

**Rules and Regulations Relating to Degree of Bachelor of Engineering /
Bachelor of Technology (B.E. /B. Tech.)**

(To Be Introduced from Academic Year, 2012-13)

Degree Course (Modified) with Effect from Academic Year 2012-13

(These rules and regulations will supersede earlier rules and regulations)

Preamble

The present education needs to improve its international competitiveness and the employability of its student community. In this age of information technology the education paradigm is shifting from teaching to learning and the role of teacher is a facilitator. The focus of education should be student centered and thrust should be on learning by the students than teaching by the faculty. The contact hours should be optimized so that student can approach to library, use Internet and take up self-study to improve his / her skills.

This curriculum structure has been framed by considering guidelines of National Knowledge Commission (NKC), which suggests appropriate importance of basic courses, core courses and interdisciplinary / elective courses to fulfill the varied needs of the industry.

Features of the CGPA system:

- 1) The degree course B.E. / B. Tech. being run under the faculty of Engineering and Technology shall be of **46** credits per year. There shall be total **184** credits allotted for **4** year degree course.

Note: For lateral entry admitted students (Diploma and B.Sc. students), total no. of credits allotted shall be **138**. But B.Sc. student has to complete credits of courses of 'Elements of Civil Engineering & Engineering Mechanics' and 'Elements of Mechanical Engineering & Engineering Graphics' of F.E. in addition to **138** credits of SE to BE.

- 2) The credits shall be awarded as follows except for some special subjects:
 - **1** credit for **1** hour theory lecture.
 - $\frac{1}{2}$ credit for **1** hour practical / tutorial.
- 3) The batch size for practical shall be as follows:
 - FE & SE: **18** to **22** students
 - TE & BE: **13** to **17** students
- 4) The batch size for Mini Project, Project, and Seminar shall be of **8** to **10** students. Each teacher can guide maximum **2-3** projects.

- 5) There shall be some credit courses having grade points and some audit courses having audit points. However audit points shall not be counted in calculation of final SGPA and CGPA.
- 6) The structure of syllabus from FE to BE shall be same for all branches of Engineering and Technology.

Course Title: Bachelor of Engineering / Bachelor of Technology

Abbreviation: B. E. / B. Tech.

Type of Course: A 4 year degree course divided into 8 Semesters.

Pattern: Semester

Number of Years and Semesters: 4 Years divided into 8 semesters with 2 semesters per year.

Nomenclature of Semesters:

The revised Rules, Regulations and Syllabus for four year courses in Engineering and Technology shall be introduced gradually as follows:

No	Year	Abbreviation	Semester	With effect from
1	First Year B.E. / B. Tech.	FE	I & II	A.Y. 2012-13
2	Second Year B.E. / B. Tech.	SE	III & IV	A.Y. 2013-14
3	Third Year B.E. / B. Tech.	TE	V & VI	A.Y. 2014-15
4	Final Year B.E. / B. Tech.	BE	VII & VIII	A.Y. 2015-16

Award of the Degree: Degree shall be awarded to students earning credits of all eight semesters (Minimum 184 Credits) and completing of minimum number of Audit Points as given in **Rule 11**.

Note: For lateral entry admission (Diploma and B.Sc. students), minimum number of credits shall be 138 and minimum number of Audit Points as given in **Rule 11**.

Duration of Semester: Each Semester shall be normally of 15 To 16 weeks duration for class room teaching / laboratory work.

Definitions:

- **University:** North Maharashtra University, Jalgaon.
- **College / Institute:** Any college / Institute conducting B.E / B. Tech. course and affiliated to North Maharashtra University, Jalgaon.

- **State Government:** Government of Maharashtra.
- **Admission Authority:** Any authority to conduct admission process as prescribed by Government of Maharashtra.
- **DTE:** Directorate of Technical Education, Maharashtra State.

Rule 1: B.E. / B. Tech. Entry levels into the course, eligibility criteria, admission authority and procedures

Entry levels into the course shall be at the beginning of the Semester - I or at the beginning of the Semester - III.

Eligibility criteria, admission authority and procedures shall be Government of Maharashtra / Directorate of Technical Education and procedure shall be as per directions of admission authority prevailing at the time of admission.

Rule 2: B.E. / B. Tech. Examinations

Rule 2.1: The Examination conducting authority shall be North Maharashtra University, Jalgaon.

Rule 2.2: The examination at the end of each semester shall be normally held in November / December and April / May in each academic year.

