# **Report of the Core Curriculum Committee**

First (I) Semester of the Year 2023-24

## 1. Guidelines for Drawing Instructors and Tutors from Various Departments

1.1 List of Core Courses and respective Departments handling them as per Committee and/or agreements between/among departments when Instructors are drawn from multiple Departments

Course No. and Title	Departments									
	2022-23 & 2023-24	2024-25 & 2025-26	2026-27 & 2027-28	2028-29 & 2029-30						
TA111(Engineering Graphics)	CE	AE	CE	ME						
ESO201(Thermodynamics)	ME	CHE	AE	CHE						
ESO202(Solid Mechanics)	AE	CE	ME	CE						
ESO204(Fluid Mechanics)	CHE	ME	CHE	AE						
HSS-1	HSS	HSS	HSS	HSS						
HSS-2	HSS	HSS	HSS	HSS						

### 1.2 List of Core Courses and respective Departments handling them as per Committee when Instructors are drawn from a fixed Department

Department	Course(s)
BSBE	LIF111, ESO206
СНМ	CHM111, CHM112M, CHM113M, CSO201, CSO202, CSO203
CE	ESO208
CSE	ESC111M, ESC112M, ESO207
EE	ESC201, ESO203
ES	ESO213
ME	TA202
MSE	TA201, ESO225
MTH	MTH111M, MTH112M, MSO201, MSO202M, MSO203M, MSO205
ECO	HSO201
РНҮ	PHY111, PHY112, PHY113, PHY114, PHY115, PSO201

## 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 Lab	СНМ
CHM112M	General Chemistry: Physical Chemistry	СНМ
CHM113M	General Chemistry: Inorganic & Organic Chemistry	СНМ
MTH111M	Single Variable Calculus	MTH
MTH112M	Application Of Single Variable Calculus & Several Variable Calculus	MTH
PHY111	Physics Laboratory	РНҮ
PHY112	Classical Dynamics	РНҮ
PHY113	Classical Electrodynamics	РНҮ
PHY114	Quantum Physics	РНҮ
PHY115	Oscillations And Waves	РНҮ
ESC111M	Fundamentals Of Computing - I	CSE
ESC112M	Fundamentals Of Computing - II	CSE
LIF111	Introduction To Biology	BSBE
TA111	Engineering Graphics	AE, CE, ME
HSS-I (1)	Humanities-I	HSS
ESC201	Introduction to Electronics	EE
TA201	Manufacturing Processes I	MSE
TA202	Manufacturing Processes II	ME
HSS-I (2 <sup>nd</sup> Year)	Humanities-I	HSS
HSS-II	Humanities-II	HSS,
ESO201	Thermodynamics	AE, CHE, ME, ES
ESO202	Mechanics of Solids	AE, CE, ME
ESO204	Fluid Mechanics and Rate Processes	AE, CHE, ME, ES
ESO225	Nature and Properties of Materials	MSE,
ESO206	Principles of Biotechnology	BSBE
ESO207	Data Structures_and Algorithms	CSE
ESO208	Computational Methods in Engg.	CE
ESO213	Fundamentals of Earth Sciences	ES
MSO202M	Complex Variables	ME, MTH, EE, AE, PHY
MSO203M	Partial Differential Equations	AE, CE, ME, MSE, MTH, EE, PHY
HSO201	Applied Probability And Statistics	ECO, CE

Note: Table is constructed largely using data from previous years.

Course Group	Course No.	Course title	Estimated number of	No. of students	No. of students	Final estimate
			New Students		1egistered in 2022-23-1	101 2023-24 1
	CHM111	Chemistry Lab	600	00	600	600
	CHM112M	General Chemistry: Physical Chemistry	600	10	620	630
	CHM113M	General Chemistry: Inorganic & Organic Chemistry	600	30	620	650
First	MTH111M	Single Variable Calculus	1220	208	1220	1428
Semester	MTH112M	Application Of Single Variable Calculus & Several Variable Calculus	1220	198	1220	1418
Courses	PHY111	Physics Lab	620	2	620	622
courses	PHY112	Classical Dynamics	368	00	368	370
	PHY113	Classical Electrodynamics	382	4	382	386
	PHY114	Quantum Physics	221	75	221	300
	PHY115	Oscillations And Waves	249	20	249	270
	ESC111M	Fundamentals Of Computing - I	600	27	600	627
	ESC112M	Fundamentals Of Computing - II	600	17	600	617
	LIF111	Introduction To Biology	600	16	600	620
	TA111	Engineering Graphics	620	32	620	652
	ETH111	Practical Ethics	600	17	600	620
	ELC111/112/113	English Language & Communication	620	4	620	620
	PE111	Morning Exercise	1220	109	1220	1329
	EME	Economics Management & Engg.	600			600
Third	ESC201	Introduction to Electronics	602			602
Semester	TA201	Manufacturing Processes I	346			346
Courses	TA202	Manufacturing Processes II	277			277
	HSS-I (2nd year)	Humanities-I	600	50	650	650
	HSS -II	Humanities-II	1800	100	1900	1900
	ESO201	Thermodynamics	296			
	ESO202	Mechanics of Solids	302			
Engineering	ESO204	Fluid Mechanics and Rate Processes	216			
Science	ESO225	Nature and Properties of Materials	85			
Options	ESO206	Principles of Biotechnology	53			
	ESO207	Data Structures and Algorithms	273			
	ESO208	Computational Methods in Engg.	148			
	ESO213	Fundamentals of Earth Sciences	43			
Science	MSO202M	Complex Variables	483			
Options	MSO203M	Partial Differential Equations	603			
	MSO205	Introduction To Probability Theory	100	-	100	100
	HSO201	Applied Probability And Statistics	200	-	200	200

