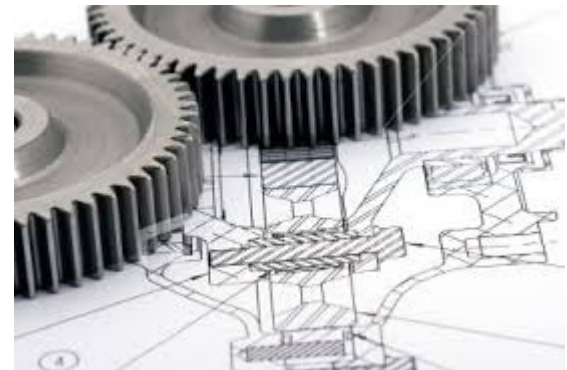


# ENGINEERING GRAPHICS

MEC103

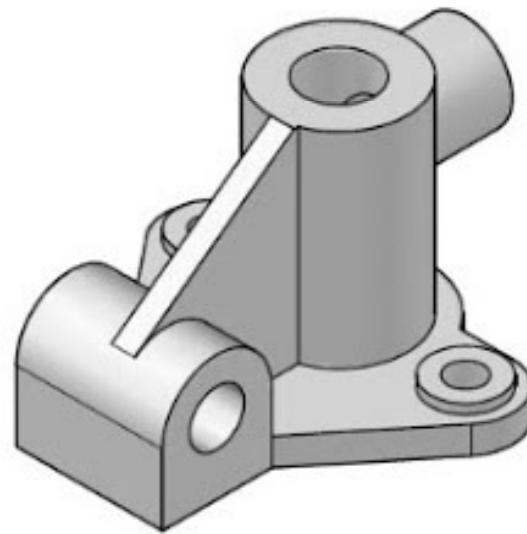


# **Learning Outcomes**

- Overview of the subject.
- Course outcomes.
- LTP count / Credits of the subject.
- CA pattern
- Text books / reference books.
- Overview of the syllabus.