Rule 3: Attendance Rule and Detention Rule

Rule 3.1: The student will not be allowed to appear for the examinations i.e. he / she shall be detained if he / she do not attend minimum **75** % classes of theory, practical etc.

The attendance rules will be governed by DTE rules and relevant ordinance of university as applicable at that time.

Rule 3.2: If a candidate is detained in first term of any year, he / she will not be allowed to register for second term. He / she will have to register for the same in succeeding year(s).

If a candidate is detained in second term of any year, he / she will have to register for the second term of succeeding year(s).

Rule 4: Passing Criteria for Theory Course

Rule 4.1: For the ESE in Theory courses, minimum passing marks are **32** out of **80**. No separate passing is required for ISE but the student has to score minimum **40** marks out of **100** to pass in theory course.

Rule 4.2: In ESE and ICA of all courses other than theory, minimum **40** % of total marks shall be required for passing.

Rule 5: Internal Sessional Examination (ISE)

To ensure uniform attention of the students of their work throughout each semester of their study, Internal Sessional Examinations (ISE) shall be conducted

in each semester. Conducting authority shall be Institute where candidate is admitted. The institutional examination committee shall consist of Principal as a Chairman and four teachers nominated by the Principal. Internal Sessional Examinations (ISE) shall not have any passing criteria. Internal Sessional examinations shall normally be conducted in the middle of regular semester only.

Re-examination for ISE shall be allowed during current semester only. The institute must submit the ISE marks at the end of semester and there shall be no improvement test after the marks are sent to the university. Scaling down shall be done for ISE as per **Rule 5.1**.

No separate passing is required for Internal Sessional Examinations and if the candidate remains absent for the ISE, the candidate shall be just treated as not appeared for the test securing **zero** marks. The ISE marks obtained by the candidate shall be added to the marks obtained by the candidate in End Semester Examination (ESE) conducted by the University as given in Annexure - I.

Rule 5.1: Scaling Down Formula

Scaling down of Internal Sessional Examination (ISE) marks shall be done as per following formula

A - Marks obtained by a student in ESE.

B - Marks obtained by a student in ISE.

$$\text{Scaled down marks} = (A * (20 / 80)) + (20 \% * 20)$$

For example:

Sr. No.	A (ESE)	B (ISE)	Scale Down B (ISE)
1	36	15	13
2	45	10	10

Note: There shall not be any scaling up scheme for ISE. If a student fails in any theory course (i.e. scores less than **32** marks) in ESE, scaling down, if required, will be done whenever the student passes in that course (i.e. scores **32** or more marks) in the ESE.

Rule 6: Internal Continuous Assessment (ICA)

ICA shall be based on continuous evaluation of student’s performance throughout semester.

Rule 7: Eligibility Criteria for Admission in Next Year

Rule 7.1: Student has to complete minimum **32** Credits in an academic year to be eligible for admission to next year.

Rule 7.2: Student shall be admitted in **TE** provided he / she have earned all credits of **FE** and minimum **32** credits of **SE**. Similarly the student shall be admitted in **BE** provided he / she have earned all credits of **SE** and minimum **32** credits of **TE**.

Note: For latterly admitted B.Sc. students, credits against courses 'Elements of Civil Engineering & Engineering Mechanics' and 'Elements of Mechanical Engineering & Engineering Graphics' of FE shall not be considered while deciding eligibility for **TE** admission. These students shall be allowed for admission in **BE** only after earning credits of these courses.

Rules 7.3: If student does not complete ICA of any course, he / she shall be awarded '**I (Incomplete)**' grade. In case of '**I**' or '**F**' grade in ICA, student shall not be allowed to appear for ESE (Practical / Oral) of the same course, if there is an ESE for that course. In all cases, if the student secures '**I**' or '**F**' grade, he / she have to register for the same course in succeeding semester when the same course is offered. However if the institute offers the same course in next semester, the student can register for the same in the very next semester also.

Rule 7.4: If a student secures '**F**' or '**I**' grade in any course, his / her SGPA and CGPA shall not be declared till he / she earns the credit of that course.

Rule 8: Calculation of SGPA and CGPA

Semester Grade Point Average (SGPA):

The performance of a student in a semester is indicated by a number called SGPA. SGPA is the weighted average of the grade points obtained in all courses registered by the student during the semester. It shall be calculated as follows:

$$\text{SGPA} = \frac{\sum_{i=1}^n C_i p_i}{\sum_{i=1}^n C_i}$$

Where,

C_i = the number of credits earned in the i^{th} course of a semester for which SGPA is to be calculated

p_i = grade point earned in the i^{th} course.

