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# Second Semester 2023-24

**Course Handout (Part II)**

## Date: 09/01/2024

**In addition to part I (General Handout for all courses appended to the timetable) this portion gives further specific details regarding the courses.**

**Course No : BITS F110**

**Course Title :** ENGINEERING GRAPHICS

**Instructor-in-charge : AnasuaGuhaRay**

**Team of Instructors :** Vasan A., Abhishek Sarkar,K. Rajitha, ChanduParimi, Navaneetha A., Ambili P., Arnab Guha, Arshad Javed, M. Abhinav, VemuSahiti, K.S. Deepak, MdIkramullah Khan, Ishant Sharma, Radha, Kiranmaye B., Raghuram A., Arnab Guha, Ashish Saurabh, FizaZahoor Malik, Raghu Piska, MdZabiulla, Dilwaiz Ali, GowllaJyothsna, J. LeelaKishan, P RamyaPriya, Sk Abdul Kaium, Anuradha Tiwari, BalijaUpendra, Chirdeep NR, Dole Mahesh, Kushagra Pandey, MrinmoySaha, Vijay Krupaker M., Akashjyoti Barman, Maryada Sinha, MuddasaniRajkumar, Deepjyoti Deb, Himanshu Shukla, Renuka P. Rekhade

**1. Course Description**

Introduction to AutoCAD commands, simple drawings, orthographic projections, projections of points, lines, planes; auxiliary projections; projections and sections of solids; development of surfaces; isometric projections.

**2. Scope and objective of the course:**

Engineering Graphics is the primary medium for development and communicating design concepts. Through this course, the students are trained in Engineering Graphics concepts with the use of AutoCAD. The latest ISI code of practice is followed. Computerized drawing is an upcoming technology that provides accurate and easily modifiable graphics entities, easy data storage and retrieval facility, and enhances creativity.

**3. Text Book:**

1. D.M. Kulkarni, A.P. Rastogi, and A.K. Sarkar., *Engineering Graphics with AutoCAD*, PHI Learning Private Limited, New Delhi 2009.

**4. Reference Books:**

1. Dhananjay A Jolhe, *Engineering Drawing: With an Introduction to AutoCAD*, Tata McGraw Hill, 2008.

2. Warren J. Luzadder& Jon M. Duff, *Fundamentals of Engineering Drawing*, 11th edition, Prentice Hall of India, New Delhi.

3. N.D.Bhatt& V.M. Panchal, Engineering Drawing, Charotar Publishing House, 2006.

**5. Course Plan**

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| --- | --- | --- | --- | --- |
| **Lecture No.** | **Learning Objectives** | **Topics to be covered** | **Practical** Classes | **Chapter in the Text Book** |
| 1 | Introduction to EG | Basic concepts and Handout discussions | - | 1 |
| 2-3 | Introduction toAutoCAD | Basic commands | 3 | 1 & 2 |
| 4-5 | Orthographic projections | Theory, techniques, first and third angle projections,  Multi view drawing from pictorial views. | 2 | 3 & 5 |
| 6-7 | Projections of Points and Lines | Positions, notation system, and projections procedure, Positions, terms used, different cases, traces of a line and projections procedure | 2 | 9 |
| 8 | Projections of Lines | Positions, terms used, different cases, traces of a line and projections procedure | 1 | 10 |
| 9-10 | Projections of Solids and Sections of Solids | Construction of right, regular, oblique solids; section planes and sectional view. | 2 | 12 & 13 |
| 11 | Development of surfaces | Radial line, parallel line; anti-development | 1 | 14 |
| 12-13 | Isometric Projection | Theory of isometric drawing, construction of isometric projection from orthographic. | 2 | 6 |

**6. Evaluation Scheme:**

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| --- | --- | --- | --- | --- | --- |
| **EC No.** | **Evaluation component** | **Duration** | Weightage (%) | **Date, Time** | **Nature of Component** |
| 1 | Mid sem test (CBT) | 60 min | 20 | 16/03 - 9.30 - 11.00AM | Closed Book |
| 2 | Comprehensive Test (CBT) | 90 min | 30 | 20/05 FN | Closed Book |
| 3 | Practical (CAD Software) | - | 30 | Once a week | Open Book |
| 4 | Tutorial | - | 20 | Once a week | Open Book |

CBT – Computer Based Test

**7. Chamber Consultation Hours:**Please email the IC/ the tutorial batch in charge/the practical batch in charge for fixing any appointments or issues.

**8. Notices:** Concerned notices will be displayed on CMS

**9. Make–up policy:**

Make-up for tutorial and practical class will be granted only on genuine reasons (medical cases who are admitted in the hospital, intercollegiate activities permitted by SWD and important family function of direct blood relations). Request for evaluation of makeup should be made to the concerned practical and tutorial section in-charges on the proforma in the immediate subsequent practical class which is attended.

**10. Academic Honesty and Integrity Policy:** Academic honesty and integrity are to be maintained by all the students throughout the semester and no type of academic dishonesty is acceptable.

**Prof**. **AnasuaGuhaRay**

**INSTRUCTOR-IN-CHARGE**

**BITS F110**