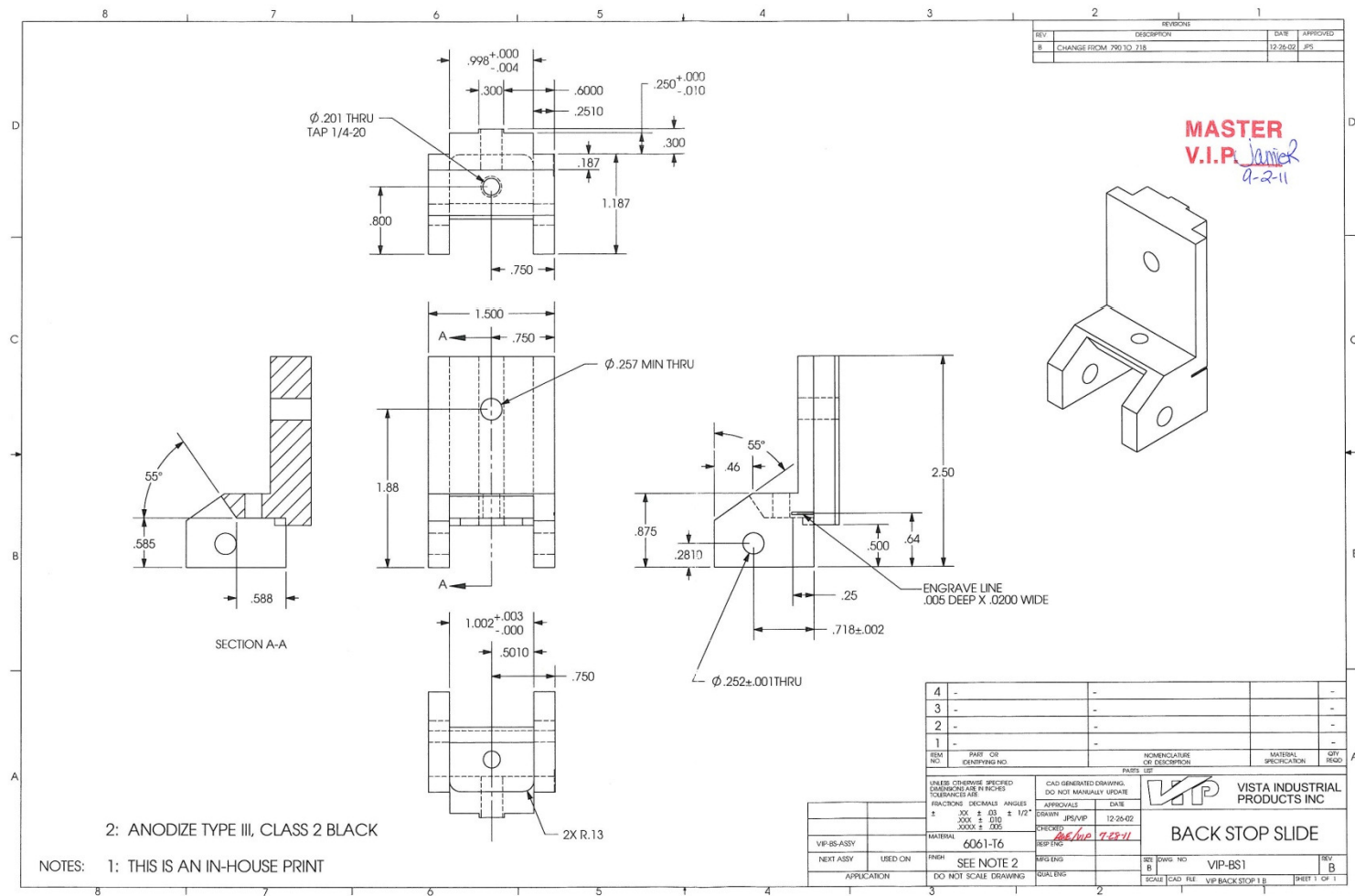
# Introduction to Engineering Drawing

- The role of engineers is to design & develop products.



# Introduction to Engineering Drawing

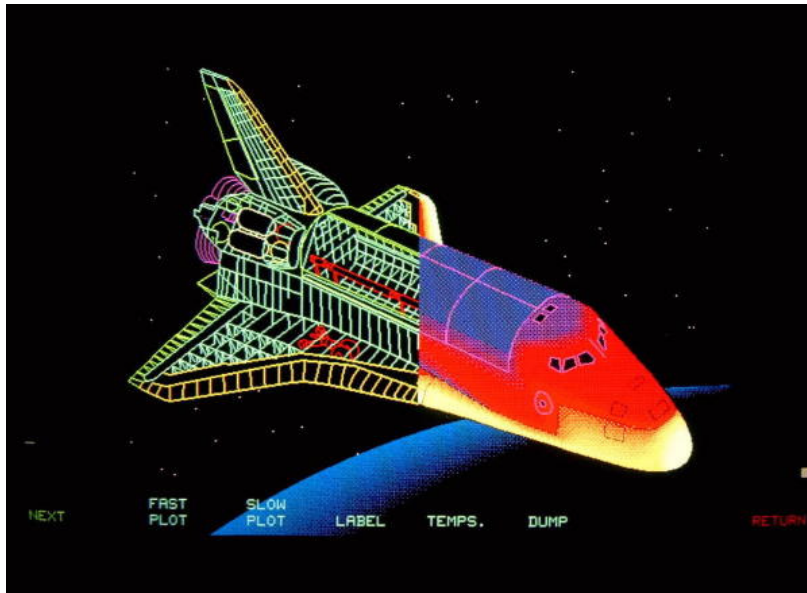
- To communicate their ideas they use engineering drawings.



# **Introduction to Engineering Drawing**

- Engineering drawing is a graphical language used by engineers to communicate their ideas. So it acts as a communication link between designers and manufacturers.
- It is completely different from artistic drawing, which is used to express aesthetic, philosophical and abstract ideas.
- Just as a picture speaks thousands of words, a complete technical drawing tells everything about the geometry of the product.