$i = 1, 2, 3, \dots, n$, where 'n' represents the number of courses in which a student is registered in that semester.

The SGPA is rounded up to two decimal places.

Cumulative Grade Point Average (CGPA):

Up-to-date assessment of the overall performance of a student from the time of his / her first registration is obtained by calculating a number called Cumulative Grade Point Average (CGPA), which is weighted average of the grade points obtained in all courses registered by the student since he/she entered the institute. It shall be calculated as follows:

$$\text{CGPA} = \frac{\sum_{j=1}^m C_j p_j}{\sum_{j=1}^m C_j}$$

Where,

C_j = The number of credits offered in the j^{th} course up to the semester for which CGPA is to be calculated.

p_j = Grade point earned in the j^{th} course. A letter grade lower than E in a course shall not be taken into consideration for calculation of CGPA.

$j = 1, 2, 3, \dots, m$, where 'm' represent the number of courses in which a student is registered up to the semester for which the CGPA is to be calculated.

The CGPA is rounded up to two decimal places.

Rule 8.1: Conversion of CGPA to Percentage Marks and Vice-versa

$$\text{CGPA} = (\% \text{ Marks} + 7.5) / 10$$

$$\text{Percentage Marks} = (\text{CGPA} - 0.75) * 10 \%$$

Rule 9: CGPA Improvement

A student shall be allowed to improve his / her CGPA by reappearing for the courses from VII and / or VIII Semesters of BE as per prevalent policy of the university.

Rule 10: Methodology for award of Grades

Conversion of course marks into Grades shall be done as per table given below:

No.	Marks Range in %	Grade	Grade Point
01	85 - 100	A+	10
02	74-84	A	9
03	64-73	B	8
04	55-63	C	7
05	47-54	D	6
06	40 - 46	E	5
07	Less than 40	F	0

Rule 11: Audit Courses

In addition to academic credits, student has to complete audit courses for obtaining audit points. The following audit courses shall be completed.

- Environmental Science
- Co-curricular activities
- Extra Curricular activities

Rule 11.1: Environmental Science Audit Course

It is compulsory to complete Environment Science audit course for all admitted students. ESE for Environmental Science shall be conducted as per the prevalent rules of the university. There shall be **6** audit points for the Environment Science audit course.

Rule 11.2: Co-curricular Activity

A minimum **16** Audit points for co-curricular activities shall be obtained by the student during his course of study distributed over at least **4** semesters. There is no limit on maximum audit points obtained by the student. The final grade sheet will include the actual number of audit points obtained by the student during his entire course of study.

Note: For lateral entry admission (Diploma and B.Sc. students), student shall obtain a minimum **12** Audit points for co-curricular activities distributed over at least **3** semesters.

No	Name of Activity	Audit Points
01	Technical Conference Attendance (Minimum State Level)	01
02	Technical Paper Presentation (Minimum State Level)	02
03	Award Winning Technical Paper Presentation	04
04	Technical Workshop for Minimum 2 Days	01
05	Technical Courses other than Curriculum for Each Course	02
06	Professional Society Membership (1 point for each membership)	01
07	Any Foreign Language Course (2 points for each course)	02
08	Any other Relevant Activity*	-

***Note:** If the institute wants to include any other activity, the details shall be sent to the university. The dean faculty of Engineering & Technology shall take the decision of approving the activity and allocating number of audit points for the activity.

Rule 11.3: Extra-curricular Activity:

A minimum **8** Audit points for Extra - curricular activities shall be obtained by the student during his course of study distributed over at least **4** semesters. There is no limit on maximum audit points obtained by the student. The final grade sheet will include the actual number of audit points obtained by the student during his entire course of study.

Note: For lateral entry admission (Diploma and B.Sc. students), student shall obtain a minimum **6** Audit points for Extra - curricular activities distributed over at least **3** semesters.

Sr. No.	Name of Activity	Audit Points
Sports		
01	• Member of Inter College Team	01
	• Member of Inter University Team	02
	• Member of National Level Team	03
Cultural Events		
02	• Inter College Level	01
	• Inter University Level	02
	• Inter State Level	03
03	Membership of NSS, NCC	01
04	Social Service Activities (Blood Donation, Tree Plantation, Adult Education etc.)	01
05	Any other Relevant Activity*	-

***Note:** If the institute wants to include any other activity, the details shall be sent to the university. The dean faculty of Engineering & Technology shall take the decision of approving the activity and allocating number of audit points for the activity.