# 2. Estimate of Number of Students in Core Courses in First (I) Semester during the Year 2023-24

# 3. Core Course Teaching Support Requirement in First (I) Semester during the Year 2023-24

No. of tudent         Section tudent         Section	Course(s)	Course No.	Course title	Credits	Estimated	Students per	No. of	Theory	Lab.	Instruction	Total						
Image:         Image:<					No. of	Section	sections	tutors	tutors	units	(Instruction and						
Image         Image <th< td=""><td></td><td></td><td></td><td></td><td>students</td><td>(approx.)</td><td></td><td></td><td></td><td></td><td>tutorial/lab)</td></th<>					students	(approx.)					tutorial/lab)						
CMU11         Chemistry Lab         Open (a)         B00											units						
cHN12M         General Chemistry. Physical Chemistry.         1-1         1-0         600         100         6         6          3.0         3-6*6/2           MT111M         Genchmistry. Inorganic Sorg. Chemistry.         3-1.0         1400         100         14         14          4.00         144-14/2           MT111M         Mathematics.         3-1.0         110         1000         14         14          4.00         144-14/2           MT111M         Map. Of Single Vriable Calculus & Several Variable Calculus         3-1.0         1000         100         104         40         -         2.0         424-25           PMT11         Classical Dramics         3-1.0         100         100         00         00         00         -         2.0         4-2.5           PMT113         Classical Dramics         3-1.0         200         100         00         00         00         0.0         -         2.0         4-2.6           PMT113         Classical Dramics         3-1.0         100         000         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0		CHM111	Chemistry Lab	0-0-3 [03]	600	30	20		20	1.0	20+1=21						
First         Gen. Chemistry. Inorganic & Org. Chemistry         2-10 [M]         600         100         6         6         6         0         3-0         3-6-972           First         MT1120         App. Of Single Variable Calculus & 3-10 [11]         1400         100         14         14         -         4.0<		CHM112M	General Chemistry: Physical Chemistry	2-1-0 [04]	600	100	6	6		3.0	3+6=9/2						
M11110         Mathematics1         31-0         140         040         144-13/2           Sement M         M1112         Approximation Mathematics         31-0         140         100         101         100		CHM113M	Gen. Chemistry: Inorganic & Org. Chemistry	2-1-0 [04]	600	100	6	6		3.0	3+6=9/2						
First First First MP1120App. of Single Variable Calculus 8 several Variable Calculus31-0 [11]6200100104141.012.001.021.20		MTH111M	Mathematics-I	3-1-0 [11]	1400	100	14	14		4.0	14+4=18/2						
Semeter Guess FW112Physics labOption Constraint <td>First</td> <td>MTH112M</td> <td>App. Of Single Variable Calculus &amp; Several Variable Calculus</td> <td>3-1-0 [11]</td> <td>1400</td> <td>100</td> <td>14</td> <td>14</td> <td></td> <td>4.0</td> <td>14+4=18/2</td>	First	MTH112M	App. Of Single Variable Calculus & Several Variable Calculus	3-1-0 [11]	1400	100	14	14		4.0	14+4=18/2						
Course FunctionPM112Classical Journation-1-10111-1-20-1-2-0 </td <td>Semester</td> <td>PHY111</td> <td>Physics Lab</td> <td>0-0-3 [03]</td> <td>622</td> <td>31</td> <td>20</td> <td></td> <td>20</td> <td>1.0</td> <td>20+1=21</td>	Semester	PHY111	Physics Lab	0-0-3 [03]	622	31	20		20	1.0	20+1=21						
Phy13         Casical Electodynamics         3-10 [11]         386         100         04         04         0.0	Courses	PHY112	Classical Dynamics	3-1-0 [11]	370	100	04	04		2.0	4+2=6						
Phy110 Phy110 Quantum PhysicsQuantum Physics31-0 [11]300100030.0 <th< td=""><td></td><td>PHY113</td><td>Classical Electrodynamics</td><td>3-1-0 [11]</td><td>386</td><td>100</td><td>04</td><td>04</td><td></td><td>2.0</td><td>4+2=6</td></th<>		PHY113	Classical Electrodynamics	3-1-0 [11]	386	100	04	04		2.0	4+2=6						
PHY115         Oscillations And Waves $3-1-0[11]$ $270$ $100$ $03$ $0-1$ $2.0$ $3+2-5$ ESC111M         Fundamentals Of Computing - II $31-3[7]$ $627$ $31$ $20$ $20$ $4.0$ $202-04-44/2$ LP111         Life Sciences $2-0.0[66]$ $600$ $   3.0$ $20$ $4.0$ $202-04-44/2$ LP111         Life Sciences $2-0.0[66]$ $600$ $   3.0$ $200$ $4.0$ $202-04-44/2$ LP111         Life Sciences $2-0.0[66]$ $600$ $   3.0$ $200$ $3.0$ $200$ $3.0$ $202$ $3.0$ $202$ $3.0$ $202$ $20$ $4.0$ $24-0-203$ ELC112         English Language & Communication (Edvanced) (Scheme) $2-10-0[03]$ $500$ $100$ $200$ $200$ $20$ $20$ $20$ $20$ $20$ $20$ $20$ $20$ $20$ $20$ $20$ <td></td> <td>PHY114</td> <td>Quantum Physics</td> <td>3-1-0 [11]</td> <td>300</td> <td>100</td> <td>03</td> <td>03</td> <td></td> <td>2.0</td> <td>3+2=5</td>		PHY114	Quantum Physics	3-1-0 [11]	300	100	03	03		2.0	3+2=5						