# Applications



# Course Detail

- LTP – 2, 2, 0  
(Two lectures, Two Tutorials, Zero practical hours per week)
- Credit – 4

# Course Assessment Model

- 3 online assignments
  - Assignment 1 in 3<sup>rd</sup> week.
  - Syllabus – Unit 1 & 2



# Books

- Text Books

- Engineering Drawing with an introduction to AutoCAD  
by DHANANJAY A JOLHE

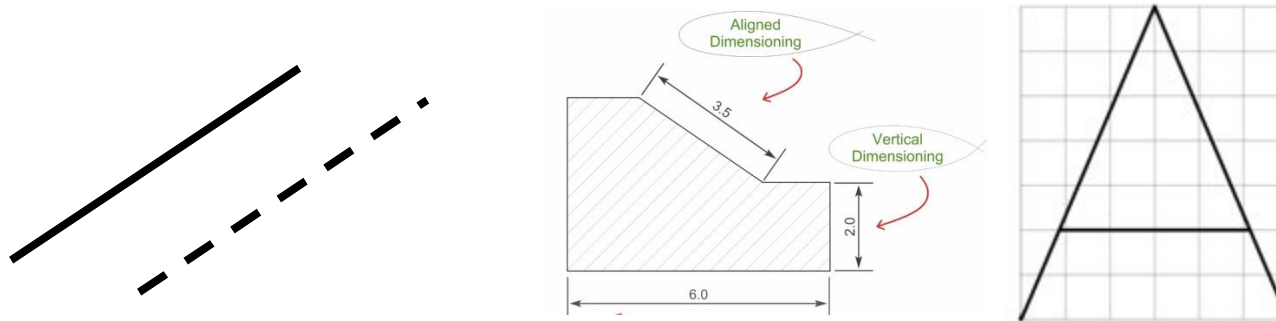
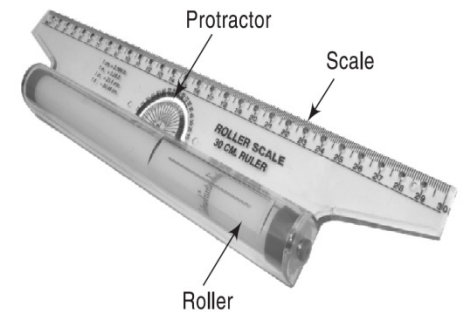
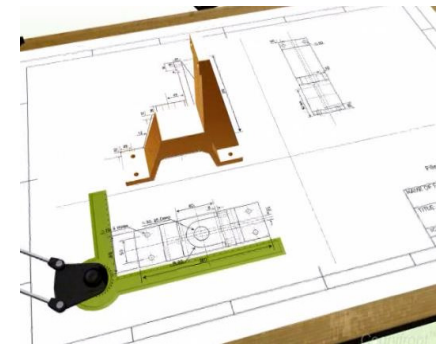
- Reference Books

- Engineering Drawing by AMAR PHATAK
- Engineering Drawing by M.B. SHAH & B.C. RANA
- Engineering Graphics by K.C. JOHN
- Engineering Drawing by N.D. BHATT & M. PANCHAL

