MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY
TANZANIA INSTITUTE OF EDUCATION

ARCHITECTURAL DRAUGHTING SYLLABUS
FOR TECHNICAL SECONDARY SCHOOLS
FORM I – IV

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DECLARATION

The Architectural Draughting Syllabus is approved for use in Technical Secondary Schools in Tanzania.

Approved by .....

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1.0 Introduction

This Architectural Draughting Syllabus is a revised version of 1993 syllabus. Although, some of the subject contents of the phased out syllabus have been retained, changes have been effected in the arrangement of topics and sub-topics, addition of new topics and removal of irrelevant and outdated contents. The revised version has taken into consideration the current social, political, economic, global and technological development as well as emerging cross-cutting issues.

The revised syllabus observed a paradigm shift from content based to competence-based pedagogy to give room for the learners to build skills and competencies in Architectural Draughting. It encourages the constructivist approaches to teaching and learning whereas the learner participates actively in the construction of knowledge, skills and attitudes.

The syllabus covers the four years of secondary education, i.e., from Form One to Form Four in Tanzania.

2.0 Objectives of Education in Tanzania

Objectives of Architectural Draughting syllabus reflects the general objectives of education in Tanzania, which are to:

a) guide and promote the development and improvement of the personalities of the citizens of Tanzania, their human resources and effective utilization of those resources in bringing about individual and national development;
b) promote the acquisition and appreciation of culture, customs and traditions of the people of Tanzania;
c) promote the acquisition and appropriate use of literacy, social, scientific, vocational, technological, professional and other forms of knowledge, skills and attitudes towards the development and improvement of the condition of man and society;
d) develop and promote self-confidence and inquiring mind, understanding and respect for human dignity and human rights and readiness to work hard for personal self-advancement and national development;
e) promote and expand the scope of acquisition, improvement and upgrading of mental, practical, productive and other skills needed to meet the changing needs of industry and the economy;
f) enable every citizen to understand and uphold the fundamentals of the national constitution as well as protecting human and civil rights, obligations and responsibilities; and
g) promote love for work, self and wage employment and improved performance in the production and service sectors.

3.0 Objectives of Secondary Education

Objectives of Architectural Draughting syllabus reflects the general objectives of secondary education in Tanzania, which are to:

a) consolidate, broaden and develop a deeper understanding of the ideas and concepts acquired at the primary level;
b) enhance and further develop an appreciation for cultural values including national unity, identity, democracy, ethics, personal integrity, readiness to work, human rights, customs, traditions, civic responsibilities and obligations;
c) develop linguistic ability and effective use of communication skills in Kiswahili, English, and at least one other foreign language;

d) develop readiness for tertiary and higher education, vocational, technical and professional training;
e) inculcate a sense and ability for self-study, self-confidence and self advancement in new frontiers of science and technology, academic and occupational knowledge and skills; and
f) develop readiness to join the world of work.

4.0 Competencies of the Subject

By the end of the four years course, the student should have developed competencies in:

a) exploring socio-economic factors as considerations in own subject, study electives/ choices and career;
b) drawing outlines of simple residential building, site plan, water supply system and drainage system;
c) applying traditional drawing methods to produce working drawings (schematic drawings), detail drawings, water supply system and drainage system for simple residential building; and
d) applying computer aided draughting to produce working drawings (schematic drawings), detail drawings, water supply system and drainage system for simple residential building.

5.0 Objectives of the Subject

By the end of the four years course, the student should be able to;

a) use skills and knowledge learnt from the architectural draughting in construction practices;
b) apply knowledge of construction/ draughting of building in solving construction problems.
c) apply acquired competencies in solving day to day problems;
d) explore architectural draughting opportunities and needs in his/her society;
e) use the acquired skills for self-employment and in performing architectural draughting in building industry; and
f) become responsive to dynamically changing social-economic and technological needs.

6.0 Structure and Organisation of the Syllabus Content

This syllabus has two parts. The first part comprises class level competencies and class level objectives. The second part is the syllabus content and is presented in the table. It includes; topic, sub-topic, specific objectives to be achieved, teaching and learning strategies, teaching and learning resources, assessment criteria/tools and number of the period.

6.1 Class level competencies

Class level competencies are general competencies intended to be achieved within a class level or within each year of study. Class level competencies reflect the skills, knowledge and attitudes which the learner should demonstrate within that level of study. However, these competencies are not discrete but rather continuous. It is possible that a particular competency may require more than one year to be developed.

6.2 Class level objectives

The class level objectives are objectives intended to be achieved within the class level. These are specific instructional objectives at a particular class level. The class level objectives in this syllabus are stated in general terms and they have been derived from the competencies. For each competence intended to be developed one or more objectives have been stated in order to achieve it.

6.3 Topics/sub-topics

This part describes the matter dealt within a subject. The major topics in this syllabus have been derived from the class level competencies and objectives. Every major topic has been divided into several sub-topics. Each sub-topic comprises of a portion of the content of the topic in question. The sub-topics have also been arranged to attain a logical order and facilitate learning process. The horizontal treatment of this syllabus is controlled by the sub-topics. This means that for every sub-topic, there are teaching and learning strategies; teaching and learning resources, assessment strategies and the estimated number of periods.

6.4 Specific objectives

This includes statements that describe results in terms of knowledge, attitude, skills aspiration and behaviour that a student is expected to achieve and perform after going through the programme. They also reflect the process of attaining the specified competencies within the cognitive, affective and psychomotor domains.

6.5 Teaching and learning strategies

Teaching/learning strategies indicate what the teacher and the students are expected to be doing in the process of teaching and learning. The teaching/learning strategies in this syllabus are simply suggestive, and not exhaustive. The teacher is free to use them or design his/ her own. The teacher is expected to work as a facilitator for supporting the students to learn. Participatory and cooperative learning-based activities are encouraged for the students to work in groups and participate in learning processes effectively.

6.6 Teaching and learning resources

In the teaching and learning of this syllabus, many resources will be needed. In case the commercial materials needed are not available, the teacher and students should work together to collect or improvise alternative resources available in the school environment.

6.7 Assessment

The suggested assessment strategies in this syllabus are based on the specific instructional objectives. The formative and summative assessment approaches should be geared towards mastering all the competencies and skills developed within the course. Instruments of assessment should ensure that all the levels of cognitive, affective and psychomotor domains are observed.

6.8 Number of periods

The number of periods has been allocated per sub-topic. Some topics with relatively wider content will need more time than others. According to the education circular no. 9 of 2004, there are a total of 194 effective teaching days per year.

FORM I

CLASS LEVEL COMPETENCIES

By the end of Form I, the student should have ability to:

a) explore socio-economic factors in building industry for their own careers;
b) make considerations for the elective professional field and study choices for their own future careers;
c) apply safety management in architectural studios and in different engineering workshops;
d) use different types of drawing tools effectively in Architectural draughting; and
e) use basic knowledge of lines and angles to draw geometrical figures.

