



Jai Mahakali Shikshan Sanstha's

# Shri Shankarprasad Agnihotri College of Engineering



Approved by AICTE, New Delhi (06/07/MS Engg, 2005 Dated 18/06/2007)  
DTE Mumbai Recognised by Govt of Maharashtra Affiliated to R.T.M. Nagpur University Nagpur

Pt. Shri. Shankarprasad Agnihotri  
President

Dr. C. B. Kothare (M.E. Ph.D.)  
Principal

Ref.

Date :

*1.1.2 The institution adheres to the academic calendar including for the conduct of Continuous Internal Evaluation (CIE)*

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PRINCIPAL

Shri Shankarprasad Agnihotri  
College of Engineering, WARDHA



**Jai Mahakali Shikshan Sanstha's**  
**Shri Shankarprasad Agnihotri College of Engineering, wardha**  
**ACADEMIC CALENDAR 2023-24**  
**(Odd Semester)**

Sr. No.	Activities	Date/Duration	Responsible Authorities
1	<b>Odd Semester</b>	<b>7 Aug. 2023 to 18 Nov. 2023</b>	
2	Completion of remaining fees up to	<b>15 Nov. 2023</b>	
3	Induction Program	7/08/2023 to 19/08/2023	HOD, Class In-charge
4	<b>Independence day</b>	15 August 2023	Institute
5	Parents /teacher meeting	1 <sup>st</sup> week of every month	HOD, Class In-charge
6	Students Grievance Redressal cell and women's Grievance Redressal meeting	1 <sup>st</sup> Week of every month	Student Grievance cell In charge, Woman's cell In charge
7	Display of Attendance	1 <sup>st</sup> Week of every month	Detention In-charge
8	Feedback	4 <sup>th</sup> week of every month	Class In charge
9	I <sup>st</sup> Program for Personality Development	4 <sup>th</sup> week of September	HOD, Class In-charge
10	Project Seminar	Applicable	Department
11	Unit Test – I	1 <sup>nd</sup> week of September	Subject Teacher
12	Allotment of Assignment -	2 <sup>nd</sup> week of September	Subject Teacher
13	<b>Seminar on Research Paper Writing</b>	Applicable	Department
14	Industrial Visit for Students	1 <sup>ST</sup> week of October	HOD/Class In-charges
15	Submission of Assignment	1 <sup>ST</sup> week of October	First week of October
16	Unit Test – II	3 <sup>th</sup> Week of September	Subject Teacher
17	International conference	NA	NA
18	Alumni meet and cultural	NA	NA
19	<b>Sessional Examination - I</b>	4 <sup>nd</sup> week of September	Sessional In-Charge
20	Display of Marks Sessional - I	1 <sup>st</sup> October 2023	Sessional In-Charge
21	Project Seminar	Applicable	Department
22	Unit Test – III	2 <sup>nd</sup> Week of October	Subject Teacher
23	Workshop	3 <sup>rd</sup> week of October	HOD/Class In-charges
24	II <sup>nd</sup> Program for Personality Development	4 <sup>th</sup> week of October	HOD/Class In-charges
25	1st Industry expert lecture/Guest lecture/seminar	1 <sup>st</sup> week of November	HOD/Class In-charges
26	<b>Sessional Examination - II</b>	1 <sup>st</sup> week of November	Sessional In-Charge
27	Internal Practical	3 <sup>rd</sup> week of November	Practical In-charge
28	Display of Marks Sessional - II	4 <sup>th</sup> week of November	Sessional In-Charge
29	Display of Overall Attendance	4 <sup>th</sup> week of November	Detention In-charge
30	Clearance (for Students of All Semester)	Up to 30 November 2023	HOD/Class In-charges
31	External Practical Examination	As Per RTMNU Schedule	Practical In-charge
32	University Theory Examination	As Per RTMNU Schedule	-----

Activity Schedule:

1.	Parents Meet	1 <sup>st</sup> Saturday of every month	Class teacher
2.	Technical Event	2 <sup>nd</sup> Saturday of every month	ISTE I/C
3.	Cultural Event	3 <sup>rd</sup> Saturday of every month	ISTE I/C
4.	Sports Event	4 <sup>rd</sup> Saturday of every month	ISTE I/C



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**Jai Mahakali Shikshan Sanstha's**  
**Shri Shankarprasad Agnihotri College of Engineering, Ramnagar, Wardha**  
**ACADEMIC CALENDAR 2023-24**  
**(Even Semester)**

Sr. No.	Activities	Date/Duration	Responsible Authorities
1	<b>Even Semester</b>	<b>01 Dec. 2023 to 30 Apr. 2024</b>	
2	Completion of remaining fees up to	24 Jan 2024	Admin, Account In-charge
3	Display of Attendance	1 <sup>st</sup> Week of every month	Detention In-charge
4	Annual Program	14 Jan 2024 to 16 Jan 2024	HOD, Class In-charge
5	<b>Republic day</b>	26 Jan 2024	Institute
6	1 <sup>st</sup> Program for Personality Development	2 <sup>nd</sup> week of month	HOD, Class In-charge
7	Feedback	4 <sup>th</sup> week of every month	Class In charge
8	Unit Test – I	4 <sup>th</sup> week of Jan	Subject Teacher
9	Allotment & Submission of Assignment -	4 <sup>th</sup> week of every month	Subject Teacher
10	Project Seminar	1 <sup>st</sup> week according to dept. Schedule	Department
11	Seminar on Research Paper Writing	1 <sup>st</sup> week of Feb	Department
12	<b>Sessional Examination - I</b>	3 <sup>rd</sup> week of Feb	Sessional In-Charge
13	Display of Marks Sessional - I	1 <sup>st</sup> week of Feb	Sessional In-Charge
14	Unit Test – II	2 <sup>nd</sup> Week of Feb	Subject Teacher
15	Industrial Visit for Students	2 <sup>nd</sup> week of Feb	HOD/Class In-charges
16	Cultural Activity (Shiv Jayanti)	19 Feb 2024	Department
17	Workshop	3 <sup>rd</sup> week of Feb	HOD/Class In-charges
18	2 <sup>nd</sup> Program for Personality Development	4 <sup>th</sup> week of Feb	HOD/Class In-charges
19	<b>Sessional Examination - II</b>	2 <sup>nd</sup> week of March	Sessional In-Charge
20	Internal Practical	2 <sup>nd</sup> week of March	Practical In-charge
21	Display of Marks Sessional - II	2 <sup>nd</sup> week of March	Sessional In-Charge
22	Display of Overall Attendance	2 <sup>nd</sup> week of March	Detention In-charge
23	<b>International conference</b>	3 <sup>rd</sup> week of March 2024	Institute
24	Alumni meet and cultural	3 <sup>rd</sup> week of March 2024	Institute
25	Clearance (for Students of All Semester)	Up to 14 March 2024	HOD/Class In-charges
26	External Practical Examination	As Per RTMNU Schedule	Practical In-charge
27	University Theory Examination	As Per RTMNU Schedule	-----

Activity Schedule:

1	- Students & Women's Grievance Redress Cell Meet - Parents / Teacher Meet	1 <sup>st</sup> Week of every month	- Student & Woman's Grievance Cell In charge - Class In charge
2	- Technical Event - Anti Ragging Cell Meet	2 <sup>nd</sup> Week of every month	- ISTE Technical - Anti Ragging Cell In charge
3	- Cultural Event	3 <sup>rd</sup> Week of every month	ISTE Cultural In charge
4	- Sports & NSS Event (Indoor & Outdoor) Activity	4 <sup>th</sup> Week of every month	Sports & NSS In charge



  
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College of Engineering, WARDHA

# University Guideline

## UNIT- III: ANALYSIS OF CONTINUOUS TIME PERIODIC AND APERIODIC SIGNALS (14Marks)

Fourier Series: Trigonometric Fourier Series, Exponential Fourier Series, Fourier Transform Properties: Linearity, Time Shifting, Time and frequency scaling, Duality, Multiplication property, Differentiation and Integration, Convolution property, Parseval's relation.

## UNIT- IV: LAPLACE TRANSFORM(14Marks)

Review of the Laplace Transform for continuous time signals and systems, system functions, poles and zeros of system functions and signals, Laplace domain analysis of LTI systems.

## UNIT- V: DISCRETE TIME FOURIER TRANSFORM (DTFT) (14Marks)

Introduction, Representation of aperiodic Signals: The Discrete-Time Fourier Transform, The Fourier Transform of periodic signal, Properties of Discrete-Time Fourier Transform, Frequency response of discrete time LTI systems.

### Continuous Assessment (Internal Marks) evaluation guidelines:

1. A total mark allotted for internal marks is 30. Out of this, 10 marks shall be exclusively allotted to activity-based learning.
2. Remaining 20 marks can be based on continuous tests/ examinations, assignments etc. as per internal mark policy of the institute.

### Activity Based Learning

#### Instructions for Activity Based Learning

1. All Experiments are from Virtual Labs.
2. At least 1 experiment activity should be conducted from every unit.
3. Some additional simulation-based activities feasible to be executed in classrooms can be added by the course teachers.
4. At least 10 activities to be conducted in every course in classroom.
5. Course faculty is permitted to use any other open source or licensed platform in classroom.
6. Course faculty can add any other activity as per the feasibility in classroom-based teaching learning process.

#### Suggested List

1. Exp-1 Signals and their properties  
Demonstration of different signals and their properties. There are FIVE sub-experiments within this experiment.
2. Exp-2 System and their property  
Demonstration of Salient properties systems. There are THREE sub-experiments within this experiment.
3. Exp-3 Fourier analysis of signals  
Analysis of Fourier properties of Signals. There are SIX sub-experiments within this experiment.
4. Exp-4 Sampling and signal reconstruction.

Weinbridge Potentiometers, Measurement of Inductance, capacitance using AC bridges like Anderson, Ownens; DeSauty's. Shielding and earthing.

### UNIT – III: ANALOG/ DIGITAL MEASUREMENT SYSTEMS: (14Marks)

Signal conditioning measurement meters, Electronic multimeter, Q-meter, RF power and voltage measurements. Measurement of Energy- A.C. single phase and poly-phase induction type energy meters. Oscilloscope: Digital storage oscilloscope – 2 and 4 channel, delay line, multiple trace. Triggering, delayed sweep. HMI systems for SCADA.