FSC111M         Fund. of computing-1         31-317         627         31         20         20         20         4.0         20-04-44/2           ESC112M         Fundamental of Computing - II         31-317         627         31         20         20         4.0         20-04-44/2           LIF111         Life Sciences         2-0-1(06)         600         -         -         -         3.0         80-0           TA111         Engineering Graphics         2-0-2(09)         652         33         20         -         20         3.0         20-3-22           ELC111         English Language & Communication (Intermediate) (Scheme)         2-1-0-0(09)         150         Instructor for ELC111/112/113 will be provided by the DOAA office. Wever, all the departments action (Sanguage & Communication (Advanced) (Scheme)         2-1-0-0(09)         150           Fill         Economics Management & Engg. (Three courses)         3-0-0-0(09)         600         100         20         20         20         4.0         24.0           Semetric         ESC010         Introduction to Electronics         3-1-3 [14]         600         30         20         20         4.0         2.0         07.0           TA20         Manufact. Proc. I (MSE)         1-0-3 [06]         600		PHY115	Oscillations And Waves	3-1-0 [11]	270	100	03	03		2.0	3+2=5						
ESC112MFundamentals of computing - II31-331-32020204.020-204-44/2LIF111Liftsciences20-060003.03.0EIG11Engineering Graphics20-36023020-2.03.02020-320-3EIG11Engits Language & Communication (Basic) (Scheme)2-10-0[09]3001nstructor for ELC111/112/113 will bery deby the DAA office - Were, all the to experime new term term term term term term term term		ESC111M	Fund. Of Computing-I	3-1-3 [7]	627	31	20	20	20	4.0	20+20+4=44/2						
Image: biase interval int		ESC112M	Fundamentals Of Computing - II	3-1-3 [7]	617	31	20	20	20	4.0	20+20+4=44/2						
TA111         Engineering Graphics $2-3.[09]$ $622$ $33$ $20$ $ 20$ $3.0$ $20-3-23$ FTH111         Practical Ethics $1-0-2[03]$ $620$ $30$ $20$ $2+20-22'$ $2+20-22'$ ELC112         English Language & Communication (Intermediate) (Scheme) $2.1-0-0[09]$ $300$ Instructor FELC111/112/113 will be provided by the DOAA office. However, all the departments new to provide TAs to manage this coursever, all the departments new to provide TAs to manage this coursever, all the departments new to provide TAs to manage this coursever, all the departments new to provide TAs to manage this coursever, all the departments new to provide TAs to manage this coursever, all the departments new to provide TAs to manage this coursever, all the departments new to provide TAs to manage this coursever, all the departments new to provide TAs to manage this coursever, all the departments new to provide TAs to manage this coursever, all the departments new to provide TAs to manage this coursever, all the departments new to provide TAs to manage this coursever, all the departments new to provide TAs to manage this course of the depart departments new to provide TAs to manage this course of the departments new to provide TAs to manage this course of the departments new to provide TAs to manage this course of the departments new to provide TAs to manage this course of the departments new to provide TAs to manage this course of the departments new to provide TAs to manage this course of the departments new to provide TAs to manage this course of the departments new to provide TAs to the departments new to provide TAs to provide TAs to pro		LIF111	Life Sciences	2-0-0 [06]	600	-				3.0	03.0						
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$		TA111	Engineering Graphics	2-0-3 [09]	652	33	20		20	3.0	20+3=23						
ELC111         English Language & Communication (Basic) (Scheme)         2:1-0-0[09]         300         Instructor for ELC111/112/113 will be provided by the DOAA office. However, all the departments need to provide thy the DOAA office. However, all the departments need to provide thy the DOAA office. However, all the departments need to provide thy the DOAA office. However, all the departments need to provide thy the DOAA office. However, all the departments need to provide thy the DOAA office. However, all the departments need to provide thy the DOAA office. However, all the departments need to provide thy the DOAA office. However, all the departments need to provide thy the DOAA office. However, all the departments need to provide thy the DOAA office. However, all the departments need to provide thy the DOAA office. However, all the departments need to provide thy the DOAA office. However, all the departments need to provide thy the DOAA office. However, all the departments need to provide thy the DOAA office. However, all the departments need to provide thy the DOAA office. However, all the departments need to provide thy the DOAA office. However, all the departments need to provide thy the DOAA office. However, all the departments need to provide thy the DOAA office. However, all the departments need to provide thy the DOAA office. However, all the departments need to provide thy the DOAA office. However, all the departments need to provide thy the DOAA office. However, all the departments need to provide thy the DOAA office. However, all the departments need to provide thy the DOAA office. However, all the departments need to provide thy the DOAA office. However, all the departments need to provide thy the DOAA office. However, all the departments need to provide thy the DOAA office. However, all the departments need to provide thy the DOAA office. However, all the departments need to provide thy the DOAA office. Howevere, all the departments nee		ETH111	Practical Ethics	1-0-0-2[03]	620	30	20				2+20=22 <sup>+</sup>						