CLASS LEVEL OBJECTIVES

By the end of Form I, the student should be able to:

a) investigate the diversity of jobs according to economic sectors, as well as work settings and form of activities in Architectural field;
b) explain the roles, duties and importance of Architect in the society;
c) conceptualize studio as related to Architectural draughting;
d) explain safety management rules and procedures applied in architectural draughting studios;
e) identify and use tools, equipment and materials used in architectural draughting studios; and
f) explain different types of measuring instruments used in documenting Architectural works.

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
1.0 ARCHITECTURAL DRAUGHTING	1.1 Introduction to Architectural Draughting	The student should be able to: a) Explain the term Architectural Draughting. b) Explain importance of Architectural Draughting field in society. c) Differentiate Architectural Draughting from other fields of engineering. d) Identify opportunities obtained in the field of Architectural Draughting.	i) The teacher to use questions to guide students to: – Explain the meaning of Architectural Draughting. – Explain importance of Architectural Draughting field in society ii) The teacher to organise group discussions for students to: – Differentiate Architectural Draughting from other fields of engineering.	• Sample architectural drawings • Multimedia, TV, Computer • Reading texts on the topic	1. Is the student able to explain the meaning of the term Architectural Draughting? 2. Is the student able to explain importance of Architectural Draughting field in society? 3. Is the student able to differentiate Architectural Draughting from other fields of engineering?	5

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
		e) Explain the essence of studying Architectural Draughting.	– Identify opportunities obtained in the field of Architectural Draughting. iii) The teacher to use questioning strategies (what, why and how questions) to guide students to explain the essence of studying Architectural Draughting. iv) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in part (i-iii).		4. Is the student able to identify opportunities obtained in the field of Architectural Draughting? 5. Is the student able to explain the essence of studying Architectural Draughting?	

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
2.0 ARCHITECTURAL DRAUGHTING OCCUPATIONAL INFORMATION	2.1 Duties and Roles of Architect and Draughting experts	The student should be able to: a) Describe the duties of Architect and Draughts persons in a drawing office and on work sites. b) Describe the roles of Architect and Draughts persons in a drawing office. c) Describe the role of Architect and Draughts persons on work sites.	i) The teacher to organise group discussion for students to: – Describe the duties of Architect and Draughts persons in a drawing office and on work sites. – Describe the roles of Architect and Draughts persons in a drawing office. – Describe the role of Architect and Draughts persons in on work sites	• Sample architectural drawings • Architectural Drawing textbook • Other relevant texts	1. Is the student able to describe the duties of architect in a drawing office and on sites? 2. Is the student able to describe the roles of architect in a drawing office? 3. Is the student able to describe the role of Architect and Draughts persons in on work sites?	4

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
			ii) The teacher should give feedback and to use students' responses as feedback to support students to describe the duties and roles of Architect and Draughts persons in a drawing office and on site works.			
	2.2 Relationship between Architectural Draughting and other Civil Engineering Disciplines	The student should be able to: a) Explain the importance of architectural drawing to building work. b) Explain the importance of architectural drawing to civil engineering.	i) The teacher to organise groups discussion and guide students to: – Explain the importance of architectural draughting to building work – Explain the importance of architectural drawing to civil engineering.	• Sample architectural drawings • Multimedia, TV, Computer • Reading texts	1. Is the student able to explain the importance of architectural drawing to building works? 2. Is the student able to explain the importance of architectural drawing to civil engineering?	1

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
		c) Explain the difference between architectural draughting and civil engineering. d) Explain the relationship between architectural drawing and civil engineering.	– Describe the difference between architectural draughting and civil engineering. – Explain the relationship between architectural drawing and civil engineering. ii) Students to present their responses for sharing and discussion. iii) The teacher should give feedback and to use students' responses as feedback to support students to perform the task given in part (i).		3. Is the student able to explain the difference between architectural draughting and civil engineering? 4. Is the student able to explain the relationship between architectural drawing and civil engineering?	

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
3.0 INSTRUMENTS/ EQUIPMENT AND MATERIALS	3.1 Types of Drawing Instruments	The student should be able to: a) Identify the instruments/ equipment used in a drawing office. b) Explain uses of each technical drawings instruments.	i) The teacher to display the drawing instruments/ equipment and guide students in groups to: – Identify technical drawings instruments (i.e. scales, pencils, ball pens, templates, paper trimmers, printing machines, computer, drawing, t-square, set square, protractor, compass, devider, french curve, boards). – Explain uses of each technical drawings instruments. ii) Students to present their responses for sharing and discussion.	• Sample architectural drawings • Multimedia, TV, Computer • Drawing tools, equipment and materials • Reading texts	1. Is the student able to identify instruments/ equipment used in drawing office? 2. Is the student able to explain the uses of instruments/ equipment in drawing office?	2

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
			iii) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in part (i).			
	3.2 Types of Drawing Materials	The student should be able to: a) Identify the type of materials used in a drawing office. b) Explain the uses of drawing materials. c) Demonstrate the use of each drawing materials.	i) The teacher to display the technical drawing materials and guide the students in groups to: – Identify the type of materials used in a drawing office (i.e. tracing paper, water proof ink, etc.).	• Sample architectural drawings • Multimedia, TV, Computer • Reading texts	1. Is the student able to identify types of materials used in a drawing office? 2. Is the student able to explain the uses of drawing materials?	1

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
			– Explain the uses of each drawing materials. ii) Students to present their responses for sharing and discussion. iii) The teacher to design practical activities for students to demonstrate the use of each drawing materials iv) Students should practice individually or in pairs on using of drawing materials.		3. Is the student able to demonstrate the use of each drawing materials?	

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
			v) The teacher should monitor and facilitate students on performing the tasks given in part (i), (iii) and (iv). vi) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in part (i), (ii) and (iv).			
	3.3 Care of Instruments	The student should be able to: a) Handle properly the drawing instruments/ equipment.	i) The teacher should use role play method to guide students to demonstrate the: – Handling of drawing instruments/ equipment.	• Sample architectural drawing instruments. • Multimedia, TV, Computer • Reading texts	1. Is the student able to handle properly the drawing instruments/ equipment?	1

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
		b) Maintain different types of drawing instruments/ equipment.	– Maintenance of different types of drawing instruments/ equipment. ii) The teacher should monitor and facilitate students on performing the tasks given in part (i). iii) With the aid of prepared assessment guideline, the teacher should guide students to use guideline to assess the activities performed in part (i).		2. Is the student able to maintain different types of drawing instruments/ equipment?	

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
			iv) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in part (i).			
	3.4 Drawing Office/Studio	The student should be able to: a) Define the term drawing office/studio. b) Identify drawing office instruments and equipment. c) Explain the uses of drawing office instruments/ equipment.	i) The teacher to use questions to guide students to: – Define drawing office. – Mention all office drawing equipment fixed or placed in the office. – Describe the layout of the drawing office.	• Drawing room • Drawing instruments/ equipment • Manila sheet • Marker pen • Poster showing different types of drawing instruments	1. Can the student define drawing office? 2. Can the student identify drawing office instruments and equipment? 3. Can the student explain the uses of drawing office instruments/ equipment?	4

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
		d) Describe the layout of the drawing office. e) Explain care and handling of drawing office tools. f) Arrange the equipment properly in the drawing office.	ii) The teacher to organise group discussion for students to: – Describe the layout of the drawing office – Explain how to handle and care of drawing office tools. iii) Students to present their responses for sharing and discussion. iv) The teacher to use role play methods to guide students to properly arrange the equipment properly in the drawing office.	• TV, • VHS • Reading texts • CD/VCD/ DVD • Computer • Reading texts • Pictures and drawings	4. Can the student describe the layout of the drawing office? 5. Is the student able to explain about care and handling of drawing office tools? 6. Is the student able to arrange properly the equipment and materials in the drawing office/studio?	