### UNIT – IV: FREQUENCY AND POWER MEASUREMENT: (14Marks)

Frequency, and Time measurement, signal analysis. frequency counters – measurement of frequency and time interval – extension of frequency range. Function generators – RF signal generators – Sweep generators – Frequency synthesizer – wave analyzer – Harmonic distortion analyzer – spectrum analyzer, Recent trends/developments.

### UNIT V: TELEMETRY SYSTEMS: (14Marks)

What Is Telemetry? How Telemetry Works, Benefits of Telemetry, Challenges. Learn by exploring some of the tutorials on following platforms -

- Windows Azure: Telemetry Basics and Troubleshooting
- Instrumenting Your App for Telemetry and Analytics
- Software Project Telemetry
- Telemetry Dashboard Documentation – Mozilla
- Building a Scalable Geolocation Telemetry System in the Cloud using the Maps API

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2. At least 1 experiment activity should be conducted from every unit.
3. Some additional simulation-based activities feasible to be executed in classrooms can be added by the course teachers.
4. At least 10 activities to be conducted in every course in classroom.
5. Course faculty is permitted to use any other open source or licensed platform in classroom.
6. Course faculty can add any other activity as per the feasibility in classroom-based teaching learning process.

#### Suggested List

1. Measurement of Capacitance by Carey Foster Bridge
2. Measurement of Self Inductance of High Quality Factor Coil by Hay's Bridge
3. To study the Kelvin Double Bridge for Low resistance measurement

## 2.Scheme of Examination B. Tech First Semester

A-2

**Scheme of Examination B.E. First year ( All Branches of Engineering )**

**Second Semester**

Sub Code	Subjects	Workload in hrs			Credits	Marks				Minimum Passing Marks		
		L	T/A	P		Theory		Practical		Total	Theory	Practical
						Internal	Uni	Internal	Uni			
BSE2-1T	Mathematics-I	3	1	-	4	30	70	-	-	100	45	-
BSE2-2T	Advanced Engineering Materials	2	2	-	3	30	70	-	-	100	45	-
BSE2-3T	Applied Chemistry	3	2	-	4	30	70	-	-	100	45	-
BSE2-4T	Computational Skills	2	-	-	2	15	35	-	-	50	23	-
BSE2-6T	Basics of Electrical Engineering	2	-	-	2	15	35	-	-	50	23	-
BSE2-7T	Engineering Mechanics	2	-	-	2	15	35	-	-	50	23	-
BSE2-8T	Indian Culture & Constitution	2	-	-	Audit	50	-	-	-	Audit	-	-
BSE2-9P	Workshop Practices	-	-	4	2	-	-	50	50	100	-	50
BSE2-2P	Advanced Engineering Materials	-	-	2	1	-	-	25	25	50	-	25
BSE2-3P	Applied Chemistry	-	-	3	1.5	-	-	25	25	50	-	25
BSE2-4P	Computational Skills	-	-	2	1	-	-	25	25	50	-	25
Three weeks Induction Program												
<b>Total</b>		<b>16</b>	<b>5</b>	<b>11</b>	<b>22.5</b>	<b>135*</b>	<b>315</b>	<b>125</b>	<b>125</b>	<b>700</b>		

\* L- Lecture, P-Practical, T- Tutorial, A- Activity (Half Credit per Hour)  
 \* Audit course marks are not counted in total marks

**Guidelines**

- Energy and Environment shall be taught by faculty of Chemistry and will come under board of Applied Science and Humanities (only by Chemistry Dept)
- Advance Engineering Materials shall be taught by faculty of Physics and will come under board of Applied Science and Humanities (only by Physics Dept)

Head of Department  
 Dept. Science (I & II)  
 Maharajrao Agrawala  
 College of Engg. WARDHA

## Scheme of Examination B. Tech Second Semester

A-1

**Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur**  
**Four Years B.E. Course**  
 Scheme of Examination B.E. First year ( All Branches of Engineering )

**First Semester**

Sub Code	Subjects	Workload in hrs			Credits	Marks				Minimum Passing Marks		
		L	T/A	P		Theory		Practical		Total	Theory	Practical
						Internal	Uni	Internal	Uni			
BSE1-1T	Mathematics-I	3	1	-	4	30	70	-	-	100	45	-
BSE1-2T	Applied Physics	3	2	-	4	30	70	-	-	100	45	-
BSE1-3T	Energy and Environment	2	2	-	3	30	70	-	-	100	45	-
BSE1-4T	Communication Skills	2	-	-	2	15	35	-	-	50	23	-
BSE1-5T	Engineering Graphics	1	-	-	1	15	35	-	-	50	23	-
BSE1-6T	Basics of Civil & Mechanical Engineering	4	-	-	Audit	50	-	-	-	Audit	-	-
BSE1-2P	Applied Physics Lab	-	-	3	1.5	-	-	25	25	50	-	25
BSE1-3P	Energy and Environment Lab	-	-	2	1	-	-	25	25	50	-	25
BSE1-4P	Communication Skills Lab	-	-	2	1	-	-	25	25	50	-	25
BSE1-5P	Engineering Graphics Lab	-	-	4	2	-	-	25	25	50	-	25
Three weeks Induction Program												
<b>Total</b>		<b>15</b>	<b>11</b>		<b>19.5</b>	<b>120*</b>	<b>280</b>	<b>100</b>	<b>100</b>	<b>600</b>		

\* L- Lecture, P-Practical, T- Tutorial, A- Activity (Half Credit per Hour)

Head of Department  
 Dept. Science (I & II)  
 Maharajrao Agrawala  
 College of Engg. WARDHA

## **Description-**

### **University Assessment (UA)**

As per the RTM scheme of examination B-Tech first year theory paper is total 100 marks. According to the syllabus, 70 marks of RTM theory paper (UA) and 30 marks (CA) for the college assessment.

1. Theory university assessment (UA) = **70 marks.**
2. Theory university assessment (UA) = **35 marks.**

**For external practical exam (UA) =25 marks**

15 Marks for performance+ written test) + 10 (viva) =25

### **College Assessment (CA)**

#### **Internal Assessment for Theory Paper**

i) Theory College assessment =30 marks

Distribution of marks are according to- 10(continuous assessment 2 tests per semester) +10 (assignment 2 marks per unit)+10 marks for Activity (flip learning/ ppt presentation) =30

ii) Theory College assessment =15 marks

Distribution of marks are according to-05(continuous assessment 2 tests per semester) +05 (assignment 2 marks per unit) +05 (flip learning/ ppt presentation) =15 marks

#### **Internal Assessment for Practical**

Internal practical examination - 25 marks

15 marks for performance+ written test) + 05(Viva) + 05(Journal)-=25M.

Evaluation of Internal Practical Assessment

These 25 marks is average of continuous assessment of all practical and its evaluation of the students at the time of journal checking.

## **Description:**

### University Assessment (UA)

As per the RTM scheme of examination B-Tech first year theory paper is total 100 marks.  
According to the syllabus,

70 marks of RTM theory paper (UA) and 30 marks (CA) for the college assessment. It is divided into

10 (sessional) + 10 (assignment) +10 (activity) =30.

**Practical Exam**-As per the university practical examination marks is total=(50).25 mark for university assessment(external exam)25 marks for the college assessment in the form of (internal exam).

E



**Scheme of Examination E&TC Engineering**  
**R.T.M. Nagpur University, Nagpur**  
**FOUR-YEAR B.E. COURSE**  
**(Revised Curriculum as per AICTE Model Curriculum)**  
**SCHEME OF EXAMINATION FOR**  
**B.Tech. FIRST YEAR (All Branches of Engineering)**  
**(SEMESTER – I)**

Code	Subject	Teaching Scheme				Credits				MARKS				
										Theory		Practical		Total Marks
		L	P	T/A	Total	L	P	T/A	Total	Internal	Univ.	Internal	Univ.	
BSE1-1T	Mathematics-I	3	-	1T	4	3	-	1	4	30	70	-	-	100
BSE1-2T	Applied Physics	3	-	1T	4	3	-	1	4	30	70	-	-	100
BSE1-3T	Energy and Environment	2	-	1T	3	2	-	1	3	30	70	-	-	100
BSE1-4T	Communication Skills	2	-	-	2	2	-	-	2	15	35	-	-	50
BSE1-5T	Engineering Graphics	1	-	-	1	1	-	-	1	15	35	-	-	50
BSE1-6T	Basics of Civil & Mechanical Engineering	4	-	-	4	-	-	-	AUDIT	50	-	-	-	AUDIT
BSE1-2P	Applied Physics Lab	-	3	-	3	-	1.5	-	1.5	-	-	25	25	50
BSE1-3P	Energy and Environment Lab	-	2	-	2	-	1	-	1	-	-	25	25	50
BSE1-4P	Communication Skills Lab	-	2	-	2	-	1	-	1	-	-	25	25	50
BSE1-5P	Engineering Graphics Lab	-	4	-	4	-	2	-	2	-	-	25	25	50
	Three weeks Induction Program													
<b>Total</b>		15	11	3T	29	11	5.5	3	19.5	120	280	100	100	600

- L- Lecture , P-Practical, T- Tutorial , A- Activity (Half Credit perHour)
- Audit course marks are not counted in totalmarks