ELC112         English Language & Communication (Intermediate) (Scheme)         2.1-0-0[09]         150           ELC113         English Language & Communication (Advanced) (Scheme)         2.1-0-0[09]         150           Third         English Language & Communication (Advanced) (Scheme)         2.1-0-0[09]         150           Third         Economics Management & Engg. (Three courses)         -000[09]         600         -         -         -         -         6.0         (2.0 per course)           Courses         ESC201         Introduction to Electronics         3.1-3 [14]         600         30         20         20         4.0         24.0		ELC111	English Language & Communication (Basic) (Scheme)	2-1-0-0[09]	300	Instructor for	ELC111/112/11	L3 will be pro	ovided by th	e DOAA office. I	lowever, all the						
ELC133         English Language & Communication (Advanced) (Scheme)         2-1-0-0[09]         150           FMTird (Basket)         EMC (Basket)         Economics Management & Eng. (Three courses)         3-0-0-0[09]         600         20         20         20         4.0         24.0           Courses         ESC201         Introduction to Electronics         3-1-3 [14]         600         30         20         20         20         4.0         24.0           TA201         Manufact. Proc. I(MSE)         1-0-3 [06]         600         120         05          05         2.0         07.0           TA201         Manufact. Proc. I(MSE)         1-0-3 [06]         600         120         05          05         2.0         07.0           TA202         Manufact. Proc. I(MSE)         3-1-0 [11]         650         41         16         16          4.0         04.0           MISS-I         Humanities-I         3-0-0 [09]         1800         -         -         -         4.0         04.0           ESO201         Thermodynamics         3-1-0 [11]         300         38         08         08          2.0         08+2.0           ESO204         Fid. Mech. and Rate		ELC112	English Language & Communication (Intermediate) (Scheme)	2-1-0-0[09]	150		departments need to provide TAs to manage this cours										
Hird (Basket)         EME (Basket)         Economics Management & Engg. (Three courses)         3-0-0(09)         600         Image: Course         6.0         6.0 (2.0 per course)           EWE (Course)         Introduction to Electronics         3-1-3 [14]         600         30         20         20         20         4.0         24.0           TA201         Manufact. Proc. I(MSE)         1-0-3 [06]         600         120         05          05         2.0         07.0           TA201         Manufact. Proc. I(ME)         1-0-3 [06]         600         120         05          05         2.0         07.0           TA201         Manufact. Proc. II (ME)         1-0-3 [06]         600         120         05          05         2.0         07.0           HSS-1         Humanities-I         3-1-0 [11]         650         41         16         16          4.0         20.0         08+2.0           ES0201         Thermodynamics         3-1-0 [11]         300         38         08         08          2.0         08+2.0           ES0204         Fid. Mech. and Rate Proc.         3-1-0 [11]         300         38         06         06 <td< td=""><td></td><td>ELC113</td><td>English Language &amp; Communication (Advanced) (Scheme)</td><td>2-1-0-0[09]</td><td>150</td><td colspan="12"></td></td<>		ELC113	English Language & Communication (Advanced) (Scheme)	2-1-0-0[09]	150												
Third Sensets         (Basket)         Individual condition to Electronics $3-1-3$ [14] $600$ $300$ $20$ $20$ $4.0$ $24.0$ Courses         TA201         Manufact. Proc. I(MSE) $1-0-3$ [06] $600$ $1200$ $050$ $$ $050$ $2.0$ $4.0$ $20.0$		EME		3-0-0-0[09]	600					6.0	6.0						
Semester         ESC201         Introduction to Electronics         3.1.3 [14]         600         30         20         20         20         4.0         24.0           Courses         TA201         Manufact. Proc. I(MSE)         1.0-3 [06]         6600         120         05          05         2.0         07.0           TA202         Manufact. Proc. II (ME)         1.0-3 [06]         6600         120         05          05         2.0         07.0           HS2-1         Humanities-I         Anufact. Proc. II (ME)         3.1-0 [11]         650         41         16         16          4.0         04.0           HSS-1         Humanities-I         3-1-0 [11]         650         41         16         16          4.0         04.0           HSS-2         HS5.4         Humanities-I         3-0-0 [09]         1800           4.0         04.0           ES0201         Thermodynamics         3-1-0 [11]         300         38         08         08          2.0         08+2.0           ES0202         Netana Prop. of Mat.         2-1-0 [08]         90         35         03         03          1.0<	Third	(Basket)	Economics Management & Engg. (Three courses)								(2.0 per course)						