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
			v) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in part (i), (ii) and (iv).			
4.0 LETTERING	4.1 Need of Lettering	The student should be able to:- a) Explain the meaning of lettering in architectural drawings. b) Explain the need of lettering in architectural drawings.	i) The teacher to use brainstorming questions to guide the students to explain the meaning of lettering in architectural drawings.	• Sample architectural drawings • Multimedia, TV, Computer • Reading texts	1. Is the student able to explain the meaning of lettering in architectural drawing? 2. Is the student able to explain the need of lettering in architectural drawing?	1

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
			ii) The teacher to use questioning strategies (what, why and how questions) to guide students to explain the need of lettering in architectural drawings. iii) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in part (i) and (ii).			

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
	4.2 Letters Appearance	The student should be able to: a) Describe the appearance of letters in terms of legibility, spacing sizes and shape. b) Arrange letters in terms of appearance, legibility, spacing, sizes and shape.	i) The teacher to organise group discussion and guide students to describe the appearance of letters in terms of legibility, spacing, sizes and shape (guide lines, slope, single stroke, etc.). ii) The teacher to design activities and guide students to arrange letters in terms of appearance, legibility, spacing, size and shape. iii) The teacher should monitor and facilitate students on performing the tasks given in part (ii).	• Sample architectural drawings • Multimedia, TV, Computer • Guideline • Reading texts	1. Is the student able to describe the appearance of letters in terms of legibility, spacing, sizes and shape? 2. Is the student able to arrange letters in terms of appearance, legibility, spacing, size and shape?	1

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
			iv) With the aid of the prepared assessment guideline, teacher should guide students to assess the activities performed in part (ii). v) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in part (i) and (ii).			

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
	4.3 Lettering Practices and Styles	The student should be able to: a) Identify common styles of lettering in drawings. b) Explain how to apply the common styles of lettering in drawings. c) Differentiate lettering, and stencils styles. d) Use common styles of lettering in drawings. e) Use guideline effectively in lettering.	i) The teacher to use questioning strategies (what, why and how questions) to guide students to: – Identify common styles of lettering in drawings (i.e. single stroke, lettering and classic lettering). – Explain how to apply the common styles of lettering in drawings (Alphabets and numerals, i.e. Names, Notes and dimensions). – Differentiate between lettering, and stencils styles.	• Sample architectural drawings • Multimedia, TV, Computer • Drawing pen • Pencil (clutch pencil) • Lettering • Stencils • Reading texts	1. Is the student able to identify common styles of lettering in drawings? 2. Is the student able to explain how to apply common styles of lettering in drawings? 3. Can the student differentiate lettering, and stencils styles? 4. Can the student use common style in lettering drawings? 5. Can the student use guideline effectively in lettering?	2

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
			ii) The teacher to organise practical activities and guide students to: – use common styles in lettering drawings (i.e. guidelines, slope, single stroke, single line lettering, classic lettering etc.) – Use guideline effectively in lettering. iii) The teacher should monitor and facilitate students on performing the tasks given in part (ii).			

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
			iv) With the aid of the prepared assessment guideline, teacher should guide students to assess the activities performed in part (ii). v) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in part (i) and (ii).			

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
5.0 LAYOUT OF THE DRAWING PAPER OR PAPER FORMATTING	5.1 International Standard Organization (ISO) Sheet	The student should be able to: a) Define the term ISO. b) Identify types of drawing sheet sizes. c) Make layout of drawing sheet. d) Make a sketch of a drawing sheet.	i) The teacher to use questions to guide students to define the term "ISO". ii) The teacher to organise students in groups and guide them to identify different types of drawing sheet sizes. iii) Students to present their responses for sharing and discussion. iv) The teacher to design activities for students to: – Make layout of drawing sheet (Margin, Space for drawing and Title block). – Make a sketch of drawing sheet.	• Drawing sheets • Drawing board • Drawing Instruments • Standard drawing sheets (i.e., A1, A2, A3, A4)	1. Is the student able to define ISO? 2. Can students identify different types of drawing sheet sizes? 3. Can student make layout of drawing sheets? 4. Is the student able to make a sketch of a drawing sheet?	2

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
			v) The teacher should monitor and facilitate students on performing the tasks given in part (ii). vi) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in part (i-iv).			

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
6.0 BLENDING OF STRAIGHT LINES AND CURVES	6.1 Straight lines at right angle	The student should be able to: a) Explain how to find the centre of an arc; radius of which blends with two straight lines meeting at right angles. b) Find the centre of an arc; radius of which blends with two straight lines meeting at right angles. c) Construct a centre of arc from the radius with two straight lines meets at the right angle	i) The teacher to organise group discussion and guide students to explain how to find the centre of an arc; radius of which blends with two straight lines meeting at right angles. ii) Students to present their responses for sharing and discussion. iii) The teacher to organise practical activities and guide students to perform activities on:	• Drawing instruments/ equipment • Multimedia, TV, Computer • Drawing materials • Reading texts	1. Can the student explain how to find the centre of an arc; radius of which blends with two straight lines meeting at right angles? 2. Can the student find the centre of an arc; radius of which blends with two straight lines meeting at right angles? 3. Can the student construct a centre of arc from the radius with two straight lines meets at the right angle?	4

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
			– Finding the centre of an arc; radius of which blends with two straight lines meeting at right angles. – Constructing a centre of arc from the radius with two straight lines meets at the right angle. iv) The teacher should monitor and facilitate students on performing the tasks given in part (ii).			

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
			v) With the aid of the prepared assessment guideline, the teacher should guide students to assess the activities performed in part (iii). vi) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in part (i-iii).			

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
	6.2 Straight Lines at any Angle	The students should be able to: a) Explain how to find the centre of an arc; radius of which blends with straight lines meeting at any angle. b) Find the centre of an arc; radius of which blends with straight lines meeting at any angle. c) Construct straight lines at any angle as required.	i) The teacher to organise students in groups and guide them to explain how to find the centre of an arc; radius of which blends with straight lines meeting at any angle. ii) Students to present their responses for sharing and discussion. iii) The teacher to guide students to perform activities on: – Finding the centre of an arc; radius of which blends with straight lines meeting at any angle.	• Drawing instruments/ equipment • Multimedia, TV, Computer • Drawing materials • Reading texts	1. Can the student explain how to find the centre of an arc; radius of which blends with straight lines meeting at any angle? 2. Can the student find the centre of an arc; radius of which blends with straight lines meeting at any angle? 3. Can the student construct straight lines at any angle as required?	4

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
			– Constructing straight lines at any angle as required. iv) The teacher should monitor and facilitate students on performing the tasks given in part (iii). v) With the aid of the prepared assessment guideline, the teacher should guide students to assess the activities performed in part (iii).			

