INDIAN INSTITUTE OF TECHNOLOGY (INDIAN SCHOOL OF MINES) DHANBAD

OFFICE OF THE DEAN (ACADEMIC)

No. IITISM/DAC/839 23.10.2024

NOTIFICATION

NEW UNDERGRADUATE PROGRAM TEMPLATES (AS PER NEP 2020)

The new UG program templates, as applicable from the batch admitted in MS 2024-25 along with the salient features of new program templates, are enclosed for the reference of all. Please note the change in Dual Degree Category C and addition of Dual Degree Category D. The notification no. IITISM/DAC/838 dated 21.10.2024 stands superseded by this notification with respect to the updated UG Program templates of Dual Degree category C and D.

Kindly note that in addition to the given credits, some non-credit units are also required to be necessarily earned to successfully complete the program {notification dated 18.09.2024 enclosed for reference. Office of Dean (Students' Welfare) will provide the details in this regard in due course/shortly}.

For the UG first year, the department wise list of courses is also enclosed for reference.

23/10/2024

Dean (Academic)

Copy to: Director / Dy. Director
All Deans / Assoc. Deans / HoDs
Registrar
DR (Acad) / AR (UG) / AR (PG) / AR (SW)
All UG Students

Salient Features of New UG Program Templates
(Effective from the batch admitted in MS 2024-25)

The Institute Senate has approved the change in program templates with inclusion of new categories of courses such as Ability Enhancement Courses, Skill Enhancement Courses, Value Added Courses, Engineering Science Compulsory Courses apart from introducing Inter-disciplinary Courses, Non-Credit Units, adding credits to Internships and continuing with Discipline Specific Courses. Choice of Minor/Honours/Mixed Courses has also been incorporated suitably for students to pursue their academic interests in the domains of their choice additionally.

The following are the salient features of the new Program templates implemented in line with NEP 2020 from the new batch of students admitted in MS 2024-25 –

1. The UG students can now choose the option to pursue a Minor (of a different department), an Honours (in the same discipline) or a Mix of courses from Honours/Minor basket (leading to no specific Honours/Minor specialization), as applicable as per their program template. The option in this regard can be submitted only during pre-registration for their 3rd semester. The enclosed program templates may be referred for a better understanding.
2. The B.Tech program students can also choose to enroll for a Dual Degree Category A, B, C or D now from their 3rd semester. The option in this regard can be submitted only during pre-registration for their 3rd semester. The enclosed program templates may be referred for a better understanding. The minimum eligibility requirements will continue to apply.
3. The B.Tech students opting for Dual Degree Category A during pre-registration for 3rd semester are required to choose only Honours in the same discipline. The option of choosing any minor in same/other discipline or choosing an honours of a different discipline will not be allowed.
4. The B.Tech students opting for Dual Degree Category B / C are required to choose only Minor in the discipline of their PG Degree. The option of choosing a Minor in any discipline other than that of their PG degree or the option to choose an honours will not be allowed to such students.
5. The B.Tech students opting for Dual Degree Category D (With MBA from IIM Mumbai) will not be able to choose any honours / minor courses as they will complete the 12 pre-requisite courses of MBA. Such students will get a Diploma in Management upon successful completion of their UG program along with the 12 pre-requisite courses,

subject to fulfilment of other necessary requirements. The Dual Degree Category C students who are enrolled for doing an MBA/MBA (BA) from IIT (ISM) Dhanbad will follow a separate program template that leads to award of a B.Tech. Degree with Minor in management discipline and an MBA/MBA (BA) degree, as applicable in their case.

6. The Integrated M.Tech program students will be able to choose either a minor (of a different department) or a mix of courses from honours/minor basket (leading to no specific honours/minor specialization) from their **3rd semester**. The enclosed program template may be referred for a better understanding.

7. Only the courses offered in a semester that do not have a time table clash will be allowed to be registered.

8. The approved Exit Options will also be shared in due course.

9. The detailed distribution of credits common to all UG entrants in the first year is as given hereunder –

Course Type	**1st Sem (Group I)**	**2nd Sem (Group I)**	**1st Sem (Group II)**	**2nd Sem (Group II)**
IDC – Inter-disciplinary Course	7	3	3	7
DSC – Discipline Specific Course - Core	4	4	4	4
ESC – Engineering Science Compulsory Courses	3	3	3	3
AEC – Ability Enhancement Courses	2	3	3	2
SEC – Skill Enhancement Courses	2.5	3.5	3.5	2.5
VAC – Value Added Courses	3	4	4	3
Total Semester Credits	**21.5**	**20.5**	**20.5**	**21.5**

UPDATED UG PROGRAM TEMPLATES AS PER NEP 2020 (EFFECTIVE FROM THE BATCH ADMITTED IN MS 2024-25)

B.Tech. Program

				DSC – Discipline Specific Course - Core					^Minor or Honours as applicable, or a mix of courses offered by various departments under Minor/ Honours or both (i.e. No single specialization, and with 20+6 credits) as chosen by the student from 3rd Semester						
Semester	IDC [3-0-0]	IDC /VAC Lab [0-0-2]	VAC [3-0-0]	DC [3-0-0] in 1st year, [3-1-0] later	DE [3-0-0]	DP [0-0-2]	HSSE [3-0-0]	ESC# [3-0-0]	Minor (Only DC) [3-1-0]	or Honours (Only DC) [3-1-0]	SDC of the chosen Minor /Practical of chosen Honours [0-0-3]	*AEC/SEC [3-0-0] 2nd year onwards	PR (7th - 6Cr) (8th - 10Cr)	Internship (S/X)	Graded Credits
1st & 2nd	**3**	**2**	**2**	**2**		**2**		**2**				**5**			**42**
3rd				**3**		**2**		**1**				**1**			**20**
4th				**3**		**2**		**1**				**1**			**20**
5th				**2**	**1**	**2**	**1**		**1**	**1**	**1**				**21.5**
6th				**2**	**1**	**1**	**1**		**1**	**1**	**1**				**20.5**
7th					**2**				**1**	**1**	**1**		**1**	**1**	**21.5**
8th									**2**	**2**	**1**		**1**		**19.5**
Course Count	**3**	**2**	**2**	**12**	**4**	**9**	**2**	**4**	**5**	**5**	**4**	**7**	**2**	**1**	**165 credits**
Credit Count	**9**	**2**	**6**	**46**	**12**	**9**	**6**	**12**	**20**	**20**	**6**	**17**	**16**	**4**	

^Minor, if chosen, must be of a different department / Honours chosen must be of the same department. No specialization means taking different courses and their respective SDC/practicals across Minors and/or Honours offered by various departments

Third Semester onwards ESC of the student's primary department may also be allowed

* AEC / SEC shall continue to be offered in two Groups during 3rd and 4th Semesters