Courses         TA201         Manufact. Proc. I(MSE)         1-0-3 [06]         600         120         05          05         2.0         07.0           TA202         Manufact. Proc. JI (ME)         1-0-3 [06]         600         120         05          05         2.0         07.0           HSS-I         Humanities-I         3-1.0 [11]         650         41         16         16          4.0         04.0           HSS-I         Humanities-II         3-0.0 [09]         1800         -         -         -         4.0         04.0           HSS-II         Humanities-II         3-0.0 [09]         1800         -         -         4.0         04.0           ESO201         Thermodynamics         3-1.0 [11]         300         38         08         08          2.0         08+2.0           ESO202         Mechanics of Solids         3-1.0 [11]         300         38         08         08          2.0         08+2.0           ESO204         Fld. Mech. and Rate Proc.         3-1.0 [11]         225         38         06         06          2.0         06+2.0           ESO205         Biotechnology         <	Semester	ESC201	Introduction to Electronics	3-1-3 [14]	600	30	20	20	20	4.0	24.0						
Course         TA202         Manufact. Proc., II (ME)         1-0-3 [06]         600         120         05          05         2.0         07.0           HSS-I         Humanities-I         3-1.0 [11]         650         41         16         16          4.0         20.0           HSS-2         HSS-II         Humanities-II         3-0-0 [09]         1800         -         -         -         4.0         04.0           ESO201         Thermodynamics         3-1-0 [11]         300         38         08         08          2.0         08+2.0           ESO202         Mechanics of Solids         3-1-0 [11]         300         38         08         08          2.0         08+2.0           ESO202         Mechanics of Solids         3-1-0 [11]         300         38         08         08          2.0         08+2.0           ESO204         Fid. Mech. and Rate Proc.         3-1-0 [11]         300         38         06         06          1.0         03+01           ESO205         Nat. and Prop. of Mat.         2-1-0 [08]         90         35         03         03          1.0         01.0	6	TA201	Manufact. Proc. I(MSE)	1-0-3 [06]	600	120	05		05	2.0	07.0						
HSS-I         Humanities-I         3-1-0 [11]         650         41         16         16          4.0         20.0           HSS-2         HSS-II         Humanities-II         30-0 [09]         1800         -         -         -         4.0         04.0           HSS-2         HSS-II         Humanities-II         30-0 [09]         1800         -         -         -         4.0         04.0           FSO201         Thermodynamics         3-1-0 [11]         300         38         08         08         -         2.0         08+2.0           ESO202         Mechanics of Solids         3-1-0 [11]         300         38         08         08         -         2.0         08+2.0           ESO204         Fld. Mech. and Rate Proc.         3-1-0 [11]         225         38         06         06         -         2.0         06+2.0           ESO225         Nat. and Prop. of Mat.         2-1-0 [08]         90         35         03         03         -         1.0         0.10           ESO205         Biotechnology         3-0-0 [09]         60         -         -         -         2.0         02.0           ESO206         Biotechnology         <	Courses	TA202	Manufact. ProcII (ME)	1-0-3 [06]	600	120	05		05	2.0	07.0						
HSS-2         HSS-II         Humanities-II         3-0-0[09]         1800         -         -         -         4.0         04.0           ESO201         Thermodynamics         3-1-0[11]         300         38         08         08          2.0         08+2.0           ESO202         Mechanics of Solids         3-1-0[11]         300         38         08         08          2.0         08+2.0           ESO204         Fld. Mech. and Rate Proc.         3-1-0[11]         300         38         08         08          2.0         08+2.0           ESO204         Fld. Mech. and Rate Proc.         3-1-0[11]         225         38         06         06          2.0         08+2.0           ESO205         Nat. and Prop. of Mat.         2-1-0[08]         90         35         03         03          1.0         03-01           ESO206         Biotechnology         3-0-0[09]         60         -         -          1.0         01.0           ESO207         Data Structures and Algorithms         3-0-0[09]         50           2.0         02.0           ESO208         Computational Methods in Engg.	•	HSS-I	Humanities-I	3-1-0 [11]	650	41	16	16		4.0	20.0						
ESO201         Thermodynamics         3:1-0[11]         300         38         08         08          2.0         08+2.0           ESO202         Mechanics of Solids         3:1-0[11]         300         38         08         08          2.0         08+2.0           ESO202         Mechanics of Solids         3:1-0[11]         300         38         08         08          2.0         08+2.0           ESO204         Fld. Mech. and Rate Proc.         3:1-0[11]         225         38         06         06          2.0         06+2.0           ESO205         Nat. and Prop. of Mat.         2:1-0[08]         90         35         03         03          1.0         03+01           ESO206         Biotechnology         3:0-0[09]         60         -         -          1.0         01.0           ESO207         Data Structures and Algorithms         3:0-0[12]         300         -           2.0         02.0           ESO208         Computational Methods in Engg.         3:1-0[11]         350         40         09         09          2.0         0:0           Scicence         MSO	HSS-2	HSS-II	Humanities-II	3-0-0 [09]	1800	-	-	-		4.0	04.0						