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
			vi) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in part (i-iii).			
	6.3 Point and Straight Line	The students should be able to: a) Explain how to find the centre of an arc; radius of which passes through a point and blends with straight lines.	i) The teacher to arrange students in groups and guide them to explain how to find the centre of an arc; radius of which passes through a point and blends with straight lines. ii) Students to present their responses for sharing and discussion.	• Drawing instruments/ equipment • Multimedia, TV, Computer • Drawing materials • Reading texts	1. Can the student explain how to find the centre of an arc; radius of which passes through a point and blends with straight lines?	

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
		b) Explain how to find the centre of an arc; radius of which passes through a point and blends with straight lines. c) Construct point and straight line as required.	iii) The teacher to use role play method to guide students to demonstrate the activities on: – Finding the centre of an arc; radius of which passes through a point and blends with straight lines. – Constructing point and straight line as required. iv) The teacher should monitor and facilitate students on performing the tasks given in part (iii).		2. Can the student explain how to find the centre of an arc; radius of which passes through a point and blends with straight lines? 3. Can the student construct point and straight line as required?	

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
			v) With the aid of the prepared assessment guideline, the teacher should guide students to assess the activities performed in part (iii). vi) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in part (i-iii).			

FORM II

CLASS LEVEL COMPETENCIES

By the end of Form II, the student should have the ability to:

a) construct Architectural /technical geometrical figures;
b) construct basic primary elements of design i.e. point, lines, plane and volume;
c) construct the Architectural figures by integration of straight and curved lines;
d) describe different scales types and their purposes, various equipment, drawing convention, dimensions, and lettering that are used to produce basic Architectural drawings (schematic drawings);
e) describe the principles and types of projections that are used to create pictorial images of buildings for presentation purposes; and
f) describe the conventional methods to construct perspective drawings.

CLASS LEVEL OBJECTIVES

By the end of Form II, the student should be able to:

a) construct Architectural /technical geometrical figures;
b) demonstrate basic primary elements of design i.e. point, lines, plane and volume;
c) construct Architectural figures by integrating straight and curved lines;
d) identify scales, equipment, drawing convention, dimensions, symbols and letterings used in producing basic Architectural drawings (schematic drawings);
e) demonstrate various types of projections that are used to create pictorial images of the building for presentation purposes; and
f) develop perspective drawings by conventional method.

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVE	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
1.0 GEOMETRICAL FIGURES	1.1 Meaning of Geometric Figures	The student should be able to: a) Define the meaning of geometric figures, a point and line. b) Define geometric figures as applied to engineering drawing. c) Explain the importance of geometric figures in architectural drawing.	i) The teacher to use brainstorming questions to guide students to: – Define the meaning of geometric figures, a point and line. – Define geometric figures as applied to engineering drawing. ii) The teacher to use questioning strategies (what, why and how questions) to guide students to explain the importance of geometric figures in architectural drawing.	• Standard drawing • Drawing sheets • Drawing board • Drawing Instruments • Posters showing different types of lines, angles and plane figures • Reading texts	1. Can the student define the meaning of geometric figures, a point and line? 2. Can the student define geometric figures as applied to engineering drawing? 3. Can the student explain the importance of geometric figures in architectural drawing?	2

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVE	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
			iii) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in part (i) and (ii).			
	1.2 Types of Geometrical Figures	The student should be able to: a) Identify types of geometric figures. b) Explain the uses of geometric figures in architectural draughting.	i) The teacher to organise group discussions and guide students to: – Identify geometric figures (i.e. point, line, angles, triangle, quadrilaterals, circles, tangent, polygons and ellipses).	• Standard drawing • Drawing sheets • Drawing board • Drawing Instruments • Posters showing different types of lines, angles and plane figures	1. Can the student identify different types of geometric figures in engineering? 2. Can the student explain the uses of geometric figures in architectural draughting?	4

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVE	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
		c) Describe the functions of each uses of geometric figures in architectural draughting.	– Explain the uses of geometric figures in architectural draughting. ii) The teacher to use questioning strategies (what, why and how questions) to guide students to describe the functions of each uses of geometric figures in architectural draughting iii) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in part (i) and (ii).	• Reading texts	3. Can the student describe the functions of each uses of geometric figures in architectural draughting?	

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVE	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
	1.3 Construction of Geometrical Figures	The student should be able to: a) Explain processes of constructing geometrical figures relevant to architectural draughting. b) Construct geometrical figures relevant to architectural draughting.	i) The teacher to organise group discussions and guide students to explain processes of constructing geometrical figures relevant to architectural draughting. ii) The teacher to organise practical activities for students to construct geometrical figures (i.e., lines, perpendicular lines, division of a line into equal parts, bisect different types of angles, triangle, quadrilaterals, circles, tangent, polygons and ellipses).	• Standard drawing • Drawing sheets • Drawing board • Drawing Instruments • Posters showing different types of lines, angles and plane figures • Reading texts	1. Can the student explain processes of constructing geometrical figures relevant to architectural draughting? 2. Can the student construct geometrical figures relevant to architectural draughting?	4

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVE	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
			iii) The teacher should monitor and facilitate students on performing the tasks given in part (iii). iv) With the aid of the prepared assessment guideline, teacher should guide students to assess the activities performed in part(iii) v) Students to present their responses for sharing and discussion. vi) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in part (i) and (ii).			

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVE	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
	1.4 Similar Figures	The student should be able to: a) Define the concept of similar figures. b) Define the term equal areas. c) Explain the meaning of enlarging and reducing of figures. d) Explain the method of drawing similar figures (enlargement and reduction of similar figures. e) Enlarge and reduce different figures.	i) The teacher to use questions to guide students to: – Define the concept of similar figures. – Define the term equal areas. – Explain the meaning of enlarging and reducing of figures. ii) The teacher to organise group discussions and guide students to explain the method of drawing similar figures (enlargement and reduction of similar figures).	• Posters showing different types of lines, angles and plane figures • Reading texts	1. Can the student define the concept of similar figures? 2. Can the student define the term equal areas? 3. Can the student explain the meaning of enlarging and reducing of figures? 4. Can the student explain the method of drawing similar figures (enlargement and reduction of similar figures?	4

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVE	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
			iii) Students to present their responses for sharing and discussion. iv) The teacher to design activities for students to do practices on enlarging and reducing different figure. v) The teacher should monitor and facilitate students on performing the tasks given in part (iv). vi) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in part (i-iv).		5. Can the student enlarge and reduce different figures?	