Dual Degree (Category - A) Program

				DSC – Discipline Specific Course - Core					Only Honours allowed*		Only PG Courses							
Semester	IDC [3-0-0]	IDC /VAC Lab [0-0-2]	VAC [3-0-0]	DC [3-0-0] in 1st year, [3-1-0] later	DE [3-0-0]	DP [0-0-2]	HSSE [3-0-0]	ESC# [3-0-0]	Honours (Only DC) [3-1-0]	Practical of Honours [0-0-3]	ADD [DCPG with Credit 3-1-0]	ADD [DEPG with Credit 3-0-0]	ADD [DPPG with Credit 0-0-3]	ADD [TU]	**AEC/SEC [3-0-0] 2nd year onwards	PR (7th - 6Cr) (8th - 10Cr)	Internship (S/X)	Graded Credits
1st & 2nd	**3**	**2**	**2**	**2**		**2**		**2**							5			42
3rd				**3**		**2**		**1**	**1**	1					**1**			**25.5**
4th				**3**		**2**		**1**	**1**	1					**1**			**25.5**
5th				**2**	**1**	**2**	**1**				**1**		**1**					**21.5**
6th				**2**	**1**	**1**	**1**		**1**		**1**		**1**					**24.5**
7th					**2**				**1**	**1**	**1**	**1**	**1**			**1**	**1**	**30**
8th									**1**	**1**	**2**	**1 (RM)**	**2**			**1**		**29.5**
9th											**1**	**1**	**1**	**1**				**28.5**
10th												**1**		**1**				**23**
Course Count	**3**	**2**	**2**	**12**	**4**	**9**	**2**	**4**	**5**	**4**	**6**	**4**	**6**	**2**	**7**	**2**	**1**	**250 credits**
Credit Count	**9**	**2**	**6**	**46**	**12**	**9**	**6**	**12**	**20**	**6**	**24**	**12**	**9**	**40**	**17**	**16**	**4**	

Third Semester onwards ESC of the student's primary department may also be allowed

*Also, Honours of only the same discipline, as was there in UG, can be taken

** AEC / SEC shall continue to be offered in two Groups during 3rd and 4th Semesters

Dual Degree (Category - B) Program

				DSC – Discipline Specific Course - Core					Only Minor allowed*		Only PG Courses of Second Discipline							
Semester	IDC [3-0-0]	IDC /VAC Lab [0-0-2]	VAC [3-0-0]	DC [3-0-0] in 1st year, [3-1-0] later	DE [3-0-0]	DP [0-0-2]	HSSE [3-0-0]	ESC# [3-0-0]	Minor (Only DC) [3-1-0]	SDC of Minor [0-0-3]	ADD [DCPG with Credit 3-1-0]	ADD [DEPG with Credit 3-0-0]	ADD [DPPG with Credit 0-0-3]	ADD [TU]	**AEC/SEC [3-0-0] 2nd year onwards	PR (7th - 6Cr) (8th - 10Cr)	Internship (S/X)	Graded Credits
1st & 2nd	**3**	**2**	**2**	**2**		**2**		**2**							5			42
3rd				**3**		**2**		**1**	**1**	1					**1**			**25.5**
4th				**3**		**2**		**1**	**1**	1					**1**			**25.5**
5th				**2**	**1**	**2**	**1**				**1**		**1**					**21.5**
6th				**2**	**1**	**1**	**1**		**1**		**1**		**1**					**24.5**
7th					**2**				**1**	**1**	**1**	**1**	**1**			**1**	**1**	**30**
8th									**1**	**1**	**2**	**1 (RM)**	**2**			**1**		**29.5**
9th											**1**	**1**	**1**	**1**				**28.5**
10th												**1**		**1**				**23**
Course Count	**3**	**2**	**2**	**12**	**4**	**9**	**2**	**4**	**5**	**4**	**6**	**4**	**6**	**2**	**7**	**2**	**1**	**250 credits**
Credit Count	**9**	**2**	**6**	**46**	**12**	**9**	**6**	**12**	**20**	**6**	**24**	**12**	**9**	**40**	**17**	**16**	**4**	

Third Semester onwards ESC of the student's primary department may also be allowed
*Also, Minor of only the same discipline, as is chosen for PG Degree, can be taken
** AEC / SEC shall continue to be offered in two Groups during 3rd and 4th Semesters

Dual Degree (Category - C1) With MBA

				DSC – Discipline Specific Course - Core					Only Minor allowed*		Only PG Courses of MBA							
Semester	IDC [3-0-0]	IDC /VAC Lab [0-0-2]	VAC [3-0-0]	DC [3-0-0] in 1st year, [3-1-0] later	DE [3-0-0]	DP [0-0-2]	HSSE [3-0-0]	ESC# [3-0-0]	Minor (Only DC) [3-1-0]	SDC of Minor [0-0-3]	ADD [At least 5 DCPG with 3-1-0]	ADD [DEPG with Credit 3-0-0]	ADD [DPPG with Credit 0-0-3/0-0-2]	ADD [Term Paper]	**AEC/SEC [3-0-0] 2nd year onwards	PR (7th - 6Cr) (8th - 10Cr)	Internship (S/X)	Graded Credits
1st & 2nd	**3**	**2**	**2**	**2**		**2**		**2**							5			42
3rd				**3**		**2**		**1**	**1**	1					**1**			**25.5**
4th				**3**		**2**		**1**	**1**	1					**1**			**25.5**
5th				**2**	**1**	**2**	**1**				**1**		**1**					**21.5**
6th				**2**	**1**	**1**	**1**		**1**		**2**		**1**					**27**
7th					**2**				**1**	**1**	**2**	**1**				**1**	**1**	**31.5**
8th									**1**	**1**	**4**	**1**				**1**		**31.5**
9th											**2**	**3**		**1**				**24**
10th												**3**		**1**				**17**
Course Count	**3**	**2**	**2**	**12**	**4**	**9**	**2**	**4**	**5**	**4**	**11**	**8**	**2**	**2**	**7**	**2**	**1**	**245.5 credits**
Credit Count	**9**	**2**	**6**	**46**	**12**	**9**	**6**	**12**	**20**	**6**	**38**	**24**	**2.5**	**16**	**17**	**16**	**4**	

Third Semester onwards ESC of the student's primary department may also be allowed
*Also, Minor of only the same discipline, as is chosen for PG Degree, can be taken
** AEC / SEC shall continue to be offered in two Groups during 3rd and 4th Semesters

Dual Degree (Category - C2) With MBA (BA)