# Syllabus

## Unit 1 (Introduction to Engineering Drawing)

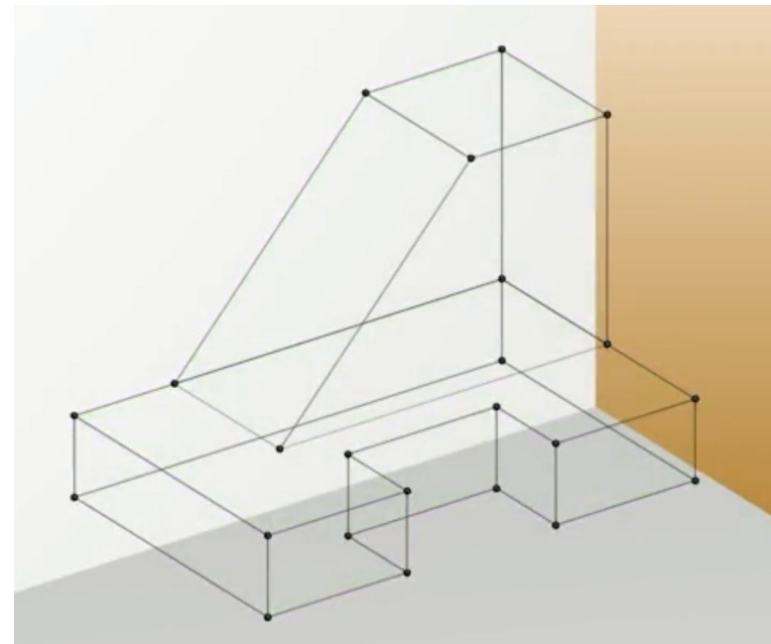
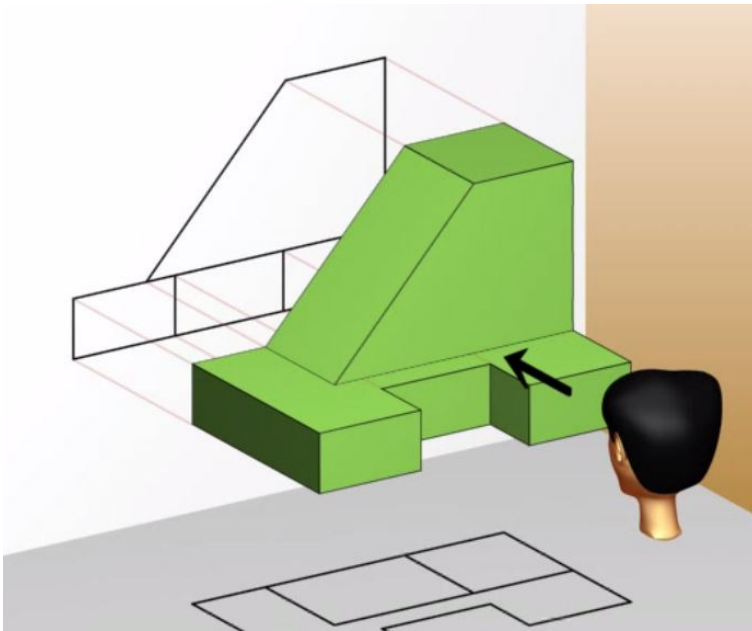
- Principles of Engineering Graphics and their significance.
- Drawing instruments.
- Lettering in vertical Gothic letters using single stroke.
- Dimensioning.
- Different types of lines used in engineering drawing.
- Plane and Diagonal Scale.