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVE	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
	1.5 Construction of similar figures	The student should be able to: a) Construct different types of plane similar figures. b) Construct different types of three dimensional similar figures. c) Draw similar figures (enlargement and reduction of similar figures. d) Construct a given figure with equal area to a given one. e) Construct equal areas.	i) The teacher to design activities for students to: – Construct different types of plane similar figures. – Construct different types of three dimensional similar figures. – Draw similar figures (enlargement and reduction of similar figures). – Construct a given figure with equal area to a given one. – Construct equal areas.	• Posters showing different types of lines, angles and plane figures • Reading texts	1. Can the student construct different types of plane similar figures? 2. Can the student construct different types of three dimensional similar figures? 3. Can the student draw similar figures (enlargement and reduction of similar figures?	

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVE	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
			ii) The teacher should monitor and facilitate students on performing the tasks given in part (i). iii) With the aid of the prepared assessment guideline, teacher to guide students to assess the activities performed in part(i) iv) Students to present their responses for sharing and discussion. v) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in part (i).		4. Can the student construct a given figure with equal area to a given one? 5. Can the student construct equal areas?	

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVE	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
2.0 DIMENSIONS	2.1 Purpose	The student should be able to: a) Define the term dimensions as applied in Architectural draughting. b) Explain the purpose of dimensions in different types of views. c) Describe the importance of dimensions as applied in Architectural draughting.	i) The teacher to use questioning strategies to guide students to define the term dimensions as applied in Architectural draughting. ii) The teacher to use questioning strategies (what, why and how questions) to guide student to: – Explain the purpose of dimensions in different types of views. – Describe the importance of dimensions as applied in Architectural draughting.	• Drawing instruments/ equipment • Multimedia, TV, Computer • Drawing materials • Reading texts	1. Is the student able to define the term dimensions as applied in Architectural draughting? 2. Is the student able to explain the purpose of dimensions in different types of views? 3. Is the student able to describe the importance of dimensions as applied in Architectural draughting?	4

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVE	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
			iii) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in part (i) and (ii).			
	2.2 Rules	The student should be able to: a) Identify the rules of dimensioning of different views. b) Explain the applications of rules of dimensioning of different views in architectural draughting	i) The teacher to use questioning strategies (what, why and how questions) to guide students to: – Identify the rules of dimensioning of different views. – Explain the applications of rules of dimensioning of different views in architectural draughting	• Drawing instruments/ equipment • Multimedia, TV, Computer • Drawing materials • Reading texts	1. Is the student able to identify the rules of dimensioning of different views?	4

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVE	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
			ii) The teacher should give feedback and use students' responses as feedback to support students in identifying the rules of dimension of different types of views and their applications in architectural draughting.		2. Is the student able to explain the applications of rules of dimensioning of different views in architectural draughting?	
	2.3 Types	The student should be able to: a) Identify the different types of dimensions. b) Explain the uses of different types of dimensions in architectural draughting.	i) The teacher to organise group discussion and guide students to: – Identify the different types of dimensions(e.g. overall dimensions and detail dimensions).	• Drawing instruments/ equipment • Multimedia, TV, Computer • Drawing materials • Reading texts	1. Can the student identify the different types of dimensions?	4

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVE	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
			– Explain the uses of different types of dimensions in architectural draughting. ii) The teacher should give feedback and use students' responses as feedback to support students to explain types and uses of different types of dimensions in architectural draughting		3. Can the student explain the uses of different types of dimensions in architectural draughting?	
3.0 SCALES	3.1 Definition of Scale	The student should be able to a) Define the term "Architectural scale". b) Explain the uses of scale in Architectural draughting.	i) The teacher to use brainstorming questions to guide students to define the term "Architectural scale".	• Drawing instruments/ equipment • Multimedia, TV, Computer • Drawing materials	1. Can the student define the term Architectural scale?	1

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVE	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
			ii) The teacher to use questions to guide students to explain the uses of scale in Architectural draughting. iii) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in part (i) and (ii).	• Reading texts	2. Can the student explain the uses of scale in Architectural draughting?	
	3.2 Materials and Shapes	The student should be able to: a) Identify the materials used to manufacture scale rules.	i) The teacher to use questions to guide the students to: – Identify the materials used to manufacture scale rules (e.g. wooden, plastic and steel).	• Drawing instruments equipment • Multimedia, TV, Computer • Drawing materials	1. Can the student identify the materials used to manufacture scale rules?	2

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVE	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
		b) Describe the common shapes of architectural scales (triangular and flat scale).	– Describe common shapes of architectural scales (triangular and flat scale). ii) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in part (i).		2. Is the student able to describe the common shapes of architectural scales?	
	3.3 Scale Calibration	The student should be able to; a) Explain the processes of calibration of architectural scales. b) Calibrate architectural scales.	i) The teacher to organise students in groups and guide them to explain the processes of calibration of architectural scales ii) The teacher to design activities for students to calibrate architectural scales.	• Drawing instruments/ equipment • Multimedia, TV, Computer • Drawing materials • Reading texts	1. Can the student explain the processes of calibration of architectural scales? 2. Can the student calibrate architectural scales?	2

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVE	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
			iii) The teacher should monitor and facilitate students on performing the tasks given in part (ii). iv) Students to present their work for sharing and discussion. v) With the aid of prepared assessment guideline, the teacher should guide students to assess the activities done on calibrating architectural scales. vi) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in part (i) and (ii).			

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVE	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
	3.4 Reading and Application of Scales	The student should be able to: a) Read different architectural scales. b) Use architectural scales in setting out the size of drawing on a paper.	i) The teacher to design activities for students to: – Read different architectural scales – Use architectural scales in setting out the size of drawing on a paper. ii) The teacher should monitor and facilitate students on performing the tasks given in part (i). iii) Students to present their work for sharing and discussion.	• Drawing instruments/ equipment • Multimedia, TV, Computer • Drawing materials • Reading texts	1. Is the student be able to read and use different architectural scales? 2. Is the student be able to use architectural scales in setting out the size of drawing on a paper?	2

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVE	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
			iv) With the aid of prepared assessment guideline, the teacher to guide students to assess the activities done on reading and application of different architectural scales. v) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in part (i).			

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVE	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
4.0 ORTHOGRAPHIC PROJECTION	4.1 Purpose	The students should be able to: a) Define the term orthographic projections as applied in Architectural drafting. b) Explain the purpose of drawing orthographic projections in Architectural drafting. c) Describe the uses of drawing orthographic projections in Architectural drafting.	i) The teacher to use questions to guide students to define the term orthographic projections as applied in Architectural drafting. ii) The teacher to organise students in groups and guide them to: – Explain the purpose of drawing orthographic projections in Architectural drafting. – Describe the uses of drawing orthographic projections in Architectural drafting.	• Drawing instruments/ equipment • Multimedia, TV, Computer • Drawing materials • Reading texts	1. Is the student able to define the term orthographic projections as applied in Architectural drafting? 2. Is the student able to explain the purpose of drawing orthographic projections in Architectural drafting? 3. Is the student able to describe the uses of drawing orthographic projections in Architectural drafting?	4

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVE	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
			iii) The teacher should give feedback and use students' responses as feedback to support students in explaining the purpose and uses of drawing orthographic projections in Architectural drafting.			
	4.2 Principal Planes	The students should be able to: a) Identify the three principles planes used in architectural draughting. b) Explain how to project views of principal planes.	i) The teacher to organise students in groups and them to: – Identify the three principles planes used in architectural draughting. – Explain how to project views of principal planes.	• Drawing instruments/ equipment • Multimedia, TV, Computer • Drawing materials • Reading texts	1. Can the student identify the three principles planes used in architectural draughting?	2

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVE	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
		c) Project views of principal planes.	ii) The teacher to design activities for students to project views of principal planes (i.e.,vertical-planes and horizontal- planes elevations). iii) The teacher should monitor and facilitate students on performing the tasks given in part (ii). iv) With the aid of prepared assessment guideline, the teacher to guide students to assess the activities performed on projecting views on principal planes.		2. Can the student explain how to project views of principal planes? 3. Can the student project the views of principal planes?	