				DSC – Discipline Specific Course - Core					Only Minor allowed*		Only PG Courses of MBA (BA)							
Semester	IDC [3-0-0]	IDC /VAC Lab [0-0-2]	VAC [3-0-0]	DC [3-0-0] in 1st year, [3-1-0] later	DE [3-0-0]	DP [0-0-2]	HSSE [3-0-0]	ESC# [3-0-0]	Minor (Only DC) [3-1-0]	SDC of Minor [0-0-3]	ADD [At least 5 DCPG with 3-1-0]	ADD [DEPG with Credit 3-0-0]	ADD [DPPG with Credit 0-0-3/0-0-2]	ADD [Term Paper]	**AEC/SEC [3-0-0] 2nd year onwards	PR (7th - 6Cr) (8th - 10Cr)	Internship (S/X)	Graded Credits
1st & 2nd	**3**	**2**	**2**	**2**		**2**		**2**							5			42
3rd				**3**		**2**		**1**	**1**	1					**1**			**25.5**
4th				**3**		**2**		**1**	**1**	1					**1**			**25.5**
5th				**2**	**1**	**2**	**1**				**1**		**1**					**21.5**
6th				**2**	**1**	**1**	**1**		**1**		**2**		**1**					**26**
7th					**2**				**1**	**1**	**2**	**1**				**1**	**1**	**32.5**
8th									**1**	**1**	**4**	**1**				**1**		**31.5**
9th											**2**	**3**		**1**				**24**
10th												**3**		**1**				**17**
Course Count	**3**	**2**	**2**	**12**	**4**	**9**	**2**	**4**	**5**	**4**	**11**	**8**	**2**	**2**	**7**	**2**	**1**	**245.5 credits**
Credit Count	**9**	**2**	**6**	**46**	**12**	**9**	**6**	**12**	**20**	**6**	**38**	**24**	**2.5**	**16**	**17**	**16**	**4**	

Third Semester onwards ESC of the student's primary department may also be allowed
*Also, Minor of only the same discipline, as is chosen for PG Degree, can be taken
** AEC / SEC shall continue to be offered in two Groups during 3rd and 4th Semesters

Dual Degree (Category - D) With MBA from IIM MUMBAI

				DSC – Discipline Specific Course - Core											
Semester	IDC [3-0-0]	IDC /VAC Lab [0-0-2]	VAC [3-0-0]	DC [3-0-0] in 1st year, [3-1-0] later	DE [3-0-0]	DP [0-0-2]	HSSE [3-0-0]	ESC# [3-0-0]	12 Pre-requisite courses for MBA*	**AEC/SEC [3-0-0] 2nd year onwards	PR (5th - 6Cr) (7th - 10Cr)	Internship (S/X)	Graded Credits except MBA Pre-reqsts.	MBA prerequisite Course Credits	**Total credits***
1st & 2nd	**3**	**2**	**2**	**2**		**2**		**2**		5			42	0	**42**
3rd				**3**		**2**		**1**	**2**	**1**			20	7	**27**
4th				**3**		**2**		**1**	**3**	**1**			20	10	**30**
5th				**2**	**1**	**2**	**1**		**2**		**1**		22	7	**29**
6th				**2**	**1**	**1**	**1**		**3**				15	10	**25**
7th					**2**				**2**		**1**	**1**	20	8	**28**
Credits	**9**	**2**	**6**	**46**	**12**	**9**	**6**	**12**	**42**	**17**	**16**	**4**	**139**	**42**	**181 credits**

8th	**Curriculum, as prescribed at IIM Mumbai, for the MBA degree**
9th	
10th	

Third Semester onwards ESC of the student's primary department may also be allowed
*Students enrolled for this programme need to ensure that they complete all the courses of B.Tech as well as pre-requisite courses of MBA by the end of 7th semester
** AEC / SEC shall continue to be offered in two Groups during 3rd and 4th Semesters

Integrated M.Tech. Program

				DSC – Discipline Specific Course - Core					Only ^Minor or a Mix of courses (i.e. no specialization) allowed						
Semester	IDC [3-0-0]	IDC /VAC Lab [0-0-2]	VAC [3-0-0]	DC [3-0-0] in 1st year, [3-1-0] later	DE [3-0-0]	DP [0-0-2]	HSSE [3-0-0]	ESC# [3-0-0]	Minor (Only DC) [3-1-0]	SDC of Minor [0-0-3]	Vocational Training / Excursion / Field Visit [S/X]	*AEC/SEC [3-0-0] 2nd year onwards	Thesis	Internship (S/X)	Graded Credits
1st & 2nd	**3**	**2**	**2**	**2**		**2**		**2**				**5**			**42**
3rd				**3**		**2**		**1**				**1**			**20**
4th				**3**		**2**		**1**			**1**	**1**			**23**
5th				**2**	**1**	**2**	**1**		**1**	**1**					**21.5**
6th				**2**	**1**	**1**	**1**		**1**	**1**	**1**				**23.5**
7th				**3**		**2**			**1**	**1**					**19.5**
8th				**3**	**1**	**1**			**2**	**1**	**1**				**28.5**
9th													**1**	**1**	**24**
10th													**1**		**20**
Course Count	**3**	**2**	**2**	**18**	**3**	**12**	**2**	**4**	**5**	**4**	**3**	**7**	**2**	**1**	**222 credits**
Credit Count	**9**	**2**	**6**	**70**	**9**	**12**	**6**	**12**	**20**	**6**	**9**	**17**	**40**	**4**	

Third Semester onwards ESC of the student's primary department may also be allowed

* AEC / SEC shall continue to be offered in two Groups during 3rd and 4th Semesters

^Minor, if chosen, must be of a different department. No specialization means taking different courses and their respective SDC/practicals across Minors and/or Honours offered by various departments

Department of Applied Geology

Group- II

1st Semester						
S. No.	**Course Component**	**Course Code**	**Course Name**	**L-T-P**	**Course Category**	**Credit (L*1+T*1+P*0.5)**
1	IDC1	NMCI101	Engineering Mathematics - I	3-0-0	Theory	3
2	DSC1	NGLC103	Introduction to Palaeontology	3-0-0	Theory	3
3	DSC2	NGLC104	Palaeontology Practical	0-0-2	Practical	1
4	ESC1	NPEE101	Introduction to Petroleum Engineering	3-0-0	Theory	3
5	AEC1	NHSA103	Understanding Human Behaviour	2-1-0	Theory	3
6	SEC1	NMES101	Manufacturing Process	2-0-3	Practical	3.5
7	VAC1	NCSV101	Computer Programming	3-0-0	Theory	3
8	VAC2	NCSV102	Computer Programming Lab	0-0-2	Practical	1
						20.5