ESO202         Mechanics of Solids         3-1-0[11]         300         38         08         08          2.0         08+2.0           ESO204         Fld. Mech. and Rate Proc.         3-1-0[11]         225         38         06         06          2.0         06+2.0           ESO205         Nat. and Prop. of Mat.         2-1-0[08]         90         35         03         03          1.0         03+01           ESO206         Biotechnology         3-0-0[09]         60         -         -          1.0         01.0           ESO207         Data Structures and Algorithms         3-0-0[12]         300         -         -         -         -         -         0.0         02.0           ESO207         Data Structures and Algorithms         3-0-0[12]         300         -         -         -         -         -         0.0         02.0           ESO208         Computational Methods in Engg.         3-1-0[11]         350         40         09         09         -         2.0         0.9         0.0           Science         MSO202M         Complex Variables         3-1-0[06]         483         100         05         05/2=2.5		ESO201	Thermodynamics	3-1-0 [11]	300	38	08	08		2.0	08+2.0						
ESO204         Fld. Mech. and Rate Proc.         3-1-0 [11]         225         38         06         06          2.0         06+2.0           ESO225         Nat. and Prop. of Mat.         2-1-0 [08]         90         35         03         03          1.0         03+01           ESO206         Biotechnology         3-0-0 [09]         60         -         -          1.0         01.0           ESO207         Data Structures and Algorithms         3-0-0 [12]         300         -           2.0         02.0           ESO208         Computational Methods in Engg.         3-1-0 [11]         350         40         09         09          2.0         09+02           ESO213         Fundamentals of Earth Sciences         3-0-0 [09]         50            1.0         01.0           Science         MSO202M         Complex Variables         3-1-0 [06]         483         100         05         05/2=2.5          2.0         2.5+02           MSO203M         Partial Diff. Equations         3-1-0 [06]         650         100         07         07/2=3.5          2.0         3.5+02 <tr< td=""><td></td><td>ESO202</td><td>Mechanics of Solids</td><td>3-1-0 [11]</td><td>300</td><td>38</td><td>08</td><td>08</td><td></td><td>2.0</td><td>08+2.0</td></tr<>		ESO202	Mechanics of Solids	3-1-0 [11]	300	38	08	08		2.0	08+2.0						
ES0225         Nat. and Prop. of Mat.         2:1-0 [08]         90         35         03         03          1.0         03+01           ES0206         Biotechnology         3-0-0 [09]         60         -           1.0         01.0           ES0207         Data Structures and Algorithms         3-0-0 [12]         300         -           2.0         02.0           ES0208         Computational Methods in Engg.         3-1-0 [11]         350         40         09         09          2.0         09+02           ES0213         Fundamentals of Earth Sciences         3-0-0 [09]         50            1.0         01.0           Science         MS0202M         Complex Variables         3-1-0 [06]         483         100         05         05/2=2.5          2.0         2.5+02           MS0203M         Partial Diff. Equations         3-1-0 [06]         650         100         07         07/2=3.5          2.0         3.5+02           MS0205         Introduction To Probability Theory         3-1-0 [11]         100         100         01         1         -         1.0         01+01		ESO204	Fld. Mech. and Rate Proc.	3-1-0 [11]	225	38	06	06		2.0	06+2.0						
ESO206         Biotechnology         3-0-0 [09]         60            1.0         01.0           ESO207         Data Structures and Algorithms         3-0-0 [12]         300            2.0         02.0           ESO208         Computational Methods in Engg.         3-1-0 [11]         350         40         09         09          2.0         09+02           ESO213         Fundamentals of Earth Sciences         3-0-0 [09]         50           1.0         01.0           Science         MSO202M         Complex Variables         3-1-0 [06]         483         100         05         05/2=2.5          2.0         2.5+02           MSO203M         Partial Diff. Equations         3-1-0 [06]         650         100         07         07/2=3.5          2.0         3.5+02           MSO205         Introduction To Probability Theory         3-1-0 [11]         100         100         01         1         -         1.0         01+01           HSO201         Applied Probability And Statistics         3-1-0 [11]         200         100         02         2         -         1.0         03.0 <td></td> <td>ESO225</td> <td>Nat. and Prop. of Mat.</td> <td>2-1-0 [08]</td> <td>90</td> <td>35</td> <td>03</td> <td>03</td> <td></td> <td>1.0</td> <td>03+01</td>		ESO225	Nat. and Prop. of Mat.	2-1-0 [08]	90	35	03	03		1.0	03+01						