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVE	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
			v) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in part (i) and (ii).			
	4.3 Types	The students should be able to a) Identify two types of orthographic projection. b) Explain the uses of each type of orthographic projection in architectural draughting.	i) The teacher to organise students in groups and guide them to: – Identify two types of orthographic projection (i.e., first and third angle projection). – Explain the uses of each type of orthographic projection in architectural draughting.	• Drawing instruments/ equipment • Multimedia, TV, Computer • Drawing materials • Reading texts	1. Can the student identify the two types of orthographic projections? 2. Can the student explain the uses of each type of orthographic projection in architectural draughting?	2

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVE	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
			ii) Students to present their responses for sharing and discussion. iii) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in part (i).			
	4.4 First Angle Projection	The students should be able to: a) Explain the meaning of the term first angle projection. b) Explain in detail how figures can be draw in first angle projection.	i) The teacher to use questions to guide students to: – Explain the meaning of the term first angle projection. – Explain in detail how figures can be draw in first angle projection.	• Drawing instruments/ equipment Multimedia, TV, computer • Drawing materials • Reading texts	1. Can the student explain the meaning of the term first angle projection?	6

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVE	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
		c) Explain the importance of using first angle projections in architectural drawing. d) Draw figures in first angle projection.	ii) The teacher to use questioning strategies (what, why and how questions) to guide students to explain the importance of using first angle projections in architectural drawing. iii) The teacher to design activities for students to draw figures in first angle projection. iv) The teacher should monitor and facilitate students on performing the tasks given in part (iii).		2. Can the student explain in detail how figures can be draw in first angle projection? 3. Can the student the explain the importance of using first angle projections in architectural drawing? 4. Can the student draw figures in first angle projection?	

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVE	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
			v) With the aid of prepared assessment guideline, the teacher should guide students to assess the activities performed on drawing figures in first angle projection. vi) Students to present their work for sharing and discussion. vii) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in part (i-iii).			

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVE	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
	4.5 Third Angle Projection	The student should be able to: a) Define the term third angle projection. b) Explain in detail how figures can be draws in third angle projection. c) Explain the importance of using first angle projections in architectural drawing. d) Draw figures in third angle projection.	i) The teacher to use questions to guide students to: – Define the term third angle projection – Explain in detail how figures can be draws in third angle projection. ii) The teacher to use questioning strategies (what, why and how questions) to guide students to explain the importance of using first angle projections in architectural drawing.	• Drawing instruments/ equipment • Multimedia, TV, Computer • Drawing materials • Reading texts	1. Can the student define the term third angle projection? 2. Can the student explain in detail how figures can be draws in third angle projection? 3. Can the student explain the importance of using first angle projections in architectural drawing?	4

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVE	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
			iii) The teacher to design activities for students to explain the importance of using first angle projections in architectural drawing. iv) The teacher should monitor and facilitate students on performing the tasks given in part (iii). v) With the aid of prepared assessment guideline, the teacher should guide students to assess the activities performed on drawing figures in third angle projection.		4. Can the student draw figures in third angle projection?	

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVE	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
			vi) Students to present their work for sharing and discussion. vii) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in part (i-iii).			
	4.6 Conventional Symbols of First and Third Angle Projections	The students should be able to: a) Describe conventional symbols of first and third angle projections.	i) The teacher to organise students in groups and guide them to: – Describe conventional symbols of first and third angle projections.	• Drawing instruments/ equipment • Multimedia, TV, Computer • Drawing materials • Reading texts	1. Is the student able to describe conventional symbols of first and third angle projections?	4

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVE	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
		b) Explain the importance of using conventional symbols of first and third angle projections in architectural drawing. c) Use conventional symbols of first and third angle projections in architectural drawing.	– Explain the importance of using conventional symbols of first and third angle projections in architectural drawing. ii) The teacher to design activities for students to use conventional symbols of first and third angle projections in architectural drawing. iii) The teacher should monitor and facilitate students on performing the tasks given in part (ii).		2. Is the student able to explain the importance of using conventional symbols of first and third angle projections in architectural drawing? 3. Is the student able to use conventional symbols of first and third angle projections in architectural drawing?	

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVE	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
			iv) With the aid of prepared assessment guideline, the teacher should guide students to assess the activities performed on using conventional symbols of first and third angle projections in architectural drawing. v) The teacher should give feedback and use students' responses as feedback to support students to describe and use conventional symbols of first and third angle projections in architectural draughting.			

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVE	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
5.0 POINTS, LINES AND PLANES IN SPACE	5.1 Need for Points, Lines and Planes in Space	The student should be able to: a) Explain the need for points, lines and planes in space. b) Explain the uses of points, lines and planes in space. c) Find true length of a line, true plane and shape. d) Find true angle of lines in space, intersection of lines in space.	i) The teacher to use questioning strategies (what, why and how questions) to guide students to: – Explain the need for points, lines and planes in space. – Explain the uses of points, lines and planes in space. ii) The teacher to organise students in groups and guide them to: – Find true length of a line, true plane and shape. – Find true angle of lines in space, intersection of lines in space.	• Drawing instruments/ equipment • Multimedia, TV, Computer • Drawing materials	1. Is the student able to explain the need for points, lines and planes in space? 2. Is the student able to explain the uses of points, lines and planes in space? 3. Find true length of a line, true plane and shape. 4. Find true angle of lines in space, intersection of lines in space?	4

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVE	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
		e) Find true sections, shapes of cylinders, cones and pyramids.	– Find true sections, shapes of cylinders, cones and pyramids. iii) The teacher should monitor and facilitate students on performing the tasks given in part (ii). iv) With the aid of prepared assessment guideline, the teacher should guide students to assess the activities performed on part (ii). v) Students to present their responses for sharing and discussion.		5. Find true sections, shapes of cylinders, cones and pyramids?	

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVE	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
			vi) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in part (i) and (ii).			
6.0 AUXILIARY VIEWS	6.1 Purpose	The student should be able to: a) Explain meaning of the term auxiliary views. b) Explain the importance of auxiliary views in architectural draughting. c) Describe the uses of auxiliary views in architectural draughting.	i) The teacher to use brainstoming questions to guide students to explain meaning of the term auxiliary views. ii) The teacher to use questioning strategies to guide students to: – Explain the importance of auxiliary views in architectural draughting.	• Drawing instruments/ equipment • Multimedia, TV, Computer • Drawing materials • Reading texts	1. Is the student able to explain meaning of the term auxiliary views? 2. Is the student able to explain the importance of auxiliary views in architectural draughting?	2

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVE	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
			– Describe the uses of auxiliary views in architectural draughting. iii) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in part (i) and (ii). iv) With the aid of prepared assessment guideline, the teacher should guide students to assess the activities performed on drawing projections of auxiliary plan and elevation.		3. Is the student able to explain describe the uses of auxiliary views in architectural draughting?	