**SCHEME OF EXAMINATION FOR  
B.Tech. FIRST YEAR (All Branches of Engineering)  
(SEMESTER – II)**

Code	Subject	Teaching Scheme				Credits				MARKS				
										Theory		Practical		Total Marks
		L	P	T/A	Total	L	P	T/A	Total	Internal	Univ.	Internal	Univ.	
BSE2-1T	Mathematics-II	3	-	1T	4	3	-	1	4	30	70	-	-	100
BSE2-2T	Advanced Engineering Materials	2	-	1A	3	2	-	1	3	30	70	-	-	100
BSE2-3T	Applied Chemistry	3	-	1T	4	3	-	1	4	30	70	-	-	100
BSE2-4T	Computational Skills	2	-	-	2	2	-	-	2	15	35	-	-	50
BSE2-6T	Basics of Electrical Engineering	2	-	-	2	2	-	-	2	15	35	-	-	50
BSE2-7T	Engineering Mechanics	2	-	-	2	2	-	-	2	15	35	-	-	50
BSE2-8T	Indian Culture & Constitution	2	-	-	2	-	-	-	AUDIT	50	-	-	-	AUDIT
BSE1-5P	Workshop Practices	-	4	-	4	-	2	-	2	-	-	50	50	100
BSE2-2P	Advanced Engineering Materials Lab	-	2	-	2	-	1	-	1	-	-	25	25	50
BSE2-3P	Applied Chemistry Lab	-	3	-	3	-	1.5	-	1.5	-	-	25	25	50
BSE2-4P	Computational Skills Lab	-	2	-	2	-	1	-	1	-	-	25	25	50
	Three weeks Induction Program													
<b>Total</b>		<b>16</b>	<b>11</b>	<b>2T+1A</b>	<b>30</b>	<b>14</b>	<b>5.5</b>	<b>3</b>	<b>22.5</b>	<b>135</b>	<b>315</b>	<b>125</b>	<b>125</b>	<b>700</b>

**Guidelines**

- Energy and Environment shall be taught by faculty of Chemistry and will come under board of Applied Science and Humanities (only by ChemistryDept)
- Advance Engineering Materials shall be taught by faculty of Physics and will come under board of Applied Science and Humanities (only by PhysicsDept)

# R.T.M. Nagpur University, Nagpur

## SCHEME OF EXAMINATION

### B.Tech. ELECTRONICS & TELECOMMUNICATION / ELECTRONICS & COMMUNICATION ENGINEERING/ ELECTRONICS ENGINEERING (SEMESTER – III)

Code	Subject	Teaching Scheme				Credit				MARKS				
										Theory		Practical		Total Marks
		L	Practical	Tutorial / Activity	Total	L	P	T/A	Total	Internal	Univ.	Internal	Univ.	
BEETC-301	Applied Maths-III	3	-	-	3	3	-	-	3	30	70	-	-	100
BEETC-302T	Components for Electronic circuit design	3	-		3	3	-	-	3	30	70	-	-	100
BEETC-302P	Components for Electronic circuit design Lab	-	2	-	2	-	1	-	1	-	-	25	25	50
BEETC-303T	Digital System Design	3	-	1T	4	3	-	1	4	30	70	-	-	100
BEETC-303P	Digital System Design Lab	-	2	-	2	-	1	-	1	-	-	25	25	50
BEETC-304P	Network Theory	3	-	-	3	3	-	-	3	30	70	-	-	100
BEETC-305T	Signal & System	3	-	-	3	3	-	-	3	30	70	-	-	100
BEETC-306T	Measurement and Instrumentation	3	-	-	3	3	-	-	3	30	70	-	-	100
BEETC-307P	Electronics Workshop I Lab	-	2	-	2	-	1	-	1	-	-	25	25	50
BEETC-308T	Consumer affairs	2	-		2							-	-	Audit
	<b>Total</b>	<b>20</b>	<b>6</b>	<b>1T</b>	<b>27</b>	<b>18</b>	<b>3</b>	<b>1</b>	<b>22</b>	<b>180</b>	<b>420</b>	<b>75</b>	<b>75</b>	<b>750</b>

**SCHEME OF EXAMINATION FOR  
B.Tech. ELECTRONICS & TELECOMMUNICATION / ELECTRONICS & COMMUNICATION ENGINEERING/ ELECTRONICS  
ENGINEERING  
(SEMESTER – IV)**

Code	Subject	Teaching Scheme				Credit				MARKS				
										Theory		Practical		Total Marks
		L	Practical	Tutorial / Activity	Total	L	P	T/A	Total	Internal	University	Internal	Univ.	
BEETC-401T	Microcontrollers & Applications	3	-	1T	4	3	-	1	4	30	70	-	-	100
BEETC-401P	Microcontrollers & Applications Lab	-	2	-	2	-	1	-	1	-	-	25	25	50
BEETC-402T	Analog & Digital Communications	3	-	1T	4	3	-	1	4	30	70	-	-	100
BEETC-403P	Analog and Digital Electronics Lab	-	2	-	2	-	1	-	1	-	-	25	25	50
BEETC-404T	Analog System Design	3	-	1T	4	3	-	1	4	30	70	-	-	100
BEETC-405T	Data structure & Algorithm	3	-	-	3	3	-	-	3	30	70	-	-	100
BEETC-406T	HSC: Numerical Mathematics and Probability Using MATLAB	3	-	-	3	3	-	-	3	30	70	-	-	100
BEETC-407T	Programming for problem solving	2	-	-	2	2	-	-	2	15	35	-	-	50
BEETC-407P	Programming for problem solving Lab	-	4	-	4	-	2	-	2			25	25	50
BEETC-408I	Internship								1			50	-	50
BEETC-409A	Universal human values	3			3	3			3	30	70			100
	<b>Total</b>	<b>20</b>	<b>8</b>	<b>3T</b>	<b>31</b>	<b>20</b>	<b>4</b>	<b>3</b>	<b>28</b>	<b>195</b>	<b>455</b>	<b>125</b>	<b>75</b>	<b>850</b>

- L- Lecture , P-Practical, T- Tutorial , A- Activity
- Audit course marks are not counted in total marks

**SCHEME OF EXAMINATION FOR  
B.Tech. ELECTRONICS & TELECOMMUNICATION / ELECTRONICS & COMMUNICATION ENGINEERING  
(SEMESTER – V)**

Code	Subject	Teaching Scheme				Credits				MARKS				
										Theory		Practical		Total Marks
		L	P	T/A	Total	L	P	T/A	Total	Internal	Univ.	Internal	Univ.	
BEETC-501T	Embedded System Design	2	-	1T	3	2	-	1	3	30	70	-	-	100
BEETC-501P	Embedded System Design Lab	-	2	-	2	-	1	-	1	-	-	25	25	50
BEETC-502T	Electromagnetic Waves	3	-	1T	4	3	-	1	4	30	70	-	-	100
BEETC-503T	Digital Signal Processing	3	-	-	3	3	-	-	3	30	70	-	-	100
BEETC-503P	Digital Signal Processing Lab	-	2	-	2	-	1	-	1	-	-	25	25	50
BEETC-504OT	HSC: IEED(Economics)	2	-	1A	3	2	-	1	3	30	70			100
BEETC-505PE	PEC-I	2	-	1T	3	2	-	1	3	30	70	-	-	100
BEETC-506P	Electronic Workshop II	-	2	-	2		1	-	1	-	-	25	25	50
BEETC-507A	Audit Course													AUDIT
	<b>Total</b>	<b>12</b>	<b>6</b>	<b>3T+1A</b>	<b>22</b>	<b>12</b>	<b>3</b>	<b>4</b>	<b>19</b>	<b>150</b>	<b>350</b>	<b>75</b>	<b>75</b>	<b>650</b>

**SCHEME OF EXAMINATION FOR  
B.Tech. ELECTRONICS & TELECOMMUNICATION / ELECTRONICS & COMMUNICATION ENGINEERING  
(SEMESTER – VI)**

Code	Subject	Teaching Scheme				Credit				MARKS				Total Marks
		L	P	T/A	Total	L	P	T/A	Total	Theory		Practical		
										Internal	Univ.	Internal	Univ.	
BEETC-601T	Computer Communication Network	2	-	-	2	2	-	-	2	30	70	-	-	100
BEETC-601P	Computer Communication Network Lab	-	2	-	2	-	1	-	1	-	-	25	25	50
BEETC-602T	Internet of Things (IOT)	2	-	-	2	2	-	-	2	30	70	-	-	100
BEETC-602P	IOT Lab	-	2	-	2	-	1	-	1	-	-	25	25	50
BEETC-603T	Wireless Sensor Network	2	-	-	2	2	-	-	2	30	70	-	-	100
BEETC-603P	Wireless Sensor Network Lab	-	2	-	2	-	1	-	1	-	-	25	25	50
BEETC-604PE	PEC-II	2	-	1T	3	2	-	1	3	30	70	-	-	100
BEETC-605OE	OE-I	2	-	1A	3	2	-	1	3	30	70	-	-	100
BEETC-606T	HSC: Effective Technical Communication	2		-	2	-	-	2	2	15	35	-	-	50
BEETC-607I	Mini Project(Internship)	-		3A	3	--	-	3	3	-	-	25	25	50
BEETC-608A	Audit Course	-								-	-			AUDIT
<b>Total</b>		<b>12</b>	<b>6</b>	<b>1T+4A</b>	<b>23</b>	<b>10</b>	<b>3</b>	<b>7</b>	<b>20</b>	<b>165</b>	<b>385</b>	<b>100</b>	<b>100</b>	<b>750</b>

**SCHEME OF EXAMINATION FOR  
B.Tech. ELECTRONICS & TELECOMMUNICATION / ELECTRONICS & COMMUNICATION ENGINEERING  
(SEMESTER – VII)**

Code	Subject	Teaching Scheme				Credit				MARKS				
										Theory		Practical		Total Marks
		L	P	T/A	Total	L	P	T/A	Total	Internal	Univ.	Internal	Univ.	
BEETC-701PE	PEC-III	3	2	1T	6	3	1	1	5	30	70	25	25	150
BEETC-702PE	PEC-IV	3	2	1T	6	3	1	1	5	30	70	25	25	150
BEETC-703PE	PEC-V	3	-		3	3	-		3	30	70	-	-	100
BEETC-704OE	OE-II	2	-	1T	3	2	-	1	3	30	70	-	-	100
BEETC-705I	Seminar/Internship	-	2	-	2	-	1	-	1	-	-	50	-	50
BEETC-706A	IPR	1		1A	2	-	-	-	-	-	-	-	-	AUDIT
	<b>Total</b>	<b>12</b>	<b>6</b>	<b>3T+1A</b>	<b>22</b>	<b>11</b>	<b>3</b>	<b>3</b>	<b>17</b>	<b>120</b>	<b>280</b>	<b>100</b>	<b>50</b>	<b>550</b>