Rule 11.4: The grade card in each semester shall contain the information about audit points obtained by the student as shown in the following table:

No	Description	Audit Points Balance	Audit Points Obtained	Total Audit Points
01	Environmental Science			
02	Co-curricular Activities			
03	Extra-curricular Activities			

The final grade card of a student shall contain the information about audit points obtained by the student as shown in the following table:

No	Audit Course	Grade	Audit Points	
			Minimum Required	Total Obtained
01	Environmental Science	CES / NCES	06	
02	Co-Curricular Activities	CCC / NCCC	16	
03	Extra-Curricular Activities	CEC / NCEC	08	
Total			30	

Rule 11.5: Audit Point Report

The college shall send the audit point report of all admitted students in following format:

Sr. No.	Name of The Student	PRN	Exam Seat No	No of Audit Points Obtained	
				Co-Curricular Activity	Extra-Curricular Activity
01					
02					

The college shall keep the detailed record of audit points obtained by each student with documentary proof for verification till he / she shall completes the requirement of the degree.

Rule 12: Credit Groups

The syllabus of all branches shall be divided into 5 groups with credit distribution as given in the following table:

Sr. No.	Group Name	Group Code	Number of Credits
01	Basic Sciences	A	26
02	Basic Engineering & Skills	B	29
03	Humanities, Social Science & Management	C	13 (14)
04	Programme Core	D	101
05	Electives	E	15 (14)
Total			184

Annexure - I

FE Semester – I

Name of the Course	Group	Teaching Scheme				Evaluation Scheme					Credits
		Theory Hrs / week	Tutorial Hrs / week	Practical Hrs / week	Total	Theory		Practical		Total	
						ISE	ESE	ICA	ESE		
Engineering Physics - I	A	3	---	---	3	20	80	---	---	100	3
Engineering Chemistry – I	A	3	---	---	3	20	80	---	---	100	3
Engineering Mathematics - I	A	3	1	---	4	20	80	---	---	100	4
Elements of Civil Engineering & Engineering Mechanics	B	3	1	---	4	20	80	---	---	100	4
Computer Programming	B	3	---	---	3	20	80	---	---	100	3
Engineering Science Lab - I	A	---	---	2*	2*	---	---	25	---	25	1
Computer Programming Lab	B	---	---	2	2	---	---	25	25 (PR)	50	1
Elements of Civil Engineering & Engineering Mechanics Lab	B	---	---	2	2	---	---	25	25 (OR)	50	1
Workshop Practice – I	B	---	---	2	2	---	---	25	---	25	1
Soft Skills – I	C	1	---	2	3	---	---	50	---	50	2
Total		16	2	10	28	100	400	150	50	700	23

ISE: Internal Sessional Examination

ESE: End Semester Examination

ICA : Internal Continuous Assessment

Note: For Engineering Science Lab, practical of Engineering Physics and Engineering Chemistry shall be conducted in alternate week.

FE Semester - II

Name of the Course	Group	Teaching Scheme				Evaluation Scheme					Credits
		Theory Hrs / week	Tutorial Hrs / week	Practical Hrs / week	Total	Theory		Practical		Total	
						ISE	ESE	ICA	ESE		
Engineering Physics – II	A	3	---	---	3	20	80	---	---	100	3
Engineering Chemistry - II	A	3	---	---	3	20	80	---	---	100	3
Engineering Mathematics - II	A	3	1	---	4	20	80	---	---	100	4
Elements of Electrical & Electronics Engineering	B	3	---	---	3	20	80	---	---	100	3
Engineering Drawing & Elements of Mechanical Engineering	B	3	---	---	3	20	80	---	---	100	3
Engineering Science - II Lab	A	---	---	2*	2*	---	---	25	---	25	1
Engineering Drawing & Elements of Mechanical Engineering Lab	B	---	---	4	4	---	---	25	25 (OR)	50	2
Elements of Electrical & Electronics Engineering Lab	B	---	---	2	2	---	---	25	25 (PR)	50	1
Workshop Practice - II	B	---	---	2	2	---	---	50	---	50	1
Soft Skills-II	C	1	---	2	3	---	---	25	---	25	2
Total		16	1	12	29	100	400	150	50	700	23

ISE: Internal Sessional Examination

ESE: End Semester Examination

ICA: Internal Continuous Assessment

Note: For Engineering Science Lab, practical of Engineering Physics and Engineering Chemistry shall be conducted in alternate week.