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVE	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
	6.2 Types	The students should be able to: a) Describe types of auxiliary views. b) Explain the use of each type of auxiliary views in architectural draughting. c) Draw projections of auxiliary plan and elevation.	i) The teacher to use questions to guide the students to: – Describe types of auxiliary views (i.e.,plan and elevations). – Explain the use of each type of auxiliary views in architectural draughting. ii) The teacher to organise students in groups and guide them to: – Describe how to draw projections of auxiliary plan and elevation. – Draw projections of auxiliary plan and elevation.	• Drawing instruments/ equipment • Multimedia, TV, Computer • Drawing materials • Reading texts	1. Is the student able to describe types of auxiliary views (plan and elevation)? 2. Is the student able to explain the use of each type of auxiliary views in architectural draughting? 3. Can the student draw projections of auxiliary plan and elevation?	6

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVE	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
			iii) The teacher should monitor and facilitate students on performing the tasks given in part (ii). iv) Students to present their responses for sharing and discussion v) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in part (i) and (ii).			

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVE	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
7.0 PICTORIAL DRAWING	7.1 Definition	The student should be able to: a) Define the term pictorial drawing, oblique projection and isometric projection. b) Identify the types of pictorial drawings. c) Explain the meaning of each pictorial drawing identified. d) Distinguish the terms pictorial, oblique projection and isometric projection.	i) The teacher to use questions to guide students to: – Define the term pictorial drawings, isometric and oblique projection. – Identify the types of pictorial drawings – Explain the meaning of each pictorial drawing identified. ii) The teacher to use questioning strategies (what, why and how questions) to guide students to:	• Standard drawing • Standard drawing sheets • Drawing board • Drawing Instruments • Poster showing different isometric and pictorial drawing • Reading texts	1. Can the student define the term pictorial drawing, oblique projection and isometric projection? 2. Can the student identify the types of pictorial drawings? 3. Can the student explain the meaning of each pictorial drawing identified?	10

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVE	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
		e) Explain the benefit and limitations of using pictorial drawing techniques.	– Distinguish the terms pictorial, oblique projection and isometric projection. – Explain the benefit and limitations of using pictorial drawing techniques. iii) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in part (i) and (ii).		4. Can the student distinguish the terms pictorial, oblique projection and isometric projection? 5. Can the student explain the benefit and limitations of using pictorial drawing techniques?	

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVE	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
	7.2 Methods	The student should be able to: a) Explain methods of constructing oblique projections using cavalier and cabinet methods. b) Explain methods of constructing cylindrical objects in Oblique projection (circles and cylinders).	i) The teacher to organise students in groups and guide them to: – Explain methods of constructing oblique projections using cavalier and cabinet methods. – Explain methods of constructing cylindrical objects in Oblique projection (circles and cylinders). – Describe methods of constructing non-cylindrical objects in isometric projection (circles and cylinders).	• Standard drawing • Standard drawing sheets • Drawing board • Drawing Instruments • Poster showing different isometric and pictorial drawing • Reading texts	1. Can the student explain methods of constructing oblique projections using cavalier and cabinet methods? 2. Can the student explain methods of constructing cylindrical objects in Oblique projection (circles and cylinders)?	

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVE	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
		c) Describe methods of constructing non-cylindrical objects in isometric projection (circles and cylinders).	ii) Students to present their responses for sharing and discussion. iii) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in part (i).		3. Can the student describe methods of constructing non-cylindrical objects in isometric projection (circles and cylinders)?	
	7.3 Construction of different projections	The student should be able to: a) Construct isometric projection b) Construct isometric projection of different figures.	i) The teacher to arrange practical activities and guide students to: – Construction of isometric projection. – Construction of isometric projection of different figures.	• Standard drawing • Standard drawing sheets • Drawing board • Drawing Instruments	1. Is the students able to construct isometric projection? 2. Is the students able to construct isometric projection of different figures?	

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVE	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
		c) Construct oblique drawing using cavalier and cabinet methods. d) Construct cylindrical objects in oblique projection (circles and cylinders) e) Construct non-cylindrical objects in isometric projection (circles and cylinders).	– Construct oblique drawing using cavalier and cabinet methods. – Construct cylindrical objects in Oblique projection (circles and cylinders). – Construct non-cylindrical objects in isometric projection (circles and cylinders). ii) The teacher should monitor and facilitate students on performing the tasks given in part (i).	• Poster showing different isometric and pictorial drawing • Reading texts	3. Is the students able to construct oblique drawing using cavalier and cabinet methods? 4. Is the students able to construct cylindrical objects in oblique projection (circles and cylinders)?	

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVE	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
			iii) With the aid of prepared assessment guideline, the teacher should guide students to assess the activities performed on drawing projections of auxiliary plan and elevation. iv) Students to present their responses for sharing and discussion v) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in part (i).		5. Is the students able to construct non-cylindrical objects in isometric projection (circles and cylinders)?	

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVE	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
8.0 PERSPECTIVE DRAWING	8.1 The Concept – Photo taking and photography – Free hand sketching	The student should be able to: a) Define the term "perspective drawing". b) Explain the concept photo taking and photography. c) Describe the term free hand sketching. d) Describe the terms related to perspective drawing.	i) The teacher to use brainstorming questions to guide students to define the term perspective drawing. ii) The teacher to use questions to guide students to: – Explain the concept photo taking and photography – Describe the term free hand sketching. – Describe the terms related to perspective drawing.	• Drawing instruments/ equipment • Multimedia, TV, Computer • Drawing materials • Reading texts	1. Is the student able to define the term perspective drawing? 2. Is the student able to explain the concept photo taking and photography? 3. Is the student able to describe the term free hand sketching? 4. Is the student able to describe the terms related to perspective drawing?	1

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVE	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
			iii) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in part (i) and (ii).			
	8.2 One Point Perspective and Two Points Perspective Drawing	The student should be able to: a) Define the term one point and two points perspective drawing. b) Describe the difference between one point and two points perspective drawing.	i) The teacher to use questions to guide students to define the term one point and two points perspective drawing. ii) The teacher to use questioning strategies to guide students to: – Describe the difference between one point and two points perspective drawing.	• Drawing instruments/ equipment • Multimedia, TV, Computer • Drawing materials	1. Is the student able to define the term one point and two points perspective drawing? 2. Is the student able to describe the difference between one point and two points perspective drawing?	4

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVE	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
		c) Describe the procedure to follow to develop both one point and two points perspective drawing.	– Describe the procedure to follow in developing both one point and two points perspective drawing. iii) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in part (i) and (ii).		3. Is the student able to describe the procedure to follow to develop both one point and two points perspective drawing?	