**SCHEME OF EXAMINATION FOR  
B.Tech. ELECTRONICS & TELECOMMUNICATION / ELECTRONICS & COMMUNICATION ENGINEERING  
(SEMESTER – VIII)**

Code	Subject	Teaching Scheme				Credit				MARKS				
		L	P	T/ A	Total	L	P	T/ A	Total	Theory		Practical		Total Marks
										Internal	Univ.	Internal	Univ.	
BEETC - 801PE	Program Elective –VI MOOC/NPTEL Course	3	-	-	3	3	-	-	3	30	70	-	-	100
BEETC - 802PE	Program Elective -VII MOOC/NPTEL Course	3	-	-	3	3	-	-	3	30	70	-	-	100
BEETC -803P	Project	-	12	-	12	-	6	-	6	-	-	50	50	100
	Seminar	-	-	2A	2	-	-	2	2	-	-	50	-	50
<b>Total</b>		<b>6</b>	<b>12</b>	<b>2A</b>	<b>20</b>	<b>6</b>	<b>6</b>	<b>2</b>	<b>14</b>	<b>60</b>	<b>140</b>	<b>100</b>	<b>50</b>	<b>350</b>

**LIST OF ELECTIVE COURSES**



Semester	Elective Type	Subject	
V	Program Elective-I	1. Operating Systems	
		2. Information Theory and Error Correcting Codes	
		3. Electronic Design Techniques With HDL	
		4. Sensors and Systems	
VI	Program Elective-II	1. Computer Architecture	
		2. Database Management Systems	
		3. Antennas & Wave Propagation	
		4. Control System Engineering	
	Open Elective-I	1. Consumer Electronics	
		2. Industrial Electronics	
VII	Program Elective-III	1. Audio and Video Engineering	
		2. Web Technologies	
		3. Mobile Communications	
		4. Robotics and Automation	
	Program Elective-IV	1. Mixed Signal Design	
		2. Data Science/ Cloud Computing	
		3. Radar and Satellite Communication	
		4. PLA and Scada	
	Program Elective-V	1. Soft computing	
		2. Fundamentals of Machine Learning	
		3. Optical Communication	
		4. Biomedical Engineering	
	Open Elective II	1. Mechatronics	
		2. Bioengineering	
	VIII	Mooc I	1. CMOS VLSI Design
			2. Artificial Intelligence
3. Evolution of Air Interface towards 5G			
4. MEMS			
MOOC		1. VLSI Signal Processing	
		2. Android Programming	



**SHRI SHANKARPRASAD AGNIHOTRI COLLEGE OF ENGG, WARDHA**  
**Department of Electronics and Telecommunication Engineering**  
**Internal Evaluation policy**

For Theory Papers Total Marks 100 is distributed as,

- 70 marks for RTMNU University theory paper ( **University assessment**)
- 30 marks for **internal College assessment.**

For ractical

- 25 marks University assessment
- 25 marks for college assessment.

Continuous Assessment Internal Marks Evolution Guidelines As Per The University total mark allotted for the internal marks is 30 out of this ,

- 10 marks shall be allotted to activity based learning.
- 10 marks sessional unit test
- 10 marks assignments (2 marks for each unit).

College assessment 30 marks University assessment 70 marks

Examination scheme for practical

- 25 marks University practical
- 25 marks for internal evaluation of 25 marks internal assessment 15 marks for performance, 5 marks for viva ,5 marks for record
- Note that 5 marks record is the average of continuous assessment of all the practical performance and its evaluation of the student at the time of journal checking

*A. P. Linge*  
HOD

Prof.A. P.Linge

*Electronics & Telecomm. Engg.*  
*Shri Shankarprasad Agnihotri*  
*College of Engg. WARDHA*

# Scheme of Examination CSE Engineering

SHRI. SHANKARPRASAD AGNIHOTRI COLLEGE OF ENGINEERING RAMNAGAR, WARDHA

Department of Computer Science and Engineering  
Session 2023-2024

## Continues Assessment (Internal Marks) evaluation Guidelines

### Continuous Assessment (Internal Marks) evaluation guidelines:

1. A total mark allotted for internal marks is 30. Out of this, 10 marks shall be exclusively allotted to activity-based learning.
2. Remaining 20 marks can be based on continuous tests/ examinations, assignments etc. as per internal mark policy of the institute.

### Activity Based Learning

#### Instructions for Activity Based Learning

1. All Experiments are from Virtual Labs.
2. At least 1 experiment activity should be conducted from every unit.
3. Some additional simulation-based activities feasible to be executed in classrooms can be added by the course teachers.
4. At least 10 activities to be conducted in every course in classroom.
5. Course faculty is permitted to use any other open source or licensed platform in classroom.
6. Course faculty can add any other activity as per the feasibility in classroom-based teaching learning process.

R.T. M. Nagpur University, Nagpur  
FOUR YEAR B.E. COURSE

B.E. SCHEME OF EXAMINATION year: 2021-22

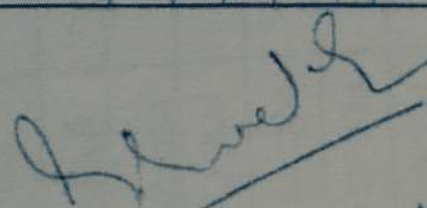
Scheme of Teaching & Examination of Bachelor of Engineering III Semester B.E. (Computer Science and Engineering)

Sr. No.	Course Code	Category	Course Name	Hours/Week			Credits	Maximum Marks				
				L	T	P		Theory		Total		
								Internal	University			
1	BECSE301T	Basic Sciences courses	Applied Mathematics - III	3	1	-	4.00	30	70	-	-	100
2	BECSE302T	Professional core courses	Object Oriented Programming with Java	3	1	-	4.00	30	70	-	-	100
3	BECSE302T	Professional core courses	Operating System	3	-	-	3.00	30	70	-	-	100
4	BECSE304T	Professional core courses	Computer Architecture & Digital System	3	1	-	4.00	30	70	-	-	100
5	BECSE305T	Professional core courses	Ethics in IT	3	-	-	3.00	30	70	-	-	100
6	BECSE306T	Humanities Social and Management Courses	Universal Human Values	2	-	-	2.00	15	35	-	-	50
7	BECSE307T	Mandatory Course	Environment Science (Audit)	2	-	-	0.00	-	-	-	-	-
8	BECSE302P	Professional core courses	Object Oriented Programming with Java Lab	-	-	2	1.00	-	-	25	25	50
9	BECSE303P	Professional core courses	Operating System Lab	-	-	2	1.00	-	-	25	25	50
10	BECSE308P	Professional core courses	Computer Workshop-1 Lab	-	-	2	1.00	-	-	25	25	50
<b>Total</b>				<b>19</b>	<b>3</b>	<b>6</b>	<b>23.00</b>	<b>165</b>	<b>385</b>	<b>75</b>	<b>75</b>	<b>700</b>

*S. V. Sonekar*  
Dr. S. V. Sonekar  
Chairman.

**RTMNU B.E. SCHEME OF EXAMINATION 2021-22**  
**Scheme of Teaching & Examination of Bachelor of Engineering IV Semester B.E. (Computer Science and Engineering)**

Sr. No.	Course Code	Category	Course Name	Hours/Week			Credits	Maximum Marks				
				L	T	P		Theory		Practical		Total
								Internal	University	Internal	University	
1	BECSE401T	Basic sciences	Discrete Mathematics and Graph Theory	3	0	0	3.00	30	70	-	-	100
2	BECSE402T	Professional core courses	Data Structure and Program Design	3	1	0	4.00	30	70	-	-	100
3	BECSE402P	Professional core courses	Data Structure and Program Design Lab	0	0	2	1.00	-	-	25	25	50
4	BECSE403T	Professional core courses	Database Managements Systems	3	0	0	3.00	30	70	-	-	100
5	BECSE403P	Professional core courses	Database Managements Systems Lab	0	0	2	1.00	-	-	25	25	50
6	BECSE404T	Professional core courses	Computer Networks	3	0	0	3.00	30	70	-	-	100
7	BECSE405T	Professional core courses	Theory of Computation	3	1	0	4.00	30	70	-	-	100
8	BECSE406T	Professional core courses	System Programming	3	0	0	3.00	30	70	-	-	100
9	BECSE407P	Professional core courses	Computer Workshop-II (Python)	0	0	2	1.00	-	-	25	25	50
10	BECSE408	Project-CS	Internship	0	0	2	1.00	-	-	50	-	50
<b>Total</b>				<b>18</b>	<b>2</b>	<b>8</b>	<b>24.00</b>	<b>180</b>	<b>420</b>	<b>125</b>	<b>75</b>	<b>800</b>

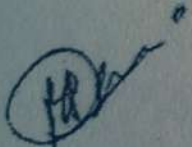
  
 Dr. S. V. Sonelkar  
 Chairman

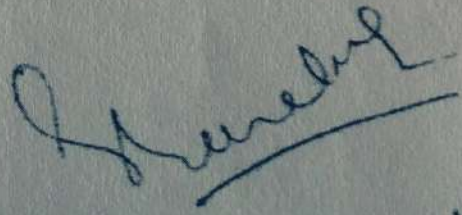
**RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY, NAGPUR**  
**FOUR YEAR BACHELOR OF TECHNOLOGY (B.Tech) DEGREE COURSE**  
**SEMESTER: V (C.B.C.S.)**  
**BRANCH: COMPUTER SCIENCE AND ENGINEERING**

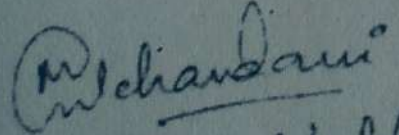
Fifth Semester:-

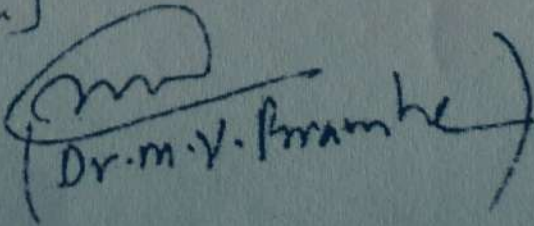
S. N.	Subject	Teaching Scheme			Evaluation Scheme			Credits	Category
		L	T	P	CA	UE	Total		
1	Artificial Intelligence	3	1	-	30	70	100	4	PCC-CS
2	Artificial Intelligence-Lab	-	-	2	25	25	50	1	PCC-CS
3	Design & Analysis of Algorithms	3	1	-	30	70	100	4	PCC-CS
4	Design & Analysis of Algorithms -Lab	-	-	2	25	25	50	1	PCC-CS
	Software Engineering & Project Management	3	-	-	30	70	100	3	PCC-CS
5	Elective-I	3	-	-	30	70	100	3	PEC-CS
6	Effective Technical Communication	2	-	-	15	35	50	2	HSMC
7	Professional Skills Lab I			2	25	25	50	1	ESC
8	Yoga and Meditation (Audit Course)	2	-	-	50	-	-	Audit	MC
	<b>Total</b>	<b>16</b>	<b>02</b>	<b>06</b>			<b>600</b>	<b>19</b>	

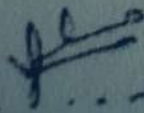
Elective-1: 1. TCP/IP    2. Design Patterns    3. Data Warehousing and Mining

  
 [Mrs. B.P. Chavaskar]

  
 Dr. S.V. Sonelkar  
 Chairman

  
 [Ms. Mona Mulchandani]

  
 (Dr. M.V. Pramank)

  
 A. Kase

RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY, NAGPUR  
FOUR YEAR BACHELOR OF TECHNOLOGY (B. Tech..) DEGREE COURSE  
SEMESTER: VI (C.B.C.S.)