2nd Semester						
S. No.	**Course Component**	**Course Code**	**Course Name**	**L-T-P**	**Course Category**	**Credit (L*1+T*1+P*0.5)**
1	IDC2	NPHI101	Engineering Physics	3-0-0	Theory	3
2	IDC3	NPHI102	Engineering Physics Lab	0-0-2	Practical	1
3	IDC4	NMCI102	Engineering Mathematics - II	3-0-0	Theory	3
4	DSC3	NGLC101	Earth System and Processes	3-0-0	Theory	3
5	DSC4	NGLC102	Earth System and Processes Practical	0-0-2	Practical	1
6	ESC2	NFME102	Basic of Mineral Engineering	3-0-0	Theory	3
7	AEC2	NHSA101	Communication Skills	1-0-0	Theory	1
8	AEC3	NHSA102	Communication Skills Lab	0-0-2	Practical	1
9	SEC2	NCES101	Engineering Graphics	1-0-3	Theory	2.5
10	VAC3	NESV101	Environmental Science	3-0-0	Theory	3
						21.5

IDC – Inter-disciplinary Course; DSC – Discipline Specific Course - Core; AEC – Ability Enhancement Courses; SEC – Skill Enhancement Courses; VAC – Value Added Courses; **ESC** – Engineering Science Compulsory (**to be offered only for the students of other departments**). ESC courses mentioned herein are to be studied by your department's student.

Department of Applied Geophysics

Group- II

1st Semester						
S. No.	**Course Component**	**Course Code**	**Course Name**	**L-T-P**	**Course Category**	**Credit (L*1+T*1+P*0.5)**
1	IDC1	NMCI101	Engineering Mathematics - I	3-0-0	Theory	3
2	DSC1	NGPC101	Geoelectromagnetism	3-0-0	Theory	3
3	DSC2	NGPC102	Geoelectromagnetism Practical	0-0-2	Practical	1
4	ESC1	NPEE101	Introduction to Petroleum Engineering	3-0-0	Theory	3
5	AEC1	NHSA103	Understanding Human Behaviour	2-1-0	Theory	3
6	SEC1	NMES101	Manufacturing Process	2-0-3	Practical	3.5
7	VAC1	NCSV101	Computer Programming	3-0-0	Theory	3
8	VAC2	NCSV102	Computer Programming Lab	0-0-2	Practical	1
						20.5

2nd Semester						
S. No.	**Course Component**	**Course Code**	**Course Name**	**L-T-P**	**Course Category**	**Credit (L*1+T*1+P*0.5)**
1	IDC2	NPHI101	Engineering Physics	3-0-0	Theory	3
2	IDC3	NPHI102	Engineering Physics Lab	0-0-2	Practical	1
3	IDC4	NMCI102	Engineering Mathematics - II	3-0-0	Theory	3
4	DSC3	NGPC103	Mathematical Geophysics	3-0-0	Theory	3
5	DSC4	NGPC104	Mathematical Geophysics Practical	0-0-2	Practical	1
6	ESC2	NCSE102	Introduction to Algorithms	3-0-0	Theory	3
7	AEC2	NHSA101	Communication Skills	1-0-0	Theory	1
8	AEC3	NHSA102	Communication Skills Lab	0-0-2	Practical	1
9	SEC2	NCES101	Engineering Graphics	1-0-3	Theory	2.5
10	VAC3	NESV101	Environmental Science	3-0-0	Theory	3
						21.5

IDC – Inter-disciplinary Course; DSC – Discipline Specific Course - Core; AEC – Ability Enhancement Courses; SEC – Skill Enhancement Courses; VAC – Value Added Courses; **ESC** – Engineering Science Compulsory (**to be offered only for the students of other departments**). ESC courses mentioned herein are to be studied by your department's student.

Department of Chemical Engineering

Group- II

1st Semester						
Sl. No.	**Course Component**	**Course Code**	**Course Name**	**L-T-P**	**Course Category**	**Credit (L*1+T*1+P*0.5)**
1	IDC1	NMCI101	Engineering Mathematics - I	3-0-0	Theory	3
2	DSC1	NCHC101	Introduction to Chemical Engineering	3-0-0	Theory	3
3	DSC2	NCHC102	Unit Operations Lab	0-0-2	Practical	1
4	ESC1	NFME101	Introduction to Materials Science & Engineering	3-0-0	Theory	3
5	AEC1	NHSA103	Understanding Human Behaviour	2-1-0	Theory	3
6	SEC1	NMES101	Manufacturing Process	2-0-3	Practical	3.5
7	VAC1	NCSV101	Computer Programming	3-0-0	Theory	3
8	VAC2	NCSV102	Computer Programming Lab	0-0-2	Practical	1
						20.5

2nd Semester						
Sl. No.	**Course Component**	**Course Code**	**Course Name**	**L-T-P**	**Course Category**	**Credit (L*1+T*1+P*0.5)**
1	IDC2	NCYI101	Engineering Chemistry	3-0-0	Theory	3
2	IDC3	NCYI102	Engineering Chemistry Lab	0-0-2	Practical	1
3	IDC4	NMCI102	Engineering Mathematics - II	3-0-0	Theory	3
4	DSC3	NCHC103	Chemical Process Calculations	3-0-0	Theory	3
5	DSC4	NCHC104	Computational Tools for Chemical Engineers Lab	0-0-2	Practical	1
6	ESC2	NMEE102	Basic Mechanical Engineering	3-0-0	Theory	3
7	AEC2	NHSA101	Communication Skills	1-0-0	Theory	1
8	AEC3	NHSA102	Communication Skills Lab	0-0-2	Practical	1
9	SEC2	NCES101	Engineering Graphics	1-0-3	Theory	2.5
10	VAC3	NESV101	Environmental Science	3-0-0	Theory	3
						21.5

IDC – Inter-disciplinary Course; DSC – Discipline Specific Course - Core; AEC – Ability Enhancement Courses; SEC – Skill Enhancement Courses; VAC – Value Added Courses; **ESC** – Engineering Science Compulsory (**to be offered only for the students of other departments**). ESC courses mentioned herein are to be studied by your department's student.