# Syllabus

## Unit 2 (Projection of Points and Lines)

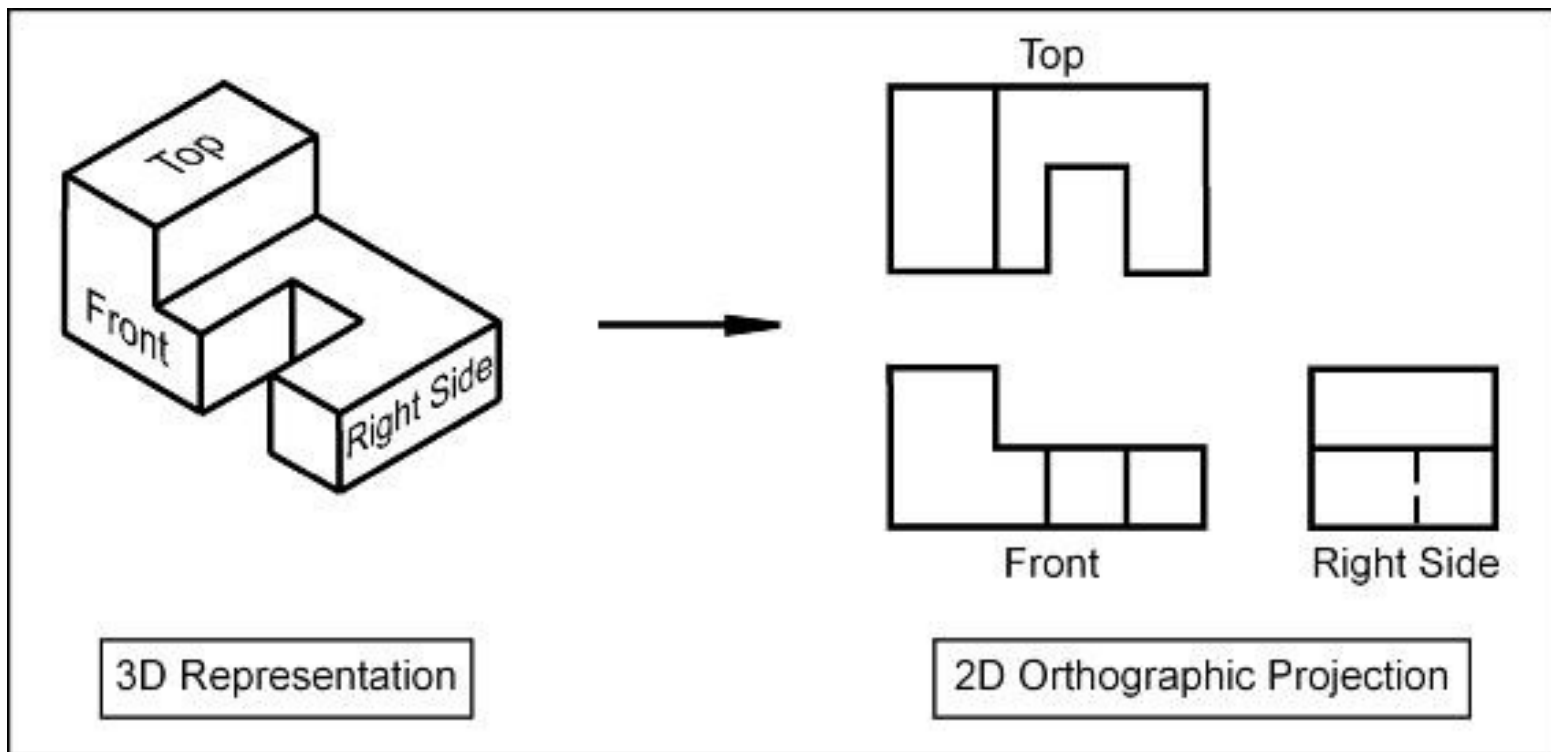
- Projection of Points.
- Projection of Lines.