BRANCH: COMPUTER SCIENCE AND ENGINEERING

Examination Scheme and Syllabus

Sixth Semester:-

S. N.	Subject	Teaching Scheme			Evaluation Scheme			Credits	Category
		L	T	P	CA	UE	Total		
1	Compiler Design	4	-	-	30	70	100	4	PCC-CS
2	Compiler Design -Lab	-	-	2	25	25	50	1	PCC-CS
3	Elective-II	3	-	-	30	70	100	3	PEC-CS
4	Elective-III	3	-	-	30	70	100	3	PEC-CS
5	Open Elective-I	3	-	-	30	70	100	3	OEC
6	Professional Skills Lab II	-	-	2	25	25	50	1	PCC-CS
7	Hardware Lab	-	-	2	25	25	50	1	ESC
8	Mini Project	-	-	6	50	50	100	3	PROJ-CS
9	Economics of IT Industry	2	-	-	15	35	50	2	HSMC
10	Intellectual Property Rights (Audit Course)	2	-	-	50	-	-	Audit	PCC
	<b>Total</b>	<b>17</b>	<b>-</b>	<b>12</b>			<b>700</b>	<b>21</b>	

Elective-II: - 1. Machine Learning 2. Internet of Things 3. Cluster and Cloud Computing

Elective-III: - 1. Data Science 2. Distributed Operating Systems 3. Human Computer Interaction

Open Elective I:- 1. Linux Fundamentals 2. Android Application Development 3. Blockchain Technologies

[ Mrs. B. P. Dherastkar ]

*[Signature]*

Dr. S. V. Sonelkar  
Chairman

*[Signature]*  
Mrs. Anona M. Chaudhari

*[Signature]*  
Dr. M. V. Bramhe

*[Signature]*  
A. 10007

DUPLICATE SCAN

RTMNU B.TECH. SCHEME OF EXAMINATION  
Scheme of Teaching & Examination of Bachelor of Technology VII Semester B.Tech. Computer Science and Engineering[CBCS]

N.	Course Code	Category	Subject	Hours/Week			Credits	Maximum Marks					Min Passing Marks	
				L	T	P		Theory		Practical		Total	Theory	Practical
								Internal	University	Internal	University			
1	BTECHCSE701T	Professional Core Course	Cryptography & Network Security	3	1	-	4	30	70	-	-	100	45	-
2	BTECHCSE701P	Professional Core Course	Cryptography & Network Security	-	-	2	1	-	-	25	25	50	-	25
3	BTECHCSE702T	Professional Core Course	Program Elective-IV	3	-	-	3	30	70	-	-	100	45	-
4	BTECHCSE703T	Professional Core Course	Program Elective-V	3	-	-	3	30	70	-	-	100	45	-
5	BTECHCSE704T	Professional Core Course	Open Elective-II	3	-	-	3	30	70	-	-	100	45	-
7	BTECHCSE705T	Professional Core Course	Project	-	-	6	3	-	-	50	50	100	-	45
8	BTECHCSE706T	HSMC	Research Methodology (Audit Course)	2	-	-	Audit	-	-	-	-	-	-	-
<b>Total</b>				14	1	8	17	120	280	75	75	550	180	70

- Program Elective-IV:** i) Deep Learning      ii) Optimization Techniques      iii) Gaming Architecture
- Program Elective-V:** i) Natural Language Processing      ii) Big Data Analytics      iii) Mobile Computing
- Open Elective-II:** i) Python Programming      ii) JAVA Programming      iii) Basics of Database Management System



**RTMNU B.TECH. SCHEME OF EXAMINATION**

**Scheme of Teaching & Examination of Bachelor of Technology VIII Semester B.Tech. Computer Science and Engineering[CBCS]**

S.N.	Course Code	Category	Subject	Hours/Week			Credits	Maximum Marks				Min Passing Marks		
				L	T	P		Theory		Total	Theory	Practical		
								Internal	University				Internal	University
1	BTEHCSE801T	Professional Core Course	Industry Project/Project**	-	-	16	8	-	-	75	75	150	-	75
2	BTEHCSE802T	Professional Core Course	Program Elective*-VI / MOOC	3	-	-	3	30	70	-	-	100	45	
3	BTEHCSE803T	Professional Core Course	Program Elective*-VII MOOC	3	-	-	3	30	70	-	-	100	45	
<b>Total</b>				6	-	16	14	60	140	75	75	350	90	75

\* Industry Project/Project: Students are encouraged to complete this project in industry and one co guide should be assigned from institute. Rigorous monitoring and mid semester at least two progress to be monitored.

\*\* Program Electives VI & VII can be opted from NPTEL, assigned faculty should also enroll for this course, Final examination will be conducted by RTMNU

**Program Elective-VI**

- Social Networks
- Reinforcement Learning
- GPU Architectures and Programming

**Program Elective-VII**

- Predictive Analytics - Regression and Classification
- Blockchain and its Applications
- Computer Vision

**For Theory Paper Total Marks 100**

- 70 (University Exam )
- 30 (College Assesment )
- For Exam Practical Exams (25 UA + 25 CA)

**Continuous Assessment of Theory paper 30 marks based upon**

- 10 marks for sessional Exam (Unit test Performance)
- 10 marks for Activity based performance.
- 10 Marks for Assignments (2 marks for per unit)

**Valuation of 25 Marks as Internal Practical Exam based upon**

- 15 marks for performance
- 5 marks for viva
- 5 marks for journals (Average of Continuous Assessment of all practical performance and its evaluation of student at the time of journal checking.)

  
Head of Department  
Computer Science & Engg.  
Shri Shankarprasad Agnihotri  
College of Engg. IAPDUSA

# Scheme of Examination Mechanical Engineering Engineering

Rashtrasant Tukdoji Maharaj Nagpur University, Nagpur

Faculty of Science & Technology

Scheme of Examination and Evaluation

Bachelor of Technology (Mechanical Engineering) (Choice Based Credit System)

III Semester B. Tech (Mechanical Engineering)

Sr No	Course Code	Category	Course Title	Teaching Scheme (Hours/Week)			Credits	Examination Scheme								
				L	T	P		Theory				Practical				
								Duration of Exam (Hrs)	Max. Marks College Assessment	Max. Marks University Assessment	Total Marks	Min. Passing Marks	Max. Marks College Assessment	Max. Marks University Assessment	Total Marks	Min. Passing Marks
1	BEME301T	Basic Science course	Applied Mathematics – III	3	-	-	3	3	30	70	100	45	-	-	-	-
2	BEME302T	Professional core courses	Manufacturing Processes	3	-	-	3	3	30	70	100	45	-	-	-	-
3	BEME302P	Professional core courses	Manufacturing Processes Lab	-	-	2	1	-	-	-	-	-	25	25	50	25
4	BEME303T	Professional core courses	Fluid Mechanics	3	-	-	3	3	30	70	100	45	-	-	-	-
5	BEME304T	Professional core courses	Kinematics of Machines	3	-	-	3	3	30	70	100	45	-	-	-	-
6	BEME305P	Professional core courses	Machine Drawing & Solid Modelling	-	1	2	2	-	-	-	-	-	50	50	100	50
7	BEME306T	Professional core courses	Material Science & Engineering	3	-	-	3	3	30	70	100	45	-	-	-	-
8	BEME307P	Project work, seminar and internship in industry or elsewhere	Skill Development (Basics of Computer aided drafting)	-	-	2	1	-	-	-	-	-	50	-	50	25
9	BEME308P	Mandatory Course	Sports / Yoga / NSS/NCC	-	-	2	Audit (0)	College Assessment in Grades O, A, B, C (Evaluation is to be done out of 50 marks, Evaluation guidelines mentioned in the syllabus of concerned course)								
<b>Total</b>				<b>15</b>	<b>1</b>	<b>8</b>	<b>-</b>	<b>-</b>	<b>150</b>	<b>350</b>	<b>500</b>	<b>-</b>	<b>125</b>	<b>75</b>	<b>200</b>	<b>-</b>
<b>Semester Total</b>				<b>24</b>			<b>19</b>	<b>Marks 700</b>								

Rashtrasant Tukdoji Maharaj Nagpur University, Nagpur  
Faculty of Science & Technology  
Scheme of Examination and Evaluation  
Bachelor of Technology (Mechanical Engineering) (Choice Based Credit System)  
IV Semester B. Tech (Mechanical Engineering)