Department of Computer Science and Engineering

Group- II

1st Semester						
Sl. No.	**Course Component**	**Course Code**	**Course Name**	**L-T-P**	**Course Category**	**Credit (L*1+T*1+P*0.5)**
1	IDC1	NMCI101	Engineering Mathematics - I	3-0-0	Theory	3
2	DSC1	NCSC101	Introduction to Unix and software Tools	3-0-0	Theory	3
3	DSC2	NCSC102	Introduction to Unix and software Tools Lab	0-0-2	Practical	1
4	ESC1	NMCE101	Statistical Methods	3-0-0	Theory	3
5	AEC1	NHSA103	Understanding Human Behaviour	2-1-0	Theory	3
6	SEC1	NMES101	Manufacturing Process	2-0-3	Practical	3.5
7	VAC1	NCSV101	Computer Programming	3-0-0	Theory	3
8	VAC2	NCSV102	Computer Programming Lab	0-0-2	Practical	1
						20.5

2nd Semester						
Sl. No.	**Course Component**	**Course Code**	**Course Name**	**L-T-P**	**Course Category**	**Credit (L*1+T*1+P*0.5)**
1	IDC2	NPHI101	Engineering Physics	3-0-0	Theory	3
2	IDC3	NPHI102	Engineering Physics Lab	0-0-2	Practical	1
3	IDC4	NMCI102	Engineering Mathematics - II	3-0-0	Theory	3
4	DSC3	NCSC103	Data Structures	3-0-0	Theory	3
5	DSC4	NCSC104	Data Structures Lab	0-0-2	Practical	1
6	ESC2	NECE102	Digital Electronics	3-0-0	Theory	3
7	AEC2	NHSA101	Communication Skills	1-0-0	Theory	1
8	AEC3	NHSA102	Communication Skills Lab	0-0-2	Practical	1
9	SEC2	NCES101	Engineering Graphics	1-0-3	Theory	2.5
10	VAC3	NESV101	Environmental Science	3-0-0	Theory	3
						21.5

IDC – Inter-disciplinary Course; DSC – Discipline Specific Course - Core; AEC – Ability Enhancement Courses; SEC – Skill Enhancement Courses; VAC – Value Added Courses; **ESC** – Engineering Science Compulsory (**to be offered only for the students of other departments**).ESC courses mentioned herein are to be studied by your department's student.

Department of Civil Engineering

Group- I

1st Semester						
Sl. No.	**Course Component**	**Course Code**	**Course Name**	**L-T-P**	**Course Category**	**Credit (L*1+T*1+P*0.5)**
1	IDC1	NMCI101	Engineering Mathematics - I	3-0-0	Theory	3
2	IDC2	NPHI101	Engineering Physics	3-0-0	Theory	3
3	IDC3	NPHI102	Engineering Physics Lab	0-0-2	Practical	1
4	DSC1	NCEC101	Building Materials and Building Construction	3-0-0	Theory	3
5	DSC2	NCEC102	Material Testing Laboratory	0-0-2	Practical	1
6	ESC1	NMEE101	Mechanics for Engineers	3-0-0	Theory	3
7	AEC1	NHSA101	Communication Skills	1-0-0	Theory	1
8	AEC2	NHSA102	Communication Skills Lab	0-0-2	Practical	1
9	SEC1	NCES101	Engineering Graphics	1-0-3	Theory	2.5
10	VAC1	NESV101	Environmental Science	3-0-0	Theory	3
						21.5

2nd Semester						
S. No.	**Course Component**	**Course Code**	**Course Name**	**L-T-P**	**Course Category**	**Credit (L*1+T*1+P*0.5)**
1	IDC4	NMCI102	Engineering Mathematics - II	3-0-0	Theory	3
2	DSC3	NCEC103	Surveying	3-0-0	Theory	3
3	DSC4	NCEC104	Surveying Laboratory	0-0-2	Practical	1
4	ESC2	NESE101	Basics of Environmental Engineering	3-0-0	Theory	3
5	AEC3	NHSA103	Understanding Human Behaviour	2-1-0	Theory	3
6	SEC2	NMES101	Manufacturing Process	2-0-3	Theory	3.5
7	VAC2	NCSV101	Computer Programming	3-0-0	Theory	3
8	VAC3	NCSV102	Computer Programming Lab	0-0-2	Practical	1
						20.5

IDC – Inter-disciplinary Course; DSC – Discipline Specific Course - Core; AEC – Ability Enhancement Courses; SEC – Skill Enhancement Courses; VAC – Value Added Courses; **ESC** – Engineering Science Compulsory (**to be offered only for the students of other departments**). ESC courses mentioned herein are to be studied by your department's student.

Department of Electronics and Communication Engineering

Group- II

1st Semester						
Sl. No.	**Course Component**	**Course Code**	**Course Name**	**L-T-P**	**Course Category**	**Credit (L*1+T*1+P*0.5)**
1	IDC1	NMCI101	Engineering Mathematics - I	3-0-0	Theory	3
2	DSC1	NECC101	Introduction to Electronics Engineering	3-0-0	Theory	3
3	DSC2	NECC102	Introduction to Electronics Engineering Lab	0-0-2	Practical	1
4	ESC1	NEEE101	Electrical Devices and Circuits	3-0-0	Theory	3
5	AEC1	NHSA103	Understanding Human Behaviour	2-1-0	Theory	3
6	SEC1	NMES101	Manufacturing Process	2-0-3	Practical	3.5
7	VAC1	NCSV101	Computer Programming	3-0-0	Theory	3
8	VAC2	NCSV102	Computer Programming Lab	0-0-2	Practical	1
						20.5

2nd Semester						
Sl. No.	**Course Component**	**Course Code**	**Course Name**	**L-T-P**	**Course Category**	**Credit (L*1+T*1+P*0.5)**
1	IDC2	NPHI101	Engineering Physics	3-0-0	Theory	3
2	IDC3	NPHI102	Engineering Physics Lab	0-0-2	Practical	1
3	IDC4	NMCI102	Engineering Mathematics - II	3-0-0	Theory	3
4	DSC3	NECC103	Digital Circuits and System Design	3-0-0	Theory	3
5	DSC4	NECC104	Digital System Design Lab	0-0-2	Practical	1
6	ESC2	NCSE102	Introduction to Algorithms	3-0-0	Theory	3
7	AEC2	NHSA101	Communication Skills	1-0-0	Theory	1
8	AEC3	NHSA102	Communication Skills Lab	0-0-2	Practical	1
9	SEC2	NCES101	Engineering Graphics	1-0-3	Theory	2.5
10	VAC3	NESV101	Environmental Science	3-0-0	Theory	3
						21.5

IDC – Inter-disciplinary Course; DSC – Discipline Specific Course - Core; AEC – Ability Enhancement Courses; SEC – Skill Enhancement Courses; VAC – Value Added Courses; **ESC** – Engineering Science Compulsory (**to be offered only for the students of other departments**). ESC courses mentioned herein are to be studied by your department's student.