# Syllabus

## Unit 3 (Orthographic Projections)

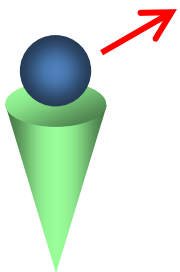
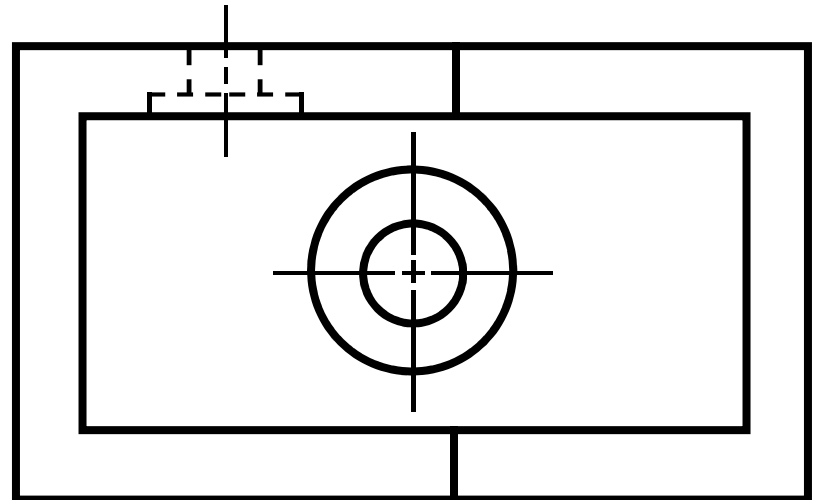
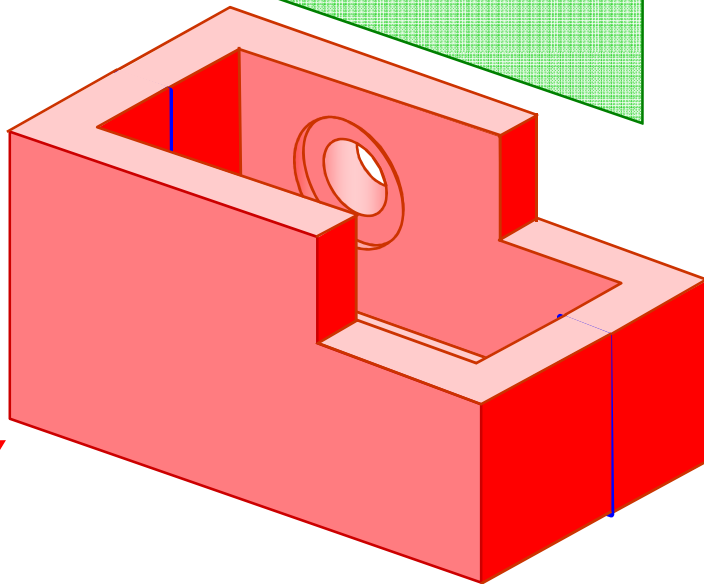
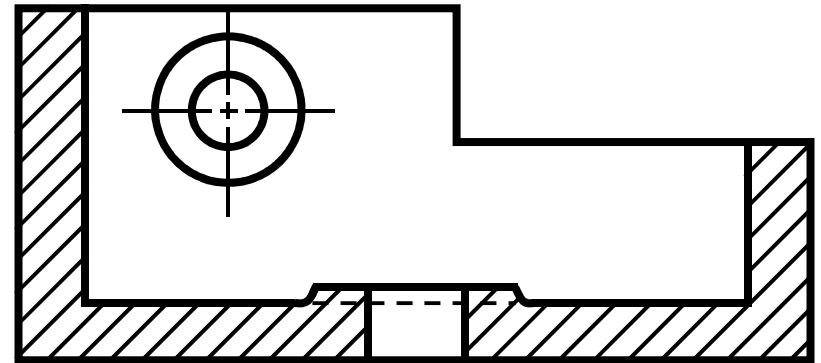
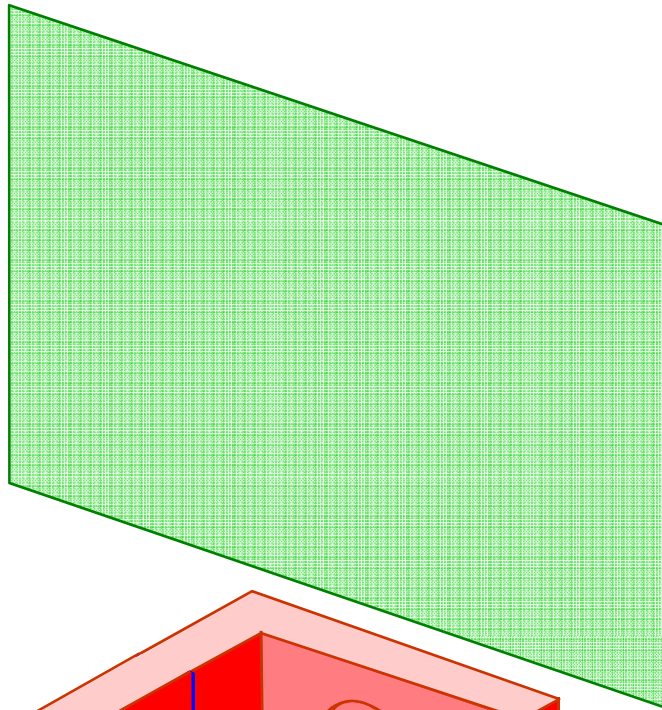
- Methods of obtaining Orthographic Projections (First angle and third angle)
- Principles of orthographic projections.