SE Semester - III

Name of the Course	Group	Teaching Scheme				Evaluation Scheme					Credits
		Theory Hrs / week	Tutorial Hrs / week	Practical Hrs / week	Total	Theory		Practical		Total	
						ISE	ESE	ICA	ESE		
TH	* A/D	3	1	---	4	20	80	---	---	100	4
TH	B	3	---	---	3	20	80	---	---	100	3
TH	D	3	1	---	4	20	80	---	---	100	4
TH	D	3	---	---	3	20	80	---	---	100	3
TH	D	3	---	---	3	20	80	---	---	100	3
Soft Skills - III	C	1	---	2	3	---	---	50	---	50	2
LAB	B	---	---	2	2	---	---	50	---	50	1
LAB	D	---	---	2	2	---	---	25	25	50	1
LAB	D	---	---	2	2	---	---	25	25	50	1
LAB	D	---	---	2	2	---	---	25	25	50	1
Total		16	2	10	28	100	400	175	75	750	23

ISE: Internal Sessional Examination

ESE: End Semester Examination

ICA: Internal Continuous Assessment

Note 1: For branches like Chemical Engineering and Biotech Engineering, two laboratory hours can be merged to form a four hour slot.

Note 2: Out of 3 practical ESE heads, at least 1 head should be practical.

*** E & TC, Mechanical, Automobile & Production Engineering branches shall have group D course and rest of the branches shall have group A course (e.g. Engineering Mathematics-III).**

SE Semester - IV

Name of the Course	Group	Teaching Scheme				Evaluation Scheme					Credits
						Theory		Practical		Total	
		Theory Hrs / week	Tutorial Hrs / week	Practical Hrs / week	Total	ISE	ESE	ICA	ESE		
TH	* A/D	3	1	---	4	20	80	---	---	100	4
TH	D	3	---	---	3	20	80	---	---	100	3
TH	D	3	1	---	4	20	80	---	---	100	4
TH	D	3	---	---	3	20	80	---	---	100	3
TH	D	3	---	---	3	20	80	---	---	100	3
LAB	B	1	---	2	3	---	---	50	---	50	2
LAB	D	---	---	2	2	---	---	50	---	50	1
LAB	D	---	---	2	2	---	---	25	25	50	1
LAB	D	---	---	2	2	---	---	25	25	50	1
LAB	D	---	---	2	2	---	---	25	25	50	1
Total		16	2	10	28	100	400	175	75	750	23

ISE: Internal Sessional Examination

ESE: End Semester Examination

ICA: Internal Continuous Assessment

Note 1: For branches like Chemical Engineering and Biotech Engineering, two laboratory hours can be merged to form a four hour slot.

Note 2: Out of 3 practical ESE heads, at least 1 head should be practical.

*** E & TC, Mechanical, Automobile & Production Engineering branches shall have group A course (e.g. Engineering Mathematics-III) and rest of the branches shall have group D course.**

TE Semester – V

Name of the Course	Group	Teaching Scheme				Evaluation Scheme					Credits
		Theory Hrs / week	Tutorial Hrs / week	Practical Hrs / week	Total	Theory		Practical		Total	
						ISE	ESE	ICA	ESE		
TH	D	3	---	---	3	20	80	---	---	100	3
TH	D	3	---	---	3	20	80	---	---	100	3
TH	D	3	---	---	3	20	80	---	---	100	3
TH	D	3	---	---	3	20	80	---	---	100	3
TH	C	3	---	---	3	20	80	---	---	100	3
LAB	D	---	---	2	2	---	---	25	25	50	1
LAB	D	---	---	2	2	---	---	25	---	25	1
LAB	D	---	---	2	2	---	---	25	25	50	1
LAB	D	---	---	2	2	---	---	25	25	50	1
LAB	B	1	---	2	3	---	---	50	---	50	2
Industrial Training / EDP / Special Study	D	---	---	---	---	---	---	25	---	25	2
Total		16	---	10	26	100	400	175	75	750	23

ISE: Internal Sessional Examination

ESE: End Semester Examination

ICA : Internal Continuous Assessment

Note 1: For branches like Chemical Engineering and Biotech Engineering, two laboratory hours can be merged to form a four hour slot.

Note 2: Out of 3 practical ESE heads, at least 1 head should be practical.

