Basic Technical Drawing
for
Grade 11 and 12

Preface

Many young people have an early interest in a career in engineering. Often they are not certain what an engineer does. Generally they do not have the opportunity to get the plants and laboratories of industry and see that actually takes place but they want to be one due to many reasons. The work of engineers covers a wide range of activities. In area such as: In design, in manufacturing, construction, maintenance, management, teaching, research etc.

Study of the basic technical drawing course is a key for success as an engineer and may be said to be the language of engineering. The basic technical drawing course is therefore designed to give students a brief look to some of the well rounded introductory information's, aspects, problems and opportunities in engineering. Technical drawing is the language used in industry by technicians and engineers to record their ideas and to give the basic information necessary for building, machines and structures.

Our aim is to study this technical language so that we may write it, express ourselves clearly to one familiar with it, and read those written by others. To achieve this we must learn its basic theory and composition by familiar with its accepted conventions and abbreviations. This technical language is universal as its principles are essentially world-wide.

Technical drawing is the name given to all drawing carried out with the aid of technical drawing instruments. All drafting may be grouped in to five main areas. These are Industrial drafting, Architectural drafting, Electrical drafting, Topographical drafting and civil engineering drafting. The people employed in these different areas must all have special training.

Technical drawing can be interpreted by acquiring a visual knowledge of the subject represented and the student's success in it will be indicated not only by his skill in doing it, but also by his ability to interpret his impression and visualize other peoples idea expressed in this language.

The curriculum guide for grade 11 and grade12 of basic Technical drawing are developed to implement the new educational and training policy. The contents of those grades are organized / incorporated for students to acquire knowledge further studies pertinent to drawing. So, these curriculum guides are designed taking in to consideration the students who may quit schooling at the first cycle of secondary education and those who will pursue their education or training in higher institution. The new curriculum framework for Ethiopian schools has allotted 2 periods per week for Basic Technical drawing in grade 11 and 12.Though the academic calendar is made of 40 weeks ,the curriculum guides are prepared for 34 weeks(68 periods) and 28 weeks(58 periods) for grade 11 and 12 respectively. The distribution of periods for each unit of each grade level is also indicated in the curriculum guides.

In these curriculum guides, basic Technical drawing subject area outcome, grade outcome, chapter outcome, competence, content, suggested activities, and ways of assessment have been briefly stated for the discipline. The competencies have been stated in behavioral terms in order to facilitate evaluation at the end of each unit. This document of grade 11 and 12 Basic Technical drawing curriculum guides was reviewed ,discussed, and finalized at a national workshop held in the general framework development department of the MOE(TIR 1-MIazia 30) by Abebe Basazinew a member of GECFDD and Wondim Maru from Yekatit 12 preparatory school.

Outcome of the Subject Area

The basic Technical drawing course in the second cycle of secondary education will enable students to:

- appreciate the contribution of technical drawing to society and in the industrial arts processes;
- understand basic principles and conventions of technical drawing;
- Acquire basic knowledge and skill for further studies pertinent to Technical drawing.

Grade 11

Basic Technical drawing course titles and time allotment distribution

Unit No.	*Course title or units*	*Theory and practice periods*		
		Theory	*Practice*	*Total*
1.	Introduction to Basic Technical Drawing	1	-	1
2..	Basic technical drawing Equipments	1	1	2
3.	Alphabet of Lines	1	-	1
4.	Lettering	2	-	2
5.	Geometrical construction	4	8	12
6.	Multi-view drawings	7	18	25
7.	Pictorial drawing	7	18	25
	Total periods per year	23	45	68

Grade 12

Basic Technical drawing course titles and time allotment distribution

Unit No.	*Course title or units*	*Theory and practice periods*		
		Theory	*Practice*	*Total*
1.	Free-hand Sketching	2	3	5
2.	Auxiliary view	4	9	13
3.	Sectional view	3	9	12
4.	Dimensioning	3	4	7
5.	Development and Intersection	8	13	21
	Total periods per year	20	38	58