SANT GADGE BABA AMRAVATI UNIVERSITY GAZETTE

Official Publication of Sant Gadge Baba Amravati University

PART- TWO

(Extra-Ordinary)
Friday, the 13th December, 2024
NOTIFICATION

No. 178/2024 Dated : 13/12/2024

Subject : Implementation of new syllabus of the Engineering Graphics of Semester I/II common for all branches of Engineering & Technology as per NEP-2020 pattern.

Ref'ce : SGBAU Gazette Part II Notification No. 146/2024 dated 30.10.2024.

It was notified for general information of all concerned that the authorities of the University have accepted to implement new syllabus of the subject **Engineering Graphics** of Semester I/II of common for all branches of Engineering & Technology as per NEP-2020 pattern to implemented from the academic session 2024-2025 onwards which was notified vide Notification No. 146/2024 dated 30.10.2024 in Gazette Part II of the University as per above reference.

Now, it is notified for general information of all concerned that the authorities of the University have accepted to implement **the revised syllabus of the subject Engineering Graphics** of Semester I/II of common for all branches of Engineering & Technology as per NEP-2020 pattern to be implemented from the academic session 2024-2025 onwards which is mentioned as under:

Syllabus of the Course: Engineering Graphics (Common for all Branches)
Subject Code: 2AL114ES

Teaching per Week: Theory: 02 Hrs Practical: 02 Hrs
Theory Examination: 60 Marks Duration of Paper: 4.0 hrs

Unit-I: Introduction to Engineering Graphics: (5 hours)
[a] Scales (Plain Scale and Diagonal Scale).
[b] Introduction to Planes of projections, Projections of points in all possible position w.r.t. reference planes.
[c] Projections of lines when it is perpendicular to one of the reference planes, when line is inclined to one and parallel to other reference plane, Line inclined to both reference planes.

Unit-II: Projections of Planes & Solids: (5 hours)
[a] Projection of Planes inclined to one reference plane & perpendicular to the other, Projection of Planes inclined to both the Reference Planes.
[b] Projection of solid when axis is perpendicular to one of the reference planes, when axis is inclined to one and parallel to other reference plane (Projection of right regular prisms, right regular pyramids, right circular cylinder, right circular cone)

Unit-III: Sections of Solids: (5 hours)
Section of Solids of Right regular Solids in simple position (Right regular prisms, right regular pyramids, right circular cylinder and right circular cone)

Unit-IV: Development of Surfaces: (5 hours)
Development of surfaces of simple regular solids

Unit-V:Orthographic Projections: (5 hours)
Principles of Orthographic Projections, Conventions Multi view orthographic projections for parts/ patterns with isometric/ non-isometric surfaces and circular features.

Unit-VI: Isometric View and Projections: (5 hours)
Principles of Isometric projection - Isometric Scale, Isometric Views, Conventions; Isometric Views of Simple Solids; conversion of Orthographic views to Isometric views.

Suggested Text / Reference Books:

1. Bhatt N. D., Panchal V.M. Engineering Drawing, Charotar Publishing House.
2. Jolhe D. A. Engineering Drawing with an Introduction to Auto CAD, Tata McGraw- Hill
3. Publishing Co. Ltd., New Delhi.
4. Shah P. J., Engineering Drawing, S. Chand Publication
5. Naraynan K. L., Kannaiah P. – Engineering Drawing, Scitech.
6. Dhawan R. K. – Engineering Drawing, S. Chand Publication
7. Basant Agrawal, C. M. Agrawal -Engineering Drawing, McGraw Hill Publication work.

Engineering Graphics - Lab. [Subject Code: 2AL117ES]

Every student will submit a set of at least Six (06) drawing sheets (from 1 to 11 listed below) and perform at least one practical (from 12 to 14 listed below) using CAD software.

List of Practicals:

1. Construction of Scales
2. Construction of Cycloidal Curves
3. Construction of Simple Mechanisms
4. Projection of Lines
5. Projection of Planes
6. Projection of Solids
7. Section of Solids
8. Development of Surfaces
9. Orthographic Projection
10. Isometric View & Projection
11. Free hand sketches of simple machine elements, like: (a) Screw threads ISI profile, (b) Types of nuts, bolts, studs, set screws, washers, locking arrangement of nuts & bolts (c) Foundation bolts – Rag, eye, lewis types

Minimum 02 problems are expected to be constructed on any one module given below using CAD software tools. Submit the Printouts of CAD drawings.

*Solve, construct & dimension the problems on:

12. To construct& dimension 2D geometrical shapes using CAD tool.
13. To solve, construct & dimension the problems of Projection of Lines using CAD tool.
14. To solve, construct & dimension the problems of Projection of Planes using CAD tool.

Sd/-
(Dr.Avinash Asanare)
Registrar
Sant Gadge Baba Amravati University

****