ESO207         Data Structures and Algorithms         3-0-0 [12]         300         -           2.0         02.0           ESO208         Computational Methods in Engg.         3-1-0 [11]         350         40         09         09          2.0         09+02           ESO213         Fundamentals of Earth Sciences         3-0-0 [09]         50            1.0         01.0           Science Options         MSO202M         Complex Variables         3-1-0 [06]         483         100         05         05/2=2.5          2.0         2.5+02           MSO203M         Partial Diff. Equations         3-1-0 [06]         650         100         07         07/2=3.5          2.0         3.5+02           MSO205         Introduction To Probability Theory         3-1-0 [01]         100         100         01         1         -         1.0         01+01           HSO201         Applied Probability And Statistics         3-1-0 [11]         200         100         02         2         -         1.0         03.0		ESO206	Biotechnology	3-0-0 [09]	60	-	-			1.0	01.0						
ESO208         Computational Methods in Engg.         3-1-0 [11]         350         40         09         09          2.0         09+02           ESO213         Fundamentals of Earth Sciences         3-0-0 [09]         50            1.0         01.0           Science Options         MSO202M         Complex Variables         3-1-0 [06]         483         100         05         05/2=2.5          2.0         2.5+02           MSO203M         Partial Diff. Equations         3-1-0 [06]         650         100         07         07/2=3.5          2.0         3.5+02           MSO205         Introduction To Probability Theory         3-1-0 [11]         100         100         01         1          1.0         01+01           HSO201         Applied Probability And Statistics         3-1-0 [11]         200         100         02         2         -         1.0         03.0		ESO207	Data Structures and Algorithms	3-0-0 [12]	300	-	-			2.0	02.0						
ESO213         Fundamentals of Earth Sciences         3-0-0 [09]         50           1.0         01.0           Science Options         MSO202M         Complex Variables         3-1-0 [06]         483         100         05         05/2=2.5          2.0         2.5+02           MSO203M         Partial Diff. Equations         3-1-0 [06]         650         100         07         07/2=3.5          2.0         3.5+02           MSO205         Introduction To Probability Theory         3-1-0 [11]         100         100         01         1          1.0         01+01           HSO201         Applied Probability And Statistics         3-1-0 [11]         200         100         02         2          1.0         03.0		ESO208	Computational Methods in Engg.	3-1-0 [11]	350	40	09	09		2.0	09+02						
Science Options         MSO202M         Complex Variables         3-1-0 [06]         483         100         05         05/2=2.5          2.0         2.5+02           MSO203M         Partial Diff. Equations         3-1-0 [06]         650         100         07         07/2=3.5          2.0         3.5+02           MSO205         Introduction To Probability Theory         3-1-0 [11]         100         100         01         1          1.0         01+01           HSO201         Applied Probability And Statistics         3-1-0 [11]         200         100         02         2          1.0         03.0		ESO213	Fundamentals of Earth Sciences	3-0-0 [09]	50					1.0	01.0						
Options         MSO203M         Partial Diff. Equations         3-1-0 [06]         650         100         07         07/2=3.5          2.0         3.5+02           MSO205         Introduction To Probability Theory         3-1-0 [11]         100         100         01         1          1.0         01+01           HSO201         Applied Probability And Statistics         3-1-0 [11]         200         100         02         2          1.0         03.0	Science	MSO202M	Complex Variables	3-1-0 [06]	483	100	05	05/2=2.5		2.0	2.5+02						
MSO205         Introduction To Probability Theory         3-1-0 [11]         100         100         01         1         -         1.0         01+01           HSO201         Applied Probability And Statistics         3-1-0 [11]         200         100         02         2         -         1.0         03.0	Options	MSO203M	Partial Diff. Equations	3-1-0 [06]	650	100	07	07/2=3.5		2.0	3.5+02						
Historics         Information for foodulity friedly         Information         Information <thinformation< th="">         Inf</thinformation<>	-	MSO205101	Introduction To Probability Theory	3-1-0 [00]	100	100	01	1	_	1.0	01+01						
		HSO201	Applied Probability And Statistics	3-1-0 [11]	200	100	02	2	-	1.0	03.0						
Total Units Required = Science Units = Figureering Science Units = Other Units =			Total Units Required = Science II	nits =	Engineering S	 Science Units =	· ·- ·	)ther Linits =	I		-2.4						

