

**ME5XXX: Engineering Drawing**  
**Mechanical Engineering, IIT Palakkad**  
**2019-20, I Semester**

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**Instructor:** Sovan Lal Das, [sovan@iitpkd.ac.in](mailto:sovan@iitpkd.ac.in), Ph: 429(O),  
**Office:** Bageshri Building, Transit Campus

**Tutors:**

Dr. Sarmistha Singh ([sarmistha@iitpkd.ac.in](mailto:sarmistha@iitpkd.ac.in)) - P1 (B3, B4, B5): Monday 2 – 4:50PM  
Dr. D. Chakradhar ([chakradhar@iitpkd.ac.in](mailto:chakradhar@iitpkd.ac.in)) - P2 (B1, B2, B6): Tuesday 2 – 4:50PM  
Dr. Kanmani Subbu S ([sksubbu@iitpkd.ac.in](mailto:sksubbu@iitpkd.ac.in)) - P3 (B7, B8, B9): Thursday 2 – 4:50PM  
Dr. K V N Surendra ([kvns@iitpkd.ac.in](mailto:kvns@iitpkd.ac.in)) - P4 (B10, B11, B12): Friday 2 – 4:50PM

**Lecture Timings:** Th 10-10:50AM (B1-B6), 11-11:50AM (B7-B12) Auditorium (Ahalia)

**Tutorial Timings:**

M	2 – 4:50 PM	(P1 – B3, B4, B5)
T	2 – 4:50 PM	(P2 – B1, B2, B6)
Th	2 – 4:50 PM	(P3 – B7, B8, B9)
F	2 – 4:50PM	(P4 – B10, B11, B12)

Venue: Drawing Hall in Hostel 3 (Ahalia campus)

**Evaluation:**

Mid Sem:	20
End Sem:	30
Tutorial:	40
Homework:	10

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**Pass Marks: 50**

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**Guidelines:**

1. Homework will be assigned every week after the lecture. It will be due in the tutorial immediately following the lecture.
  2. Each student must have a SKETCHBOOK (unruled) fully dedicated to Engineering Drawing. All homework exercises must be work on the SKETCHBOOK using H-grade pencil.
  3. Students will not be permitted to enter the tutorial session unless the SKTECH book with completed homework is shown to the tutor.
  4. Each tutorial session will have a few drawing exercises. They must be carried out in the tutorial session itself. Tutorials must be worked out in A2-size drawing sheets.
  5. Drawing sheets must be submitted at the end of each tutorial session. Late submission, and working in tutorial exercises outside the tutorial session will NOT be considered under any circumstances.
  6. Discussion among peers is strongly encouraged. COPYING is NOT permitted in Homework.
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**Course Objective:**

The Course will introduce the students to the Language of the Engineer, namely engineering drawing. At the end of the course, the students should be able to

- i. Read and understand drawings of various objects
- ii. Make drawings, manually and by using computers, of various parts that can be manufactured.
- iii. Create drawings of new products.

**Course content**

**i) Manual Drawing:**

- a) Introduction to Engineering drawing and graphics.
- b) Lettering, sketching and dimensioning.
- c) Orthographic projections. Projection of points, Projection of straight lines.
- d) Projections on Auxiliary planes
- e) Projection of planes.
- f) Development of surfaces. Intersection of surfaces
- g) Projections of solids.
- h) Sections of solids.
- i) Isometric projection

ii) Computer aided Drawing:

- a) Principles, conventions and applications of orthographic projects.
- b) Creating curves using AutoCAD.
- c) Creating Title block, using text and hatch tools.
- d) Use of dimension style. Various tools for Dimensions.
- e) Creating layouts and printing.

**References:**

- i. Bhatt, N. D., Engineering drawing, New age International 2014
- ii. Natarajan K V., Text Book of Engineering Graphics, 21st Edition, Dhanalakshmi Publishers, Chennai, 2012.
- iii. George Omura, Mastering AutoCAD 2016 and AutoCAD LT 2016
- iv. Sham Tickoo, AutoCAD 2017 for Engineers and Designers 23ed