QUS 1202 Construction Drawing

Hours Per Week			Hours per Semester	Weighted Total Mark	Weighted Exam Mark	Weighted Continuous Assessment	Credit Units
LH	PH	TH	CH	WTM	WEM	WCM	CU
4	0	4	60	100	60	40	4

Rationale/Course Description

Drawing is part and parcel of the construction processes. It presents owners' concepts in a form appropriate for fabrication and construction of the desired construction products. The course covers drawing techniques, instruments and software.

Objectives/Aims

- To inculcate in students the ability to produce, read and comprehend engineering drawings, so that they are able to convey their creative ideas effectively.
- To expose students to various building components.
- To create awareness of modern techniques used in Engineering communications.
- To enable students gain experience in transforming ideas into 2D drawings.

Course Outline

1. Introduction to Simple Geometrical Construction [2CH]

1.1 Points, lines, angles, planes and applications,

1.2 Drawing equipment, drawing papers and sizing, title blocks and applications, lettering and printing methods.

2. Tangency [2CH]

2.1 Internal and external tangents to circles,

2.2 Curved tangents, inscribing and circumscribing arcs.

3. Simple Plane Figures [2CH] 3.1 Definitions, triangles, rectangles, trapezium, rhombus, circle and regular polygons.

4. Transformation of Plane Figures [4CH] 1.1 Transformation, reduction and enlargement of figures.

5. Special Curves and Loci .. [4CH]

5.1 Ellipse, parabola and hyperbola,

5.2 Epi and hypo cycloid, Link mechanisms.

6. Principles of Orthographic Projection [8CH]

6.1 Drawing paper planning,

6.2 1st and 3rd projection,

6.3 Three-view drawing of regular objects,

6.4 Dimensioning of orthographic drawings.

7. Principles of Sectioning [4CH]

7.1 Definition, where and how to section,

7.2 Types of sections (full/half, local/resolved, part/removed and offset/aligned sections),

7.3 Dimensioning of isometric drawings.

8. Isometric and Oblique Drawings [4CH]

8.1 Principles,

8.2 Objects with isometric and non-isometric lines,

8.3 Projections - use and applications.

9. Engineering Drawing Practicals [15CH]

Learning Outcomes

Drawing skills and basic knowledge of computer aided software for design and drawing

Method of Teaching/Delivery

The course will be conducted through practical lectures, tutorials, drawing assignments and mini drawing projects.

Assessment Method

Continuous assessment through drawing assignments and mini projects, and final drawing examination. The final examination will carry 60% of the total mark, while continuous assessment will carry a total of 40%.

Reference books and materials.

1. John Molnar D.E., ***Building Construction Drafting and Design,*** CBS

2. Nuefert,E. ***Neufert Architects Data Book*** (3rd Edn), Blackwell

3. ***Representation Techniques in Building Drawing,*** Rukwaro, Mugenda, Acts Press, 9966-9702-1-5

4. ***Design Drawing Techniques for Architects,*** Tom Porter Sue, AP, 0-7506-08129

5. ***A text Book of Engineering Drawing,*** RK.Dhawan, 81-219-1431-0