#### 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 120 and it is split into 4 sections. One instructor handles all the 4 sections simultaneously. In all other courses the section size may be increased by at most 5.

4. "M" indicates modular courses.

5. ELC111/ELC112/ELC113 will be managed by DOAA but TAs will be provided by all the departments.

6. Based on the number of students and offering of the repeat courses, the report will be updated accordingly.

†It should be counted as 20 units only though calculation also includes2 instruction units as per the formula.

Third semester courses are tentative. There may be slight changes in certain courses.

# 4. Department/IDP-wise Breakup of Instructor's and/or Tutors for Core Courses in First (I) Semester during the Year 2023-24

Course No.	Course Name	Units Req.	AE	BSBE	CHE	CE	CSE	EE	IME	ME	MSE	СНМ	МТН	РНҮ	HSS	ES	ECO	SEE	DP	CGS	SSA	TOTAL
ETH111	Ethics	20.0	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	20+0
CHM111	Chemistry Lab	20+1=21										1+20										1+20
CHM112M	General Chemistry: Physical Chemistry	3+6=9/2										3+6										3+6
CHM113M	General Chemistry: Inorganic & Organic Chemistry	3+6=9/2										3+6										3+6
MTH111M	Single Variable Calculus	14+4=18/2											4+14									4+14
MTH112M	Application Of Single Variable Calculus & Several Variable Calculus	14+4=18/2											4+14									4+14
PHY111	Physics Laboratory	20+1=21												1+20								1+20
PHY112	Classical Dynamics	4+2=6												2+4								2+4
PHY113	Classical Electrodynamics	4+2=6												2+4								2+4
PHY114	Quantum Physics	3+2=5												3+2								3+2
PHY115	Oscillations And Waves	3+2=5												3+2								3+2
ESC111M	Fund. Of Computing – I	20+20+4= 44/2					4+20															4+20
ESC112M	Fund. Of Computing – II	20+20+4= 44/2					4+20															4+20
LIF111	Introduction To Biology	3.0		3+0																		3+0
TA111	Engineering Graphics	20+3=23	0+5			3+6				0+9												3+20
ELC111	English Language																					
ELC112	English Language																					
ELC113	English Language																					
HSS-I	Humanities-I	20.0													4+16							4+16
HSS-II	Humanities-II	04.0													04							04
EME	Economics Management & Engg.	06				2+0			2+0								2+0					6+0
ESC201	Introduction to Electronics	24.0						4+20														4+20
TA201	Manufact. Proc. (MSE)	07.0									2+5											2+5
TA202	Manufact. Proc. (ME)	07.0								2+5												2+5
ESO201	Thermodynamics	10.0			0+4					2+3						0+1						2+8
ESO202	Mechanics of Solids	10.0	2+0			0+5					0+3											2+8
ESO204	Fld. Mech. and Rate	08.0	0+3		2+2											0+1						2+6
ESO225	Nat. and Prop. of Mat.	04.0									1+3											1+3
ESO206	Biotechnology	01.0		1+0																		1+0
ESO207	Data Structures	02.0					2+0															2+0
ESO208	Computational Methods in Engg.	11.0			0+3	2+4				0+2												2+9
ESO213	Fundamentals of ES	01.0														1+0						1+0
MSO202M	Complex Variables	4.5	0+1 (0.5)					0+2 (1.0)		0+1 (0.5)			2+0	0+1 (0.5)								2+2.5

MSO203M	Partial Diff. Equations	5.5	0+1 (0.5)			0+2 (1.0)		0+2 (1.0)		0+1 (0.5)			2+0	0+1 (0.5)								2+3.5
MSO205	Introduction To Probability Theory	2.0											1+1									1+1
HSO201	Applied Probability And Statistics	3.0				0+1											1+1					1+2
Total Load Assigned			12	5	12	25	47	27	3	26	15	31	25	45	21	4	5	1	1	1	1	
Approximate Faculty Strength			31	23	26	44	33	54	26	44	28	39	54	48	32	16	20	9	6	5	3	541
Ratio of Load Assigned: Faculty		-	0.38	0.21	0.46	0.56	1.42	0.5	0.11	0.59	0.53	0.79	0.46	0.93	0.65	0.25	0.25	0.1	0.16	0.20	0.33	

- Units are assigned as 'm + n', where 'm' indicate instructor units and 'n' indicates tutor units.
- M: The unit assigned is halved for half semester courses
- Civil Engineering. Economic Sciences and Industrial Management & Engineering departments will offer one EME courses in 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 PHY111 and CHM111 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 ESC111M, ESC111M and ESC201 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.

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