technical drawing
school of art, design and architecture
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http://www.youtube.com/watch?v=q6mk9HPxWvo
http://www.youtube.com/watch?v=bnu2GB7w4Qs
Objective abstraction - axonometric view
Axonometric means to measure along axes.

Axonometric projection shows an image of an object as viewed from a skew direction in order to reveal more than one side in the same picture.
technical drawing introduction
what is an axonometric drawing?

Parallel projection

Parallel projections have lines of projection that are parallel both in reality and in the projection plane (drawing).
technical drawing introduction
what is an axonometric drawing?

Parallel projection

**orthographic**
In Orthographic projection lines are orthogonal (making an angle of 90 degrees) to the projection

**oblique**
Oblique projection is created by drawing one side of the object facing the observer. This side is always drawn as a true shape
Axonometric projection is a type of orthographic projection, used to create a pictorial drawing of an object, where the object is rotated along one or more of its axes relative to the plane of projection.
technical drawing introduction
what is an axonometric drawing?

Parallel projection

orthographic  oblique

axonometric

Iso-metric  di-metric  tri-metric
technical drawing introduction
what is an axonometric drawing?

Parallel projection

- orthographic
- oblique

axonometric

Iso-metric

isometric
At 30-30 angle

Plano-metric / Plan oblique
At 45-45 angle
Or 30-60 angle
An isometric drawing is an angled drawing in which the horizontal lines are drawn at a 30 degree angle and the vertical lines are left straight.
It is a simple way of representing a three dimensional object, keeping the elements to scale and showing the relationship between several sides of the same object, so that the complexities of a shape can be clearly understood.
As a result, an isometric drawing is simply a picture of an object viewed at an angle.
Isometric sketches begin with defining an isometric axis, one vertical and two drawn at 30 degrees from the horizontal.
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Components of an isometric drawing

- horizontal axis
- vertical axis
- angular lines
In an isometric drawing, the object's vertical lines are drawn vertically, and the horizontal lines in the width and depth planes are shown at 30 degrees to the horizontal.
These three lines of the isometric axis represent the three primary dimensions of the object: width, height, and depth.
When drawn under these guidelines, the lines parallel to these three axes are at their true (scale) lengths. Lines that are not parallel to these axes will not be of their true length.
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How to draw an isometric drawing?
For example...
The first step in drawing isometric is to rotate the plan on 30-30 degrees on plane of projection, which distorts the plan.
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How to draw an isometric drawing?

height on scale

depth on scale
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how to draw an isometric drawing?

Isometric graph paper can also be used for making such drawings.
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Sketch from an actual object

steps

1. Positioning object.
2. Select isometric axis.
3. Sketch enclosing box.
4. Add details.
5. Darken visible lines.
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Object having inclined surface

Non-isometric line
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Drawing isometric

Regular

Front View

reverse

Intro to technical drawing

isometric view
Circle & Arc in Isometric

Four-centre method is usually used when drawing an isometric ellipse.

1. Locate the centre of an ellipse.
2. Construct an isometric square.
3. Construct a perpendicular bisector from each tangent point.
4. Locate the four centers.
5. Draw the arcs with these centers and tangent to isometric square.
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Irregular Curve in Isometric

Steps

1. Construct points along the curve in multi view drawing.

2. Locate these points in the isometric view.

3. Sketch the connecting lines.
Isometric views are very useful to explain construction details.
Isometric views of different types of brick bonds.

Common Bond
Brickwork laid with five courses of stretchers followed by one course of headers.

Flemish Bond
Brickwork laid with each course consisting of alternating headers and stretchers.
Create an isometric view of your home.
If you cannot help worrying, remember that worrying cannot help you.
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picture of the day
technical drawing introduction

building of the day

Egg building, Mumbai
technical drawing introduction

video of the day –

DESIGN PHILOSOPHY

[can you draw? Part 7]

http://www.youtube.com/watch?v=anfLSnAL_Sw&feature=related
DRAWING
a mean to design reasoning