# Syllabus

## Unit 4      (**Sectional views**)

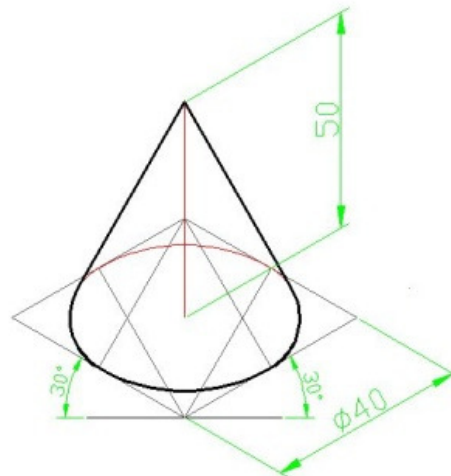
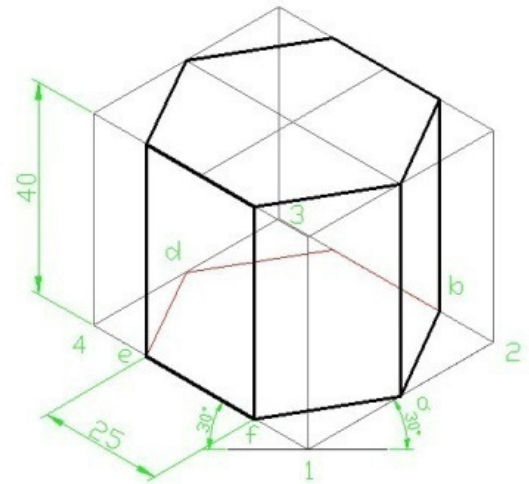
- Importance of sectioning.
- Types of sectioning (Full, Half & Offset)



# Syllabus

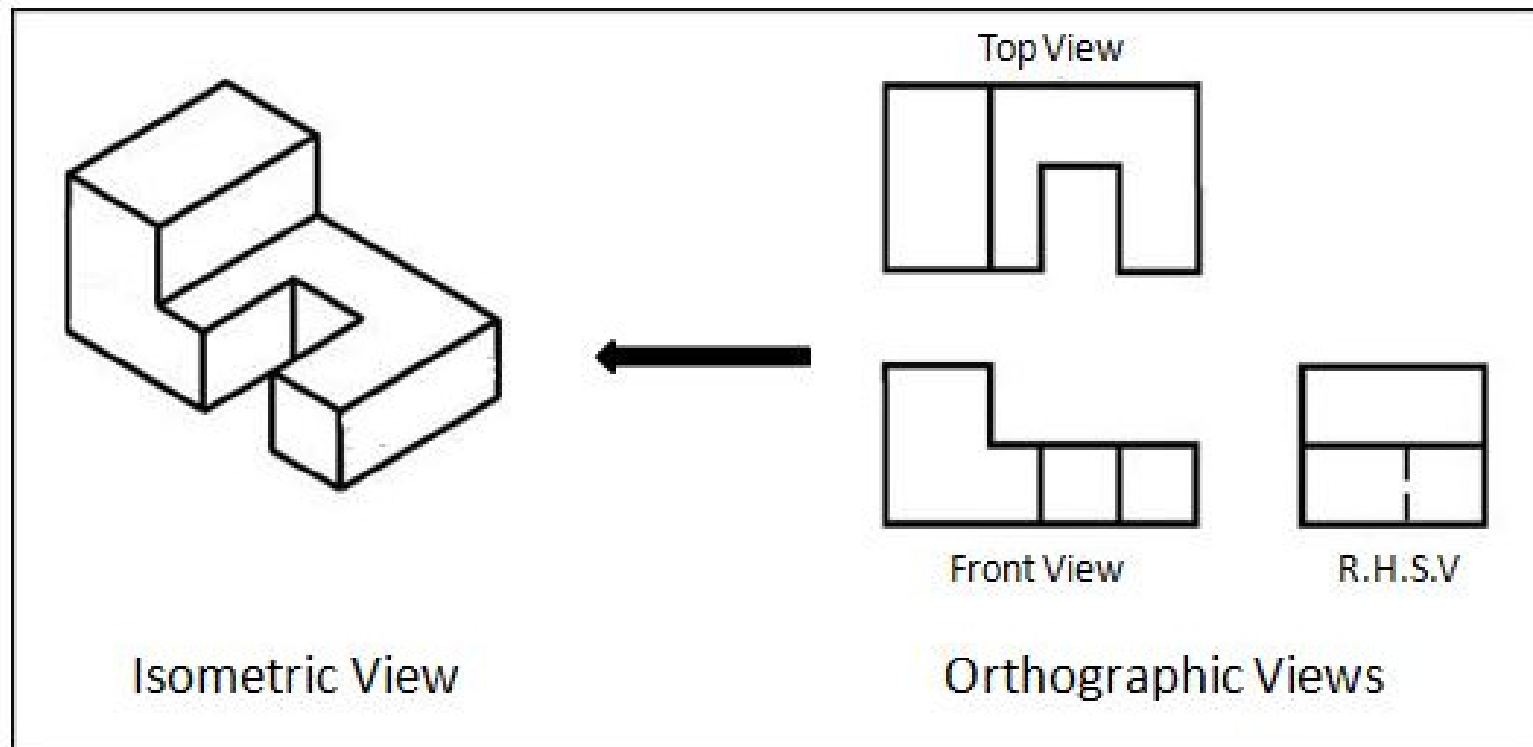
# Unit 5 (Isometric Projections)