Sr No	Course Code	Category	Course Title	Teaching Scheme (Hours/Week)			Credits	Examination Scheme								
				L	T	P		Theory					Practical			
								Duration of Exam (Hrs)	Max. Marks College Assessment	Max. Marks University Assessment	Total Marks	Min. Passing Marks	Max. Marks College Assessment	Max. Marks University Assessment	Total Marks	Min. Passing Marks
1	BEME401T	Professional core courses	Machining Processes	3	-	-	3	3	30	70	100	45	-	-	-	-
2	BEME401P	Professional core courses	Machining Processes Lab	-	-	2	1	-	-	-	-	-	25	25	50	25
3	BEME402T	Professional core courses	Hydraulic Machines	3	-	-	3	3	30	70	100	45	-	-	-	-
4	BEME402P	Professional core courses	Fluid Mechanics & Hydraulic Machines Lab	-	-	2	1	-	-	-	-	-	25	25	50	25
5	BEME403T	Professional core courses	Mechanics of Materials	3	-	-	3	3	30	70	100	45	-	-	-	-
6	BEME403P	Professional core courses	Material Testing Lab	-	-	2	1	-	-	-	-	-	25	25	50	25
7	BEME404T	Professional core courses	Engineering Thermodynamics	3	-	-	3	3	30	70	100	45	-	-	-	-
8	BEME405P	Professional core courses	Computer Programming	-	1	2	2	-	-	-	-	-	25	25	50	25
9	BEME406T	Humanities & Social Science	Professional Ethics	3	-	-	3	3	30	70	100	45	-	-	-	-
10	BEME407P	Project work, seminar and internship in industry or elsewhere	Skill Development (Training on Matlab)	-	-	2	1	-	-	-	-	-	50	-	50	25
<b>TOTAL</b>				<b>15</b>	<b>1</b>	<b>10</b>	<b>-</b>	<b>-</b>	<b>150</b>	<b>350</b>	<b>500</b>	<b>-</b>	<b>150</b>	<b>100</b>	<b>250</b>	<b>-</b>
<b>Semester Total</b>				<b>26</b>			<b>21</b>	<b>Marks 750</b>								

**Rashtrasant Tukdoji Maharaj Nagpur University, Nagpur**  
**Faculty of Science & Technology**  
**Scheme of Examination and Evaluation**  
**Bachelor of Technology (Mechanical Engineering) (Choice Based Credit System)**  
**V Semester B. Tech (Mechanical Engineering)**

Sr No	Course Code	Category	Course Title	Teaching Scheme (Hours/Week)			Credits	Examination Scheme								
				L	T	P		Theory				Practical				
								Duration of Exam (Hrs)	Max. Marks College Assessment	Max. Marks University Assessment	Total Marks	Min. Passing Marks	Max. Marks College Assessment	Max. Marks University Assessment	Total Marks	Min. Passing Marks
1	BEME501T	Professional core courses	Heat Transfer	3	-	-	3	3	30	70	100	45	-	-	-	-
2	BEME501P	Professional core courses	Heat Transfer Lab	-	-	2	1	-	-	-	-	-	25	25	50	25
3	BEME502T	Professional core courses	Energy Conversion-I	3	-	-	3	3	30	70	100	45	-	-	-	-
4	BEME503T	Professional core courses	Design of Machine Elements	3	1	-	4	3	30	70	100	45	-	-	-	-
5	BEME504T	Humanities, Social Sciences & Management courses	Industrial Economics and Management	3	-	-	3	3	30	70	100	45	-	-	-	-
6	BEME505T	Professional core courses	Mechanical Measurement & Metrology	3	-	-	3	3	30	70	100	45	-	-	-	-
7	BEME505P	Professional core courses	Mechanical Measurement & Metrology Lab	-	-	2	1	-	-	-	-	-	25	25	50	25
8	BEME506P	Project work, seminar and internship in industry or elsewhere	Industrial Visit*	-	-	2	1	-	-	-	-	-	50	-	50	25
9	BEME507P	Mandatory Course	Performing Art	-	-	2	Audit (0)	College Assessment in Grades O, A, B, C (Evaluation is to be done out of 50 marks, Evaluation guidelines mentioned in the syllabus of concerned course)								
<b>TOTAL</b>				<b>15</b>	<b>1</b>	<b>8</b>	<b>-</b>	<b>-</b>	<b>150</b>	<b>350</b>	<b>500</b>	<b>-</b>	<b>100</b>	<b>50</b>	<b>150</b>	<b>-</b>
<b>Semester Total</b>				<b>24</b>			<b>19</b>	<b>Marks 650</b>								

**Industrial Visit\***

Visit to minimum TWO industries must be carried out by every student. Visit to be carried out in a batch of 6 students. Assessment should be based on Visit report and presentation.

**Rashtrasant Tukdoji Maharaj Nagpur University, Nagpur**  
**Faculty of Science & Technology**  
**Scheme of Examination and Evaluation**  
**Bachelor of Technology (Mechanical Engineering) (Choice Based Credit System)**  
**VI Semester B. Tech (Mechanical Engineering)**

Sr No	Course Code	Category	Course Title	Teaching Scheme (Hours/Week)			Credits	Examination Scheme								
				L	T	P		Theory					Practical			
								Duration of Exam (Hrs)	Max. Marks College Assessment	Max. Marks University Assessment	Total Marks	Min. Passing Marks	Max. Marks College Assessment	Max. Marks University Assessment	Total Marks	Min. Passing Marks
1	BEME601T	Professional core courses	Automation in Production	3	-	-	3	3	30	70	100	45	-	-	-	-
2	BEME601P	Professional core courses	Automation in Production Lab	-	-	2	1	-	-	-	-	-	25	25	50	25
3	BEME602T	Professional core courses	Energy Conversion-II	3	-	-	3	3	30	70	100	45	-	-	-	-
4	BEME602P	Professional core courses	Energy Conversion Lab	-	-	2	1	-	-	-	-	-	25	25	50	25
5	BEME603T	Professional core courses	Dynamics of Machines	3	-	-	3	3	30	70	100	45	-	-	-	-
6	BEME603P	Professional core courses	Dynamics of Machines Lab	-	-	2	1	-	-	-	-	-	25	25	50	25
7	BEME604T	Professional Elective courses	Elective - I	3	-	-	3	3	30	70	100	45	-	-	-	-
8	BEME605T	Professional Elective courses	Elective - II	3	-	-	3	3	30	70	100	45	-	-	-	-
9	BEME606T	Open Elective Course	Open Elective - I	3	-	-	3	-	30	70	100	45	-	-	-	-
11	BEME607T	Mandatory Course	Environment Science	2	-	-	Audit (0)	College Assessment in Grades O, A, B, C (Evaluation is to be done out of 50 marks. Evaluation guidelines mentioned in the syllabus of concerned course)								
<b>TOTAL</b>				<b>18</b>	<b>0</b>	<b>8</b>	<b>-</b>	<b>-</b>	<b>180</b>	<b>420</b>	<b>600</b>		<b>75</b>	<b>75</b>	<b>150</b>	<b>-</b>
<b>Semester Total</b>				<b>26</b>			<b>21</b>	<b>Marks 750</b>								

Summer Internship\*\*

Summer Internship should be undertaken after end of 6th Semester for a minimum duration of 4 weeks in Industry/ Research Institute/ Organizations & its evaluation to be done in 7th semester

Rashtrasant Tukdoji Maharaj Nagpur University, Nagpur  
Faculty of Science & Technology  
Scheme of Examination and Evaluation  
Bachelor of Technology (Mechanical Engineering) (Choice Based Credit System)  
VII Semester B. Tech (Mechanical Engineering)

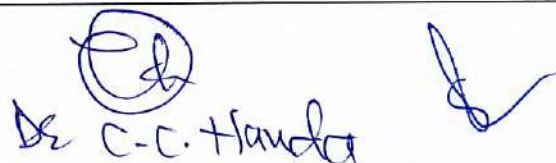
Sr No	Course Code	Category	Course Title	Teaching Scheme (Hours/Week)			Credits	Examination Scheme								
				L	T	P		Theory					Practical			
								Duration of Exam (Hrs)	Max. Marks College Assessment	Max. Marks University Assessment	Total Marks	Min. Passing Marks	Max. Marks College Assessment	Max. Marks University Assessment	Total Marks	Min. Passing Marks
1	BEME701T	Professional Elective courses	Elective - III	3	-	-	3	3	30	70	100	45	-	-	-	-
2	BEME701P	Professional Elective courses	Elective - III Lab	-	-	2	1	-	-	-	-	-	25	25	50	25
3	BEME702T	Professional core courses	Energy Conversion III	3	-	-	3	3	30	70	100	45	-	-	-	-
5	BEME703T	Open Elective Course	Open Elective - II	3	-	-	3	3	30	70	100	45	-	-	-	-
6	BEME704T	Professional core courses	Design of Transmission systems	3	1	-	4	3	30	70	100	45	-	-	-	-
7	BEME705P	Project work, seminar and internship in industry or elsewhere	Summer Internship**	During Summer Vacation after sixth semester			2	-	-	-	-	-	50	-	50	25
8	BEME706P	Project work, seminar and internship in industry or elsewhere	Project Phase I	-	-	6	3	-	-	-	-	-	50	-	50	25
9	BEME707P	Project work, seminar and internship in industry or elsewhere	Employability Enhancement*	-	-	2	1	-	-	-	-	-	50	-	50	25
<b>TOTAL</b>				<b>12</b>	<b>1</b>	<b>10</b>	<b>-</b>	<b>-</b>	<b>120</b>	<b>280</b>	<b>400</b>	<b>-</b>	<b>175</b>	<b>25</b>	<b>200</b>	<b>-</b>
<b>Semester Total</b>				<b>23</b>			<b>20</b>	<b>Marks 600</b>								
<b>Summer Internship**</b>			<b>Summer Internship should be undertaken after end of 6th Semester for a minimum duration of 4 weeks in Industry/ Research Institute/ Organizations &amp; its evaluation to be done in 7th semester</b>													
<b>Employability Enhancement*</b>			<b>Students should be given training on Technical aptitude, General aptitude, Group Discussion, Interview Techniques to enhance their chances of employment</b>													

Note: A load of 2 hours/week per project guide for the course "Project Phase I"




**Rashtrasant Tukdoji Maharaj Nagpur University, Nagpur**  
**Faculty of Science & Technology**  
**Scheme of Examination and Evaluation**  
**Bachelor of Technology (Mechanical Engineering) (Choice Based Credit System)**  
**VIII Semester B. Tech (Mechanical Engineering)**