Department of Electrical Engineering

Group- I

1st Semester						
Sl. No.	**Course Component**	**Course Code**	**Course Name**	**L-T-P**	**Course Category**	**Credit (L*1+T*1+P*0.5)**
1	IDC1	NMCI101	Engineering Mathematics - I	3-0-0	Theory	3
2	IDC2	NPHI101	Engineering Physics	3-0-0	Theory	3
3	IDC3	NPHI102	Engineering Physics Lab	0-0-2	Practical	1
4	DSC1	NEEC101	Basics of Electrical Engineering - I	3-0-0	Theory	3
5	DSC2	NEEC102	Basics of Electrical Engineering - I Lab	0-0-2	Practical	1
6	ESC1	NECE101	Basics of Electronics Engineering	3-0-0	Theory	3
7	AEC1	NHSA101	Communication Skills	1-0-0	Theory	1
8	AEC2	NHSA102	Communication Skills Lab	0-0-2	Practical	1
9	SEC1	NCES101	Engineering Graphics	1-0-3	Theory	2.5
10	VAC1	NESV101	Environmental Science	3-0-0	Theory	3
						21.5

2nd Semester						
S. No.	**Course Component**	**Course Code**	**Course Name**	**L-T-P**	**Course Category**	**Credit (L*1+T*1+P*0.5)**
1	IDC4	NMCI102	Engineering Mathematics - II	3-0-0	Theory	3
2	DSC3	NEEC103	Basics of Electrical Engineering - II	3-0-0	Theory	3
3	DSC4	NEEC104	Basics of Electrical Engineering - II Lab	0-0-2	Practical	1
4	ESC2	NCSE102	Introduction to Algorithms	3-0-0	Theory	3
5	AEC3	NHSA103	Understanding Human Behaviour	2-1-0	Theory	3
6	SEC2	NMES101	Manufacturing Process	2-0-3	Theory	3.5
7	VAC2	NCSV101	Computer Programming	3-0-0	Theory	3
8	VAC3	NCSV102	Computer Programming Lab	0-0-2	Practical	1
						20.5

IDC – Inter-disciplinary Course; DSC – Discipline Specific Course - Core; AEC – Ability Enhancement Courses; SEC – Skill Enhancement Courses; VAC – Value Added Courses; **ESC** – Engineering Science Compulsory (**to be offered only for the students of other departments**). ESC courses mentioned herein are to be studied by your department's student.

Department of Engineering Physics

Group- II

1st Semester						
S. No.	**Course Component**	**Course Code**	**Course Name**	**L-T-P**	**Course Category**	**Credit (L*1+T*1+P*0.5)**
1	IDC1	NMCI101	Engineering Mathematics - I	3-0-0	Theory	3
2	DSC1	NPHC101	Wave and Acoustics	3-0-0	Theory	3
3	DSC2	NPHC102	Wave and Acoustics Lab	0-0-2	Practical	1
4	ESC1	NCSE101	Fundamental of Data Structures	3-0-0	Theory	3
5	AEC1	NHSA103	Understanding Human Behaviour	2-1-0	Theory	3
6	SEC1	NMES101	Manufacturing Process	2-0-3	Practical	3.5
7	VAC1	NCSV101	Computer Programming	3-0-0	Theory	3
8	VAC2	NCSV102	Computer Programming Lab	0-0-2	Practical	1
						20.5

2nd Semester						
S. No.	**Course Component**	**Course Code**	**Course Name**	**L-T-P**	**Course Category**	**Credit (L*1+T*1+P*0.5)**
1	IDC2	NCYI101	Engineering Chemistry	3-0-0	Theory	3
2	IDC3	NCYI102	Engineering Chemistry Lab	0-0-2	Practical	1
3	IDC4	NMCI102	Engineering Mathematics - II	3-0-0	Theory	3
4	DSC3	NPHC103	Applied Optics	3-0-0	Theory	3
5	DSC4	NPHC104	Optics Lab	0-0-2	Practical	1
6	ESC2	NMCE102	Numerical Methods	3-0-0	Theory	3
7	AEC2	NHSA101	Communication Skills	1-0-0	Theory	1
8	AEC3	NHSA102	Communication Skills Lab	0-0-2	Practical	1
9	SEC2	NCES101	Engineering Graphics	1-0-3	Theory	2.5
10	VAC3	NESV101	Environmental Science	3-0-0	Theory	3
						21.5

IDC – Inter-disciplinary Course; DSC – Discipline Specific Course - Core; AEC – Ability Enhancement Courses; SEC – Skill Enhancement Courses; VAC – Value Added Courses; **ESC** – Engineering Science Compulsory (**to be offered only for the students of other departments**). ESC courses mentioned herein are to be studied by your department's student.

Department of Environmental Science and Engineering

Group- I

1st Semester						
Sl. No.	**Course Component**	**Course Code**	**Course Name**	**L-T-P**	**Course Category**	**Credit (L*1+T*1+P*0.5)**
1	IDC1	NMCI101	Engineering Mathematics - I	3-0-0	Theory	3
2	IDC2	NCYI101	Engineering Chemistry	3-0-0	Theory	3
3	IDC3	NCYI102	Engineering Chemistry Lab	0-0-2	Practical	1
4	DSC1	NESC101	Drinking Water Supply and Treatment	3-0-0	Theory	3
5	DSC2	NESC102	Water Pollution Practical	0-0-2	Practical	1
6	ESC1	NCHE101	Unit operations and Unit Processes	3-0-0	Theory	3
7	AEC1	NHSA101	Communication Skills	1-0-0	Theory	1
8	AEC2	NHSA102	Communication Skills Lab	0-0-2	Practical	1
9	SEC1	NCES101	Engineering Graphics	1-0-3	Theory	2.5
10	VAC1	NESV101	Environmental Science	3-0-0	Theory	3
						21.5

2nd Semester						
S. No.	**Course Component**	**Course Code**	**Course Name**	**L-T-P**	**Course Category**	**Credit (L*1+T*1+P*0.5)**
1	IDC4	NMCI102	Engineering Mathematics - II	3-0-0	Theory	3
2	DSC3	NESC103	Air Pollution	3-0-0	Theory	3
3	DSC4	NESC104	Air and Noise Pollution Practical	0-0-2	Practical	1
4	ESC2	NMNE102	Introduction to Mining, Energy and Climate Change	3-0-0	Theory	3
5	AEC3	NHSA103	Understanding Human Behaviour	2-1-0	Theory	3
6	SEC2	NMES101	Manufacturing Process	2-0-3	Theory	3.5
7	VAC2	NCSV101	Computer Programming	3-0-0	Theory	3
8	VAC3	NCSV102	Computer Programming Lab	0-0-2	Practical	1
						20.5

IDC – Inter-disciplinary Course; DSC – Discipline Specific Course - Core; AEC – Ability Enhancement Courses; SEC – Skill Enhancement Courses; VAC – Value Added Courses; **ESC** – Engineering Science Compulsory (**to be offered only for the students of other departments**). ESC courses mentioned herein are to be studied by your department's student.