TE Semester – VI

Name of the Course	Group	Teaching Scheme				Evaluation Scheme					Credits
		Theory Hrs / week	Tutorial Hrs / week	Practical Hrs / week	Total	Theory		Practical		Total	
						ISE	ESE	ICA	ESE		
TH	D	3	--	---	3	20	80	---	---	100	3
TH	D	3	---	---	3	20	80	---	---	100	3
TH	D	3	---	---	3	20	80	---	---	100	3
TH	D	3	---	---	3	20	80	---	---	100	3
TH	C	3	---	---	3	20	80	---	---	100	3
LAB	D	---	---	2	2	---	---	25	25	50	1
LAB	D	---	---	2	2	---	---	25	25	50	1
LAB	D	---	---	2	2	---	---	25	25	50	1
LAB	B	---	---	2	2	---	---	25	---	25	1
Minor Project	D	---	---	2	2	---	---	50	---	50	2
Seminar - I	D	---	---	2	2	---	---	25	---	25	2
Total		15	---	12	27	100	400	175	75	750	23

ISE: Internal Sessional Examination

ESE: End Semester Examination

ICA: Internal Continuous Assessment

Note 1: For branches like Chemical Engineering and Biotech Engineering, two laboratory hours can be merged to form a four hour slot.

Note 2: Out of 3 practical ESE heads, at least 1 head should be practical.

BE Semester - VII

Name of the Course	Group	Teaching Scheme				Evaluation Scheme					Credits
		Theory Hrs / week	Tutorial Hrs / week	Practical Hrs / week	Total	Theory		Practical		Total	
						ISE	ESE	ICA	ESE		
TH	D	3	---	---	3	20	80	---	---	100	3
TH	D	3	---	---	3	20	80	---	---	100	3
Interdisciplinary Elective	E	3	---	---	3	20	80	---	---	100	3
Elective - I	E	3	---	---	3	20	80	---	---	100	3
TH	D	3	--	---	3	20	80	---	---	100	3
LAB	D	---	---	2	2	---	---	25	25	50	1
LAB	D	---	---	2	2	---	---	25	25	50	1
LAB#	E	---	---	2	2	---	---	25	25	50	1
Project - I	D	---	---	2	2	---	---	25	25	50	2
Seminar - II	D	---	---	2	2	---	---	25	---	25	2
Industrial Visit	D	---	---	---	---	---	---	25	---	25	1
Total		15	---	10	25	100	400	150	100	750	23

ISE: Internal Sessional Examination

ESE: End Semester Examination

ICA: Internal Continuous Assessment

#Lab for Elective-I

Inter Disciplinary Elective

Elective I

1

1

2

2

3

4

Note 1: For branches like Chemical Engineering and Biotech Engineering, two laboratory hours can be merged to form a four hour slot.

Note 2: Out of 3 practical ESE heads, at least 1 head should be practical.

Note 3: Interdisciplinary Elective shall be offered by the department to the students of other department. Students from one department can not register for Interdisciplinary Elective of the same department.

Note 4: At least 15 students should register for offering any elective.

BE Semester – VIII

Name of the Course	Group	Teaching Scheme				Evaluation Scheme					Credits
		Theory Hrs / week	Tutorial Hrs / week	Practical Hrs / week	Total	Theory		Practical		Total	
						ISE	ESE	ICA	ESE		
TH	D	3	---	---	3	20	80	---	---	100	3
TH	D	3	---	---	3	20	80	---	---	100	3
Elective - II	E	3	---	---	3	20	80	---	---	100	3
Elective - III	E	3	---	---	3	20	80	---	---	100	3
LAB	D	---	---	2	2	---	---	25	25	50	1
LAB	D	---	---	2	2	---	---	25	25	50	1
LAB#	E	---	---	2	2	---	---	25	25	50	1
Industrial Lecture*	C	---	---	1*	1	---	---	50	---	50	2
Project - II	D	---	---	4	4	---	---	75	75	150	6
Total		12	---	11	23	80	320	200	150	750	23

ISE: Internal Sessional Examination

ESE: End Semester Examination

ICA: Internal Continuous Assessment

#Lab for Elective-II

* Minimum 6 lectures to be delivered by experts from the industry in alternate weeks. Next week group discussion on the lecture delivered.

Elective II

Elective III

1
2
3
4

1
2
3
4

Note 1: For branches like Chemical Engineering and Biotech Engineering, two laboratory hours can be merged to form a four hour slot.

Note 2: Out of 3 practical ESE heads, at least 1 head should be practical.

Note 3: Interdisciplinary Elective shall be offered by the department to the students of other department. Students from one department can not register for Interdisciplinary Elective of the same department.

Note 4: At least 15 students should register for offering any elective.