Sr No	Course Code	Category	Course Title	Teaching Scheme (Hours/Week)			Credits	Examination Scheme									
				L	T	P		Theory					Practical				
								Duration of Exam (Hrs)	Max. Marks College Assessment	Max. Marks University Assessment	Total Marks	Min. Passing Marks	Max. Marks College Assessment	Max. Marks University Assessment	Total Marks	Min. Passing Marks	
1	BEME801T	Professional core courses	Industrial Engineering	3	-	-	3	3	30	70	100	45	-	-	-	-	
2	BEME802T	Professional Elective courses	Elective - IV	3	-	-	3	3	30	70	100	45	-	-	-	-	
3	BEME802P	Professional Elective courses	Elective - IV Lab	-	-	2	1	-	-	-	-	-	25	25	50	25	
4	BEME803T	Professional Elective courses	Elective - V	3	-	-	3	3	30	70	100	45	-	-	-	-	
5	BEME804T	Professional Elective courses	Elective - VI	3	-	-	3	3	30	70	100	45	-	-	-	-	
6	BEME805P	Project work, seminar and internship in industry or elsewhere	Project Phase II	-	-	12	6	-	-	-	-	-	100	100	200	100	
<b>TOTAL</b>				<b>12</b>	<b>0</b>	<b>14</b>	<b>-</b>	<b>-</b>	<b>120</b>	<b>280</b>	<b>400</b>	<b>-</b>	<b>125</b>	<b>125</b>	<b>250</b>	<b>-</b>	
<b>Semester Total</b>				<b>26</b>			<b>19</b>	<b>Marks 650</b>									
Note: A load of 4 hours/week per project guide for the course "Project Phase II"																	

  
 Dr. C.C. Handa



Rashtrasant Tukdoji Maharaj Nagpur University, Nagpur

Faculty of Science & Technology

Scheme of Examination and Evaluation

Bachelor of Technology (Mechanical Engineering) (Choice Based Credit System)

ELECTIVE I	ELECTIVE II	ELECTIVE III	ELECTIVE IV	ELECTIVE V	ELECTIVE VI	OPEN ELECTIVE I	OPEN ELECTIVE II
VI SEM	VI SEM	VII SEM (T+P)	VIII SEM (T+P)	VIII SEM	VIII SEM	VI SEM	VII SEM
Operation Research	Advanced Manufacturing Techniques	Mechatronics	Finite Element Method	Heating Ventilation & Air Conditioning	Industrial IOT	Entrepreneurship Development	Introduction to Electric Vehicles
Production Planning & Control	Power Plant Engineering	Computer Aided Design	Computer Integrated Manufacturing	Electric and Hybrid Vehicles	Additive Manufacturing	Automobile Engineering	Waste Management
Tool Design	Supply Chain Management	Advancements in Automobile Engineering	Refrigeration & Air conditioning	Design of Material Handling systems	Energy Conservation and Management	Project Evaluation & Management	Finance & Cost Management
Renewable Energy sources	Introduction to Artificial Intelligence	Computational Fluid Dynamics	CNC & Robotics	Total Quality Management	Green & Sustainable Manufacturing	Operation Research Techniques	Industrial Robotics
						Industrial Safety & Environment	Introduction to Renewable Energy resources

Note : Open electives are strictly applicable for other branches students only.

SHRI SHANKARPRASAD AGNIHOTRI COLLEGE OF  
ENGINEERING, WARDHA

Department of Mechanical Engineering

Semester:- III, IV, V, VI, VII, VIII  
Session- 2023-2024

Internal Evaluation guideline

**For Theory Subject:-**

Total marks per subject = 100  
University assessment = 70 Marks  
College assessment = 30 Marks

**For practical Subject**

Total marks per practical = 50  
University assessment = 25 marks  
College assessment = College Assessment 25 marks

Continuous college assessment for Theory subject = 30 Marks

Sessional ( Unit test performance) = 10 marks

Activity (Related to subject) = 10 Marks

Assignment (2 marks for each unit) = 10 Marks

Total = 30 Marks

Continuous college assessment for Practical subject = 25 Marks

- Practical Performance = 15 Marks
- Viva = 05 Marks
- Practical write up = 05 Marks

Total = 25 Marks

Continuous college assessment for Practical subject = 50 Marks

- Practical Performance = 30 Marks
- Viva = 10 Marks
- Practical write up = 10 Marks

Total = 50 Marks



  
HOD  
Department of Mechanical Engineering  
SSPACE WARDHA

# Scheme of Examination Civil Engineering

**RASHTRASANT TUKDOJI MAHARAJ NAGPUR UNIVERSITY, NAGPUR**  
**FACULTY OF SCIENCE & TECHNOLOGY**  
**SCHEME OF EXAMINATION & EVALUATION**  
**B. TECH CIVIL ENGINEERING (CHOICE BASED CREDIT SYSTEM)**  
**SEMESTER: THIRD**

Sr. No	Subject Code	Subject	Workload in Hours			Credit				Marks					Minimum passing marks	
			L	T/A	P	L	T/A	P	Total	Theory		Practical		Total	Theory	Practical
										Int	Uni	Int	Uni			
1	BTCVE301T	Mathematics-III	3	1	0	3	1	0	4	30	70	--	--	100	45	--
2	BTCVE302T	Fluid Mechanics	3	0	0	3	0	0	3	30	70	--	--	100	45	--
3	BTCVE302P	Fluid Mechanics (Practical)	0	0	2	0	0	1	1	--	--	25	25	50	--	25
4	BTCVE303T	Solid Mechanics	3	1	0	3	1	0	4	30	70	--	--	100	45	--
5	BTCVE303P	Solid Mechanics (Practical)	0	0	2	0	0	1	1	--	--	25	25	50	--	25
6	BTCVE304T	Geotechnical Engineering	3	0	0	3	0	0	3	30	70	--	--	100	45	--
7	BTCVE304P	Geotechnical Engineering (Practical)	0	0	2	0	0	1	1	--	--	25	25	50	--	25
8	BTCVE305T	Building Construction & Elementary Building Drawing	2	0	0	2	0	0	2	30	70	--	--	100	45	--
9	BTCVE305P	Building Construction & Elementary Building Drawing (Practical)	0	0	2	0	0	1	1	--	--	25	25	50	--	25
10	BTCVE306T	Effective Technical Communication	2	0	0	2	0	0	2	15	35	--	--	50	23	--
<b>Total</b>			<b>16</b>	<b>2</b>	<b>8</b>	<b>16</b>	<b>2</b>	<b>4</b>	<b>22</b>	<b>165</b>	<b>385</b>	<b>100</b>	<b>100</b>	<b>750</b>		

- L- Lecture , P-Practical, T- Tutorial , A- Activity (Half Credit per Hour)

*Signature*  
*Chaitanya G. Shinde*

*Signature*  
 (Dr. A.N. Dabhade)  
 BOS Member

*Signature*  
 (Dr. Avinash N Shrikhande,  
 BOS (Civil Engg) chairman

**RASHTRASANT TUKDOJI MAHARAJ NAGPUR UNIVERSITY, NAGPUR**  
**FACULTY OF SCIENCE & TECHNOLOGY**  
**SCHEME OF EXAMINATION & EVALUATION**  
**B. TECH CIVIL ENGINEERING (CHOICE BASED CREDIT SYSTEM)**  
**SEMESTER: FOURTH**

Sr. No	Subject Code	Subject	Workload in Hours			Credit				Marks					Minimum passing marks	
			L	T/A	P	L	T	P	Total	Theory		Practical		Total	Theory	Practical
										Int	Uni	Int	Uni			
1	BTCVE401T	Concrete Technology	3	0	0	3	0	0	3	30	70	--	--	100	45	--
2	BTCVE402T	Structural Analysis	3	1	0	3	1	0	4	30	70	--	--	100	45	--
3	BTCVE402P	Structural Analysis (Practical)	0	0	2	0	0	1	1	--	--	25	25	50	--	25
4	BTCVE403T	Environmental Engineering	3	0	0	3	0	0	3	30	70	--	--	100	45	--
5	BTCVE403P	Environmental Engineering(Practical)	0	0	2	0	0	1	1	--	--	25	25	50	--	25
6	BTCVE404T	Transportation Engineering	3	0	0	3	0	0	3	30	70	--	--	100	45	--
7	BTCVE404P	Transportation Engineering (Practical)	0	0	2	0	0	1	1	--	--	25	25	50	--	25
8	BTCVE405T	Surveying & Geomatics	3	0	0	3	0	0	3	30	70	--	--	100	45	--
9	BTCVE405P	Surveying & Geomatics (Practical)	0	0	4	0	0	2	2	--	--	25	25	50	--	25
10	BTCVE406P	Mini Project (Practical)	0	0	2	0	0	1	1	--	--	25	25	50	--	25
<b>TOTAL</b>			<b>15</b>	<b>1</b>	<b>12</b>	<b>15</b>	<b>1</b>	<b>6</b>	<b>22</b>	<b>150</b>	<b>350</b>	<b>125</b>	<b>125</b>	<b>750</b>		

- L- Lecture , P-Practical, T- Tutorial , A- Activity (Half Credit per Hour)

**Note: In Summer vacation after 4<sup>th</sup> Semester, students have to complete 2 to 3 weeks industrial / Government / NGO / MSME / Rural Internship / Innovation / Entrepreneurship training. In the beginning of 5<sup>th</sup> semester, students have to submit detailed report of summer vacation training to department.**

*Signature*  
*Charles G. Shinde*

*Signature*  
 (Dr. A.N. Dabhade)  
 BOS Member

*Signature*  
 (Dr. Avinash N Shrikhande,  
 BOS (Civil Engg) chairman

**RASHTRASANT TUKDOJI MAHARAJ NAGPUR UNIVERSITY, NAGPUR**  
**FACULTY OF SCIENCE & TECHNOLOGY**  
**SCHEME OF EXAMINATION & EVALUATION**  
**B. TECH CIVIL ENGINEERING (CHOICE BASED CREDIT SYSTEM)**  
**SEMESTER: FIFTH**

