	ESO203	Intro Elect. Engineering	245		268	250
	ESO207	Data Structure	150			150
Science Options	MSO201	Probability and Statistics	320*		418*	350*
	PSO201	Quantum Mechanics	210		121	150
	CSO201	Basic Organic Chemistry	245		173	225
	CSO202	Atoms, Molecules, Photons	250		91	175
	HSO201A	Applied Probability & Statistics			150	150
Repeat	MTH101R	Mathematics-I		50	76	75

* As per input from head MTH, CE, HSS

3. Teaching Support Requirement

Course No.	Course Name	Units	No. of Students (Estimate)	Students per section(Appx)	Number of			Total Units (Inst.+tut/lab)
					Theory Tutors	Lab. Tutors	Instruction Units	
CHM101	Chemistry Lab	0-0-3[3]	420	35	0	12	1	1+12=13
CHM102	Gen. Chemistry	2-1-0[8]	850	35	24	0	3	3+24=27
MTH102	Mathematics-II	3-1-0[11]	900	100	9	9	4	4+9=13
PHY101	Physics Lab	0-0-3[3]	425	35	-	12	1	1+12=13
PHY102	Physics-I	3-1-0[11]	425	100	4	-	2	2+4=6
PHY103	Physics-II	3-1-0[11]	575	100	6	-	2	2+6=8
ESC101	Computing	3-1-3[14]	540	35	16	16	2	2+16=18
LIF101	Life Sciences	2-0-0[6]	450	-	-	-	1.5	1.5+0=1.5
TA101	Engineering Graphics	2-0-3[9]	420	35	-	12	1.5	1.5+12=13.5
ESC201	Electronics	3-1-3[14]	425	35	12	12	2	2+12=14
TA201	Manufacturing Lab	1-0-3[6]	425	90	-	5	1	1+5= 6
TA202	Mechanical Lab	1-0-3[6]	420	90	-	5	1	1+5= 6
COM200	Communication Skill	1-0-2[5]	440	35	-	13	1	1+13=14
ESO201	Thermodynamics	3-1-0[11]	120	35	4	-	1.5	1.5+4=5.5
ESO202	Mechanics of Solids	3-1-0[11]	210	35	6	-	2	2+6=8
ESO203	Intro Elect. Engineering	3-1-2[13]	250	35	7	7	2	2+7= 9
ESO207	Data Structure	3-0-0 [09]	150	-	-	-	2	2+0=2
MSO201	Probability and Statist.	3-1-0[11]	350	100	4	-	2	2+4=6
PSO201	Quantum Mechanics	2-1-0[8]	150	35	4	-	1.5	1.5+4=5.5
CSO201	Basic Organic Chemistry	3-1-0[11]	225	35	7	-	2	2+7=9
CSO202	Atoms, Molecules, Photons	3-1-0[11]	175	35	5	-	2	2+5=7
HSO201A	Applied Prob. & Stat.	3-1-0[11]	150	100	2	0	2	2+2=4
MTH101R	Mathematics-I	3-1-0[11]	75	100	1	-	1.5	1.5+1=2.5

Engineering Science Units = 24.5, Science Units = 31.5, Other Units = 155.5, Total Units = 211.5

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 Instructors + Tutors requirement

Course no.	Course Name	AE	BSBE	CHE	CE	CSE	EE	IME	ME	MSE	CHM	MTH	PHY	HSS	ES	TOTAL
CHM101	Chemistry Lab										1+12					1+12
CHM102	Gen. Chemistry										3+24					3+24
MTH102	Mathematics-II											4+9				4+9
PHY101	Physics Lab												1+12			1+12
PHY102	Physics-I												2+4			2+4
PHY103	Physics-II												2+6			2+6
ESC101	Intro Computing					2+16										2+16
LIF101	Life Science		1.5+0													1.5+0
TA101	Engineering Graphics	1.5+4			0+4				0+4							1.5+12
ESC201	Electronics						2+12									2+12
TA201	Manufacturing Lab									1+5						1+5
TA202	Mechanical Lab								1+5							1+5
@COM200	Communication				0+2			0+8						1+2	0+1	1+13
ESO201	Thermodynamics			1.5+1					0+3							1.5+4
ESO202	Mechanics of Solids	0+2			2+1				0+2	0+1						2+6
ESO203	Intro electrical engg.						2+5		0+2							2+7
ESO207	Data Structure					2+0										2+0
MSO201	Probability and Stat.		0+1			0+1	0+2					2+0				2+4
PSO201	Quantum Mechanics									0+1			1.5+3			1.5+4
CSO201	Basic Organic Chem.										2+7					2+7
CSO202	Atoms, Mol., Phot.			0+3							2+2					2+5
HSO201	Applied Prob. & Stat.				0+1									2+1		2+2
MTH101R	Mathematics-I											1.5+1				1.5+1
Total Load Assigned		7.5	2.5	5.5	10	21	23	8	17	8	53	17.5	31.5	6	1	211.5
Appx. Faculty Strength		22	14	20	33	32	42	19	38	25	31	36	38	39	7	396
Load per faculty		0.34	0.18	0.27	0.30	0.66	0.55	0.42	0.45	0.32	1.71	0.49	0.83	0.15	0.14	0.53

Units are assigned as lecturer-units + tutor units.