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		
						Internal	Uni	Internal	Uni		Theory	Practical
BSE2-1T	Mathematics-II	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	-	-
BSE1-5P	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												
	Total	**16**	**5**	**11**	**22.5**	**135***	**315**	**125**	**125**	**700**		

- 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)

Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur

Subject: Indian Culture and Constitution (ICC) BSE 2-8 T

Semester: II

Course: Audit (Non-credit), Total Marks: 50 (Internal)

Credit: Nil, Teaching Load: 2(Theory)/week

Course Objective:

1. To create an understanding of Indian Constitution and develop respect for the same.
2. To create awareness of India as a State Indian culture and Tradition.

Course Outcomes:

1. Students will become aware of Indian culture and civilization and their role in development of society.
2. Students will understand Industrial work-culture.
3. Students will be sensitized towards professional ethics.
4. Students will understand Indian Constitution and governance of the country.
5. Students will be able to understand the structure and system of work organizations.

(Dr. Sajid Anwar)

(B. R. Chicle)

SYLLABUS:

Unit-I

1. Concept of Culture and Civilization
2. Vedic Civilization and Indus Valley Civilization
3. Introduction to Vedas, Ashram system, Varna System
4. Concept of Social Engineering (5 Hours)

Unit-II

1. Meaning and Scope of Industrial Psychology and Industrial Sociology
2. Recruitment, Selection and Training of Workers,
3. Fatigue in industry.
4. Motives for work in industry (5 Hours)

Unit-III

1. Sustainable Development
2. Social change .
3. Professional Ethics
4. Concept and styles of Leadership in Industry. (4 Hours)

Unit-IV

1. Indian Constitution and Federal System
2. Fundamental Rights and Directive Principles of State Policy
3. Role of Bureaucracy in Modern Society
4. Socio-Legal Awareness: Right to Information(RIL), Public Interest Litigation(PIL) (5 Hours)

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Unit-V

1. Industrial Democracy
2. Works Organization: Formal and Informal Organization
3. Concept of Power, Authority and Status system;
4. Industrialization, Urbanization and Study of Slums in India . (5 Hours)

Books Recommended:

1) A New Look into Social Sciences- Shabbir, Sheik and Dwadashiwar
2) An Introduction to Sociology- Vidya Bhushan and Sachdeva
3) Social Science: The Indian Scene-Yogesh Atal
4) Applied Humanities-Rajni Tandon
5) A History of World Civilizations-J.E.Swain
6) Industrial Psychology-Haire Mason
7) Introduction to Constitution of India- Durga Das Basu
8) Industrial Sociology in India-N.R.Seth
9) Human Resource Development and Management- Dr.A.M.Sheikh
10) The Economics of Sustainable Development-Surender Kumar

Note: As AICTE has recommended that students of Engineering should learn about Indian Constitution and Indian tradition, we propose above non-credit subject entitled 'Indian Culture and Constitution' to be included in second semester for all branches.

(Prof. Abhyankar) Dr. M. N. Giriya (B. R. Chide)

RTM Nagpur University
Syllabus (Practical)

Semester	Course Title(Subject)	Hours / Week			Credits	Maximum Marks		
		L	T	P		Continual Assessment	University Examination	Total
Semester II |First Yearl	Workshop Practices Code: BSE2-5P	-	-	4	2	50	50	100

Course Outcomes	
After successful completion of this course the student will be able to:	
CO1	Read and interpret job drawing and plan operations
CO2	Identify and select proper material, tools, equipments, machines and proper operational parameters.
CO3	Set tools, work piece, and machines for desired operations.
CO4	Complete job of Carpentry, Fitting, Welding and Smithy as per job drawing in allotted time.
CO5	Use safety equipment and follow safety procedures during operations.
CO6	Inspect the job for confirming desired dimensions and shape.

List of Practical's

Sr. No.	List of Practical's
01	CARPENTRY SHOP • Demonstration of different wood working tools and machines. • Demonstration of different wood working processes, like planing, marking, chiseling, grooving, turning of wood etc. One simple job involving any one joint like mortise and tenon, dovetail, bridle, half lap etc.(4 Hours of actual working)
02	FITTING SHOP: • Demonstration of different fitting tools and drilling machines and power tools. • Demonstration of different operations like chipping, filing, drilling, tapping, cutting etc. One simple fitting job involving practice of chipping, filing, drilling, tapping, cutting etc.
03	WELDINGSHOP : Demonstration of different welding tools / machines. Demonstration on Arc Welding, Gas Welding, gas cutting. One simple job involving butt and lap joint. For each students.
04	SMITHY SHOP • Demonstration of different forging tools and Power Hammer. • Demonstration of different forging processes, likes shaping, caulking fullering, setting down operations etc. • One job like hook peg, flat chisel or any hardware item.

05	

Suggested References:

- S.K. HajaraChaudhary- Workshop Technology-Media Promotors and Publishers, New Delhi
- B.S. Raghuwanshi- Workshop Technology- DhanpatRai and sons, New Delhi
- H.S.Bawa- Workshop Technology- Tata McGraw Hill Publishers,New Delhi
- Kent's Mechanical Engineering Hand book- John Wiley and Sons, New York
- Electronics Trade & technology Development Corporation.(A Govt. of India undertaking) Akbar Hotel Annex, Chanakyapuri, New Delhi- 110 021
- Learning Materials Transparencies and CDs, CBT Packages developed by N.I.T.T.E.R. and other organizations.

Notes:

A journal shall consist of one job assignment each on the topics 1 to 4 mentioned above.

Each assignment shall consist of –

- Procedural steps in completing a given job
- Description and drawings of different tools used
- List of safety equipments used and safety rules observed during working

Notes: 1] The subject teacher should provide necessary theory inputs to students of all shops before their actual practical.

2] The instructor shall give demonstration to the students by preparing a specimen job as per the job drawing.

3] The workshop diary shall be maintained by each student duly signed by instructor of respective shop

4] Workshop Tool Manual at institute level shall be provided to the students

5] Distribution of Continuous Assessment marks is as follows:

20 marks for jobscompleted (05 marks for each job)+ 05 marks for Practical journal= Total 25 marks

6] University Examination – Performance of any one job as mentioned in list of practical and oral.

Dr M.N. Giriya

(Arbhardi)

(B.R. Chicle)