Department of Fuel Minerals and Metallurgical Engineering

Group- II

1st Semester						
S. No.	**Course Component**	**Course Code**	**Course Name**	**L-T-P**	**Course Category**	**Credit (L*1+T*1+P*0.5)**
1	IDC1	NMCI101	Engineering Mathematics - I	3-0-0	Theory	3
2	DSC1	NFMC101	Introduction to Metallurgical Engineering	3-0-0	Theory	3
3	DSC2	NFMC102	Introduction to Metallurgical Engineering Lab	0-0-2	Practical	1
4	ESC1	NMNE101	Mine to Mill Operations	3-0-0	Theory	3
5	AEC1	NHSA103	Understanding Human Behaviour	2-1-0	Theory	3
6	SEC1	NMES101	Manufacturing Process	2-0-3	Practical	3.5
7	VAC1	NCSV101	Computer Programming	3-0-0	Theory	3
8	VAC2	NCSV102	Computer Programming Lab	0-0-2	Practical	1
						20.5

2nd Semester						
S. No.	**Course Component**	**Course Code**	**Course Name**	**L-T-P**	**Course Category**	**Credit (L*1+T*1+P*0.5)**
1	IDC2	NCYI101	Engineering Chemistry	3-0-0	Theory	3
2	IDC3	NCYI102	Engineering Chemistry Lab	0-0-2	Practical	1
3	IDC4	NMCI102	Engineering Mathematics - II	3-0-0	Theory	3
4	DSC3	NFMC103	Introduction to Mineral Engineering	3-0-0	Theory	3
5	DSC4	NFMC104	Introduction to Mineral Engineering Lab	0-0-2	Practical	1
6	ESC2	NMEE102	Basic Mechanical Engineering	3-0-0	Theory	3
7	AEC2	NHSA101	Communication Skills	1-0-0	Theory	1
8	AEC3	NHSA102	Communication Skills Lab	0-0-2	Practical	1
9	SEC2	NCES101	Engineering Graphics	1-0-3	Theory	2.5
10	VAC3	NESV101	Environmental Science	3-0-0	Theory	3
						21.5

IDC – Inter-disciplinary Course; DSC – Discipline Specific Course - Core; AEC – Ability Enhancement Courses; SEC – Skill Enhancement Courses; VAC – Value Added Courses; **ESC** – Engineering Science Compulsory (**to be offered only for the students of other departments**). ESC courses mentioned herein are to be studied by your department's student.

Department of Mathematics and Computing

Group- II

1st Semester						
Sl. No.	**Course Component**	**Course Code**	**Course Name**	**L-T-P**	**Course Category**	**Credit (L*1+T*1+P*0.5)**
1	IDC1	NMCI101	Engineering Mathematics - I	3-0-0	Theory	3
2	DSC1	NMCC101	Computer Organization and Architecture	3-0-0	Theory	3
3	DSC2	NMCC102	Computer Organization and Architecture Lab	0-0-2	Practical	1
4	ESC1	NECE101	Basics of Electronics Engineering	3-0-0	Theory	3
5	AEC1	NHSA103	Understanding Human Behaviour	2-1-0	Theory	3
6	SEC1	NMES101	Manufacturing Process	2-0-3	Practical	3.5
7	VAC1	NCSV101	Computer Programming	3-0-0	Theory	3
8	VAC2	NCSV102	Computer Programming Lab	0-0-2	Practical	1
						20.5

2nd Semester						
Sl. No.	**Course Component**	**Course Code**	**Course Name**	**L-T-P**	**Course Category**	**Credit (L*1+T*1+P*0.5)**
1	IDC2	NPHI101	Engineering Physics	3-0-0	Theory	3
2	IDC3	NPHI102	Engineering Physics Lab	0-0-2	Practical	1
3	IDC4	NMCI102	Engineering Mathematics - II	3-0-0	Theory	3
4	DSC3	NCSC103	Data Structures	3-0-0	Theory	3
5	DSC4	NCSC104	Data Structures Lab	0-0-2	Practical	1
6	ESC2	NECE102	Digital Electronics	3-0-0	Theory	3
7	AEC2	NHSA101	Communication Skills	1-0-0	Theory	1
8	AEC3	NHSA102	Communication Skills Lab	0-0-2	Practical	1
9	SEC2	NCES101	Engineering Graphics	1-0-3	Theory	2.5
10	VAC3	NESV101	Environmental Science	3-0-0	Theory	3
						21.5

IDC – Inter-disciplinary Course; DSC – Discipline Specific Course - Core; AEC – Ability Enhancement Courses; SEC – Skill Enhancement Courses; VAC – Value Added Courses; **ESC** – Engineering Science Compulsory (**to be offered only for the students of other departments**). ESC courses mentioned herein are to be studied by your department's student.

Department of Mechanical Engineering

Group- I

1st Semester						
Sl. No.	**Course Component**	**Course Code**	**Course Name**	**L-T-P**	**Course Category**	**Credit (L*1+T*1+P*0.5)**
1	IDC1	NMCI101	Engineering Mathematics - I	3-0-0	Theory	3
2	IDC2	NPHI101	Engineering Physics	3-0-0	Theory	3
3	IDC3	NPHI102	Engineering Physics Lab	0-0-2	Practical	1
4	DSC1	NMEC101	Engineering Mechanics	3-0-0	Theory	3
5	DSC2	NMEC102	Engineering Mechanic Lab	0-0-2	Practical	1
6	ESC1	NEEE101	Electrical Devices and Circuits	3-0-0	Theory	3
7	AEC1	NHSA101	Communication Skills	1-0-0	Theory	1
8	AEC2	NHSA102	Communication Skills Lab	0-0-2	Practical	1
9	SEC1	NCES101	Engineering Graphics	1-0-3	Theory	2.5
10	VAC1	NESV101	Environmental Science	3-0-0	Theory	3
						21.5

2nd Semester						
S. No.	**Course Component**	**Course Code**	**Course Name**	**L-T-P**	**Course Category**	**Credit (L*1+T*1+P*0.5)**
1	IDC4	NMCI102	Engineering Mathematics - II	3-0-0	Theory	3
2	DSC3	NMEC103	Thermodynamics	3-0-0	Theory	3
3	DSC4	NMEC104	Thermodynamics Lab	0-0-2	Practical	1
4	ESC2	NECE102	Digital Electronics	3-0-0	Theory	3
5	AEC3	NHSA103	Understanding Human Behaviour	2-1-0	Theory	3
6	SEC2	NMES101	Manufacturing Process	2-0-3	Theory	3.5
7	VAC2	NCSV101	Computer Programming	3-0-0	Theory	3
8	VAC3	NCSV102	Computer Programming Lab	0-0-2	Practical	1
						20.5

IDC – Inter-disciplinary Course; DSC – Discipline Specific Course - Core; AEC – Ability Enhancement Courses; SEC – Skill Enhancement Courses; VAC – Value Added Courses; **ESC** – Engineering Science Compulsory (**to be offered only for the students of other departments**). ESC courses mentioned herein are to be studied by your department's student.