- Isometric Projections.
- Isometric Scale.
- Terminology.
- Isometric Dimensioning.



# Syllabus

## Unit 5 (Isometric Projections)

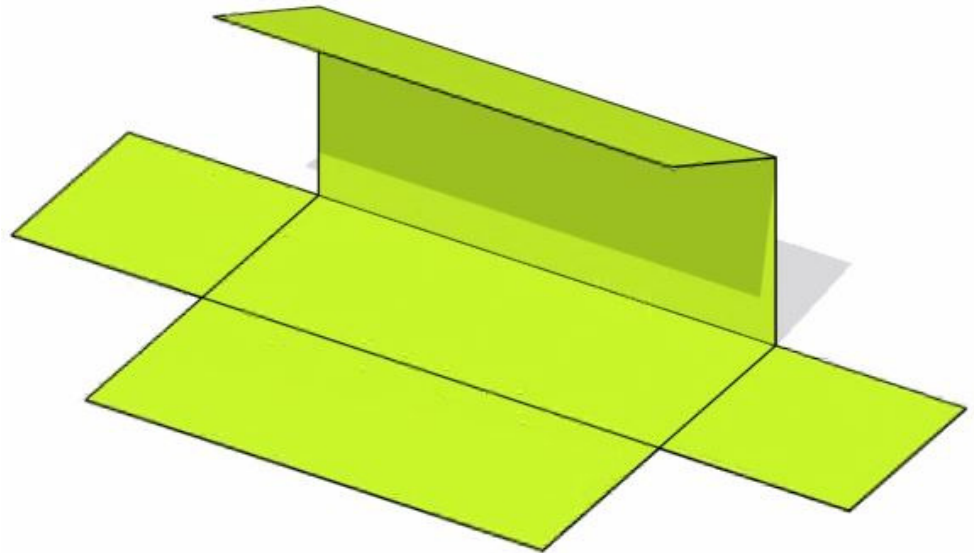
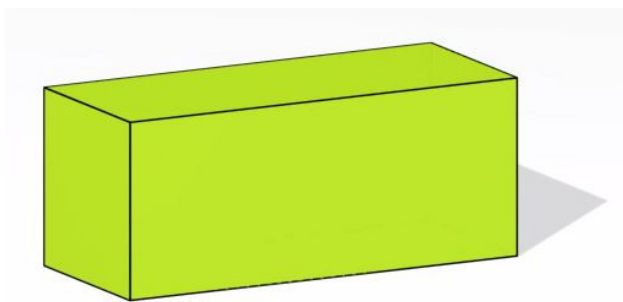




# Syllabus

## Unit 6 (Development of Surfaces)

- Methods of development (Parallel line & Radial line).
- Parallel line development of cylinder and prism.
- Radial line development of cone and pyramid.



**Thanks**