Sr. No	Subject Code	Subject	Workload in Hours			Credit				Marks					Minimum passing marks	
			L	T/A	P	L	T	P	Total	Theory		Practical		Total	Theory	Practical
										Int	Uni	Int	Uni			
1	BTCVE501T	Hydraulic Engineering	3	0	0	3	0	0	3	30	70	--	--	100	45	--
2	BTCVE501P	Hydraulic Engineering (Practical)	0	0	2	0	0	1	1	--	--	25	25	50	--	25
3	BTCVE502T	Reinforced Cement Concrete (RCC) designs	3	1	0	3	1	0	4	30	70	--	--	100	45	--
4	BTCVE503T	Civil Engineering Materials, Testing & Evaluation	3	0	0	3	0	0	3	30	70	--	--	100	45	--
5	BTCVE503P	Civil Engineering Materials, Testing & Evaluation (Practical)	0	0	2	0	0	1	1	--	--	25	25	50	--	25
6	BTCVE504T	Professional Practice, Law & Ethics	3	0	0	3	0	0	3	30	70	--	--	100	45	--
7	BTCVE505T	Elective-I	3	0	0	3	0	0	3	30	70	--	--	100	45	--
8	BTCVE506T	Elective-II	3	0	0	3	0	0	3	30	70	--	--	100	45	--
9	BTCVE507P	Industrial Training (Already done in summer vacation after 4 <sup>th</sup> sem) & Professional Skill Training (Software Applications in Civil Engineering)	0	0	2	0	0	1	1	--	--	50	50	100	--	50
10	BTCVE508AU	Organizational Behavior	2	0	0	0	0	0	0	--	--	50	Audit	50	--	--
<b>TOTAL</b>			<b>20</b>	<b>1</b>	<b>6</b>	<b>18</b>	<b>1</b>	<b>3</b>	<b>22</b>	<b>180</b>	<b>420</b>	<b>150</b>	<b>100</b>	<b>850</b>		

- L- Lecture , P-Practical, T- Tutorial , A- Activity (Half Credit per Hour)

*Signature*  
*Dr. A. N. Dabhadre*

*Signature*  
 (Dr. A. N. Dabhadre)  
 BOS Member

*Signature*  
 (Dr. Avinash N Shrikhande,  
 BOS (Civil Engg) chairman

**RASHTRASANT TUKDOJI MAHARAJ NAGPUR UNIVERSITY, NAGPUR**  
**FACULTY OF SCIENCE & TECHNOLOGY**  
**SCHEME OF EXAMINATION & EVALUATION**  
**B. TECH CIVIL ENGINEERING (CHOICE BASED CREDIT SYSTEM)**  
**SEMESTER: SIXTH**

Sr. No	Subject Code	Subject	Workload in Hours			Credit				Marks					Minimum passing marks	
			L	T/A	P	L	T	P	Total	Theory		Practical		Total	Theory	Practical
										Int	Uni	Int	Uni			
1	BTCVE601T	Estimating & Costing	3	1	0	3	1	0	4	30	70	--	--	100	45	--
2	BTCVE601P	Estimating & Costing (Practical)	0	0	2	0	0	1	1	--	--	25	25	50	--	25
3	BTCVE602T	Construction Engineering & Management	2	1	0	2	1	0	3	30	70	--	--	100	45	--
4	BTCVE603T	Water Resource Engineering	3	0	0	3	0	0	3	30	70	--	--	100	45	--
5	BTCVE604T	Elective-III	3	0	0	3	0	0	3	30	70	--	--	100	45	--
6	BTCVE605T	Open Elective-I	3	0	0	3	0	0	3	30	70	--	--	100	45	--
7	BTCVE606P	Computer Aided Civil Engineering Drawing (Practical)	0	0	2	0	0	1	1	--	--	50	50	100	--	50
<b>TOTAL</b>			<b>14</b>	<b>2</b>	<b>4</b>	<b>14</b>	<b>2</b>	<b>2</b>	<b>18</b>	<b>150</b>	<b>350</b>	<b>75</b>	<b>75</b>	<b>650</b>	<b>--</b>	<b>--</b>

- L- Lecture , P-Practical, T- Tutorial , A- Activity (Half Credit per Hour)

**Note: In summer vacation after 6<sup>th</sup> Semester, student have to complete 3 to 4 weeks industrial / Government / NGO / MSME / Rural Internship / Innovation / Entrepreneurship training. In the beginning of 7<sup>th</sup> semester, student have to submit detailed report of summer vacation training to department.**

*Signature of Dr. A. N. Dabhadre*  
 Dr. A. N. Dabhadre

*Signature of Dr. A. N. Dabhadre*  
 (Dr. A. N. Dabhadre)  
 BOS Member

*Signature of Dr. Avinash N. Shrikhande*  
 (Dr. Avinash N. Shrikhande,  
 BOS (Civil Engg) chairman

**RASHTRASANT TUKDOJI MAHARAJ NAGPUR UNIVERSITY, NAGPUR**  
**FACULTY OF SCIENCE & TECHNOLOGY**  
**SCHEME OF EXAMINATION & EVALUATION**  
**B. TECH CIVIL ENGINEERING (CHOICE BASED CREDIT SYSTEM)**  
**SEMESTER: SEVENTH**

Sr. No	Subject Code	Subject	Workload in Hours			Credit				Marks					Minimum passing marks	
			L	T/A	P	L	T	P	Total	Theory		Practical		Total	Theory	Practical
										Int	Uni	Int	Uni			
1	BTCVE701T	Design of Steel Structure	3	1	0	3	1	0	4	30	70	--	--	100	45	--
2	BTCVE702T	Elective IV	3	0	0	3	0	0	3	30	70	--	--	100	45	--
3	BTCVE703T	Elective V	3	0	0	3	0	0	3	30	70	--	--	100	45	--
4	BTCVE704T	Elective VI	3	0	0	3	0	0	3	30	70	--	--	100	45	--
5	BTCVE705T	Open Elective-II	3	0	0	3	0	0	3	30	70	--	--	100	45	--
6	BTCVE706P	Project Work Phase-I	0	0	6	0	0	3	3	--	--	50	50	100	--	50
<b>Total</b>			<b>15</b>	<b>1</b>	<b>6</b>	<b>15</b>	<b>1</b>	<b>3</b>	<b>19</b>	<b>150</b>	<b>350</b>	<b>50</b>	<b>50</b>	<b>600</b>		

- L- Lecture , P-Practical, T- Tutorial , A- Activity (Half Credit per Hour)

**Note:**

1. Project Work Phase-I shall consist of detailed report of “**Internship report**” of 3 to 4 weeks underwent after 6<sup>th</sup> semester and “**SeminarReport**” shall consist of Topic selected for Project work
2. Equal weightage shall be given to the components of "**Internship Report**" and "**Seminar Report**"

*Signature*  
*Chaitan G. Shinde*

*Signature*  
 (Dr. A.N. Dabhade)  
 BOS Member

*Signature*  
 (Dr. Avinash N Shrikhande,  
 BOS (Civil Engg) chairman

**RASHTRASANT TUKDOJI MAHARAJ NAGPUR UNIVERSITY, NAGPUR**  
**FACULTY OF SCIENCE & TECHNOLOGY**  
**SCHEME OF EXAMINATION & EVALUATION**  
**B. TECH CIVIL ENGINEERING (CHOICE BASED CREDIT SYSTEM)**  
**SEMESTER: EIGHTH**

Sr. No	Subject Code	Subject	Workload in Hours			Credit				Marks					Minimum passing marks	
			L	T/A	P	L	T	P	Total	Theory		Practical		Total	Theory	Practical
										Int	Uni	Int	Uni			
1	BTCVE801T	Construction Methods And Equipment Management #	3	0	0	3	0	0	3	30	70	--	--	100	45	--
2	BTCVE802T	Digital Land Surveying And Mapping (DLS&M) #	3	0	0	3	0	0	3	30	70	--	--	100	45	--
3	BTCVE803T	Open Elective-III	3	0	0	3	0	0	3	30	70	--	--	100	45	--
4	BTCVE804P	Project Work Phase-II	0	0	12	0	0	6	6	--	--	100	100	200	--	100
<b>TOTAL</b>			<b>9</b>	<b>0</b>	<b>12</b>	<b>9</b>	<b>0</b>	<b>6</b>	<b>15</b>	<b>90</b>	<b>210</b>	<b>100</b>	<b>100</b>	<b>500</b>		

Note:

1. These # subjects (**BTCVE801T and BTCVE802T**) should be undertaken through online mode by using NPTEL/SWAYAM /MOOCS Platforms **OR** through regular classroom teaching in Department of Civil Engineering of affiliated Colleges. Examinations will be conducted by RTMNU.
2. Project Work Phase-II shall consist of detailed report of continued project work from 7<sup>th</sup> Semester or internship in industry or at appropriate work place.

*Signature*  
*Chaitanya G. Shinde*

*Signature*  
 (Dr. A.N. Dabhade)  
 BOS member

*Signature*  
 (Dr. Avinash N Shrikhande,  
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**SHRI SHANKARPRASAD AGNIHOTRI COLLEGE OF  
ENGINEERING, WARDHA**  
Department of Civil Engineering

Semester :- III, IV, V, VI, VII, VIII  
Session :- 2023 - 2024

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**Internal Evaluation guideline**

**For Theory Subject :-**

Total marks per subject = 100  
University Assessment = 70 Marks  
College Assessment = 30 Marks

**For Practical Subject :-**

Total marks per practical = 50 marks  
University Assessment = 25 marks  
College Assessment = 25 marks

**Continuous college assessment for Theory subject = 30 Marks**

Sessional (PUnit test performance) = 15 marks

Activity (Related to subject) = 15 Marks

**Continuous college assessment for Practicals subject = 25 Marks**

- Practical Performance = 15 Marks
- Viva = 05 Marks
- Practical write up = 05 Marks

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**Total = 25 Marks**

**Continuous college assessment for Practical subject = 50 Marks**

- Practical Performance = 30 Marks
- Viva = 10 Marks
- Practical write up = 10 Marks

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**Total = 50 Marks**



  
**Head of Department  
Civil Engg.  
Shri Shankarprasad Agnihotri  
College of Engg. WARDHA.**