Department of Mining Machinery Engineering

Group- I

1st Semester						
Sl. No.	**Course Component**	**Course Code**	**Course Name**	**L-T-P**	**Course Category**	**Credit (L*1+T*1+P*0.5)**
1	IDC1	NMCI101	Engineering Mathematics - I	3-0-0	Theory	3
2	IDC2	NPHI101	Engineering Physics	3-0-0	Theory	3
3	IDC3	NPHI102	Engineering Physics Lab	0-0-2	Practical	1
4	DSC1	NMEC101	Engineering Mechanics	3-0-0	Theory	3
5	DSC2	NMEC102	Engineering Mechanic Lab	0-0-2	Practical	1
6	ESC1	NEEE101	Electrical Devices and Circuits	3-0-0	Theory	3
7	AEC1	NHSA101	Communication Skills	1-0-0	Theory	1
8	AEC2	NHSA102	Communication Skills Lab	0-0-2	Practical	1
9	SEC1	NCES101	Engineering Graphics	1-0-3	Theory	2.5
10	VAC1	NESV101	Environmental Science	3-0-0	Theory	3
						21.5

2nd Semester						
S. No.	**Course Component**	**Course Code**	**Course Name**	**L-T-P**	**Course Category**	**Credit (L*1+T*1+P*0.5)**
1	IDC4	NMCI102	Engineering Mathematics - II	3-0-0	Theory	3
2	DSC3	NMEC103	Thermodynamics	3-0-0	Theory	3
3	DSC4	NMEC104	Thermodynamics Lab	0-0-2	Practical	1
4	ESC2	NECE102	Digital Electronics	3-0-0	Theory	3
5	AEC3	NHSA103	Understanding Human Behaviour	2-1-0	Theory	3
6	SEC2	NMES101	Manufacturing Process	2-0-3	Theory	3.5
7	VAC2	NCSV101	Computer Programming	3-0-0	Theory	3
8	VAC3	NCSV102	Computer Programming Lab	0-0-2	Practical	1
						20.5

IDC – Inter-disciplinary Course; DSC – Discipline Specific Course - Core; AEC – Ability Enhancement Courses; SEC – Skill Enhancement Courses; VAC – Value Added Courses; **ESC** – Engineering Science Compulsory (**to be offered only for the students of other departments**). ESC courses mentioned herein are to be studied by your department's student.

Department of Mining Engineering

Group- I

1st Semester						
Sl. No.	**Course Component**	**Course Code**	**Course Name**	**L-T-P**	**Course Category**	**Credit (L*1+T*1+P*0.5)**
1	IDC1	NMCI101	Engineering Mathematics - I	3-0-0	Theory	3
2	IDC2	NPHI101	Engineering Physics	3-0-0	Theory	3
3	IDC3	NPHI102	Engineering Physics Lab	0-0-2	Practical	1
4	DSC1	NMNC101	Mine Economics	3-0-0	Theory	3
5	DSC2	NMNC102	Mining Technology Lab	0-0-2	Practical	1
6	ESC1	NMEE101	Mechanics For Engineers	3-0-0	Theory	3
7	AEC1	NHSA101	Communication Skills	1-0-0	Theory	1
8	AEC2	NHSA102	Communication Skills Lab	0-0-2	Practical	1
9	SEC1	NCES101	Engineering Graphics	1-0-3	Theory	2.5
10	VAC1	NESV101	Environmental Science	3-0-0	Theory	3
						21.5

2nd Semester						
S. No.	**Course Component**	**Course Code**	**Course Name**	**L-T-P**	**Course Category**	**Credit (L*1+T*1+P*0.5)**
1	IDC4	NMCI102	Engineering Mathematics - II	3-0-0	Theory	3
2	DSC3	NMNC103	Elements of Mining	3-0-0	Theory	3
3	DSC4	NMNC104	Mine Model Laboratory	0-0-2	Practical	1
4	ESC2	NECE102	Digital Electronics	3-0-0	Theory	3
5	AEC3	NHSA103	Understanding Human Behaviour	2-1-0	Theory	3
6	SEC2	NMES101	Manufacturing Process	2-0-3	Theory	3.5
7	VAC2	NCSV101	Computer Programming	3-0-0	Theory	3
8	VAC3	NCSV102	Computer Programming Lab	0-0-2	Practical	1
						20.5

IDC – Inter-disciplinary Course; DSC – Discipline Specific Course - Core; AEC – Ability Enhancement Courses; SEC – Skill Enhancement Courses; VAC – Value Added Courses; **ESC** – Engineering Science Compulsory (**to be offered only for the students of other departments**). ESC courses mentioned herein are to be studied by your department's student.

Department of Petroleum Engineering

Group- II

1st Semester						
S. No.	**Course Component**	**Course Code**	**Course Name**	**L-T-P**	**Course Category**	**Credit (L*1+T*1+P*0.5)**
1	IDC1	NMCI101	Engineering Mathematics - I	3-0-0	Theory	3
2	DSC1	NPEC101	Elements of Reservoir Engineering	3-0-0	Theory	3
3	DSC2	NPEC102	Reservoir Engineering Lab	0-0-2	Practical	1
4	ESC1	NGLE101	Introduction to Earth Science	3-0-0	Theory	3
5	AEC1	NHSA103	Understanding Human Behaviour	2-1-0	Theory	3
6	SEC1	NMES101	Manufacturing Process	2-0-3	Practical	3.5
7	VAC1	NCSV101	Computer Programming	3-0-0	Theory	3
8	VAC2	NCSV102	Computer Programming Lab	0-0-2	Practical	1
						20.5

2nd Semester						
S. No.	**Course Component**	**Course Code**	**Course Name**	**L-T-P**	**Course Category**	**Credit (L*1+T*1+P*0.5)**
1	IDC2	NCYI101	Engineering Chemistry	3-0-0	Theory	3
2	IDC3	NCYI102	Engineering Chemistry Lab	0-0-2	Practical	1
3	IDC4	NMCI102	Engineering Mathematics - II	3-0-0	Theory	3
4	DSC3	NPEC103	Petroleum Engineering Thermodynamics and Transport Phenomena	3-0-0	Theory	3
5	DSC4	NPEC104	Process Engineering Lab	0-0-2	Practical	1
6	ESC2	NGPE102	Introduction to Geophysics	3-0-0	Theory	3
7	AEC2	NHSA101	Communication Skills	1-0-0	Theory	1
8	AEC3	NHSA102	Communication Skills Lab	0-0-2	Practical	1
9	SEC2	NCES101	Engineering Graphics	1-0-3	Theory	2.5
10	VAC3	NESV101	Environmental Science	3-0-0	Theory	3
						21.5

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