FORM III

CLASS LEVEL COMPETENCIES

By the end of Form III, the student should have ability to:

a) describe a residential house design requirement;
b) distinguish residential house from commercial building designing requirements;
c) identify the designing process and principles of a residential house;
d) demonstrate basic Architectural drawings (schematic drawings) of a residential house containing all necessary parts (i.e. site plan, floor plan, roof plan, section, elevations and opening schedule);
e) show dimensions, scale and title block in producing schematic drawings for a residential house; and
f) describe the relevant tools for measuring existing building for documentation purposes.

CLASS LEVEL OBJECTIVES

By the end of Form III, the student should be able to:

a) explain the meaning of residential house design requirements;
b) differentiate between residential house and commercial buildings design requirements;
c) state design process and describe design principals of the residential house;
d) produce basic Architectural drawings (schematic drawings) of a residential house containing all necessary parts (i.e. site plan, floor plan, roof plan, section, elevations and opening schedule);
e) apply dimensions, annotations, labeling symbols, scales, and title blocks in developing schematic drawings of a residential house; and
f) use relevant tools in measuring existing building for documentation purposes.

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
1.0 RESIDENTIAL (DWELLING) HOUSE DEVELOPMENT	1.1 House Requirements	The student should be able to: a) Define the term residential house. b) Explain the requirements of designing a residential house. c) Explain the importance of considering different identified requirements in designing a residential house. d) Describe the element of universal design requirements.	i) The teacher to use brainstorming questions to guide students to define the terms residential house and universal design. ii) The teacher to organise students in groups and guide them to: – Explain the requirements of designing a residential house (i.e. user requirements, site inventory and human body's dimension i.e. land size, number of rooms, roof type, nature of site, etc.). – Explain the importance of considering different identified requirements in designing a residential house.	• Drawing instruments/ equipment • Multimedia, TV, Computer • Drawing materials • Reading texts	1. Is the student able to define the term residential house? 2. Is the student able to explain the requirements for the design of the house? 3. Is the student able to explain the importance of considering different identified requirements in designing a residential house?	6

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
		e) Describe appropriate size and space for accommodating people with various disabilities.	– Describe appropriate size and space for approach which accommodate people with various disabilities. iii) Students to present their responses for sharing and discussion. iv) The teacher to use students' responses as feedback to support students to explain the requirements of designing a residential house, and describe universal designing requirements		4. Is the student able to describe the element of universal design requirement? 5. Is the student able to describe appropriate size and space for accommodating people with various disabilities?	
	1.2 Main Residential House Areas	The student should be able to: a) Identify the main areas in a residential building. b) Describe the main areas in a residential building.	i) The teacher to organise students in groups and guide them to: – Identify the main areas in a residential building: ▫ Bed rooms, ▫ Living rooms, ▫ Circulation area	• Drawing instruments/ equipment • Multimedia, TV, Computer • Drawing materials • Reading texts	1. Can a student identify the main areas in a residential building? 2. Can the student describe the main areas in a residential building?	

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
			▫ Service Area i.e. Toilets, Bath etc. Kitchen, Storage ▫ Circulation space (conection and spaces). ▫ Fire place etc. – Describe the main areas in a residential building. ▫ Bed rooms, ▫ Living rooms, ▫ Circulation area, ▫ Service Area i.e. Toilets, Bath etc. Kitchen, Storage ▫ Circulation space (conection and spaces) ▫ Fire place etc. ii) Students to present their responses for sharing and discussion. iii) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in part (i).			

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
	1.3 Size, Shape and Functions of Rooms	The student should be able to: a) Identify the size and shape of different rooms. b) Explain the functions of different rooms. c) Describe basic dispositions & configuration of different rooms. d) Explain basic planning principles of different rooms.	i) The teacher to use questions to guide students to identify the size and shape of different rooms. ii) The teacher to organise students in groups and guide them to: – Describe the functions of different rooms – Describe basic dispositions & configuration of different rooms. iii) The teacher to use questioning strategies (what, why and how questions) to guide students to explain basic planning principles of different rooms.	• Drawing instruments/ equipment • Multimedia, TV, Computer • Drawing materials • Reading texts	1. Is the student able to identify the size and shape of different rooms? 2. Is the student able to explain the functions of different rooms? 3. Is the student able to describe basic dispositions & configuration of different rooms? 4. Is the student able to explain basic planning principles of different rooms?	2

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
			iv) Students to present their responses for sharing and discussion. v) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in part (i-iii).			
	1.4 Principles of Design	The student should be able to: a) Describe the type of room configuration dispositions. b) Explain principles of proportions, balance, symmetry, colours of different rooms.	i) The teacher to use questioning strategies (what, why and how questions) to guide students to: – Describe the type of room configuration dispositions. – Explain principles of proportions, balance, symmetry, colours of different rooms.	• Drawing instruments/ equipment • Multimedia, TV, Computer • Drawing materials. • Reading texts	1. Can the student describe the type of room configuration dispositions? 2. Can the student explain principles of proportions, balance, symmetry, colours of different rooms?	4

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
		c) Design a residential house by applying the basic design principles.	– Describe the process of designing a residential house by applying the basic design principles. ii) Students to present their responses for sharing and discussion iii) The teacher to create activities for students to design a residential house by applying the basic design principles (i.e., proportions, balance, symmetry, colours, etc.) iv) The teacher should monitor and facilitate students on performing the tasks given in part (iii).		3. Can the student design a residential house by applying the basic planning principles?	

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
			v) With the aid of prepared assessment guideline, the teacher should guide students to assess the activities performed on designing a residential house. vi) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in part (i-iii).			
2.0 FLOOR PLAN	2.1 Development of Floor Plan	The student should be able to: a) Describe the procedure for developing a floor plan.	i) The teacher to arrange students in groups and guide them to:	• Drawing instruments/ equipment • Multimedia, TV, Computer • Drawing materials • Reading texts	1. Is the student able to describe the procedure for developing a floor plan?	4

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
		b) Explain the importance of considering the identified procedures in developing a floor plan.	– Describe the procedure for developing a floor plan (e.g. consultation with the user, making preliminary design sketches and final drawing with appropriate scale). – Explain the importance of considering the identified procedures in developing a floor plan. ii) Students to present their response for sharing and discussion. iii) The teacher should give feedback and use students' responses as feedback to support students in describing the procedure for developing a floor plan.		2. Is the student able to explain the importance of considering the identified procedures in developing a floor plan?	

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
	2.2 Dimensions, Annotations and Labelling	The student should be able to: a) Draw a floor plan using appropriate dimensions, annotation and label? b) Indicate the exterior (overall) dimensions, annotation and labels of a floor plan for a room. c) Complete the floor plan drawing by labeling.	i) The teacher to create practical activities for students to: – Draw a floor plan using appropriate dimensions, annotation and label? – Indicate the exterior showing overall and detail showing dimensions, annotation and label of a floor plan. – Complete the floor plan drawing by labeling; the rooms, names of the project and the scale used to draw the plan, elevation and section. ii) The teacher should monitor and facilitate students on performing the tasks given in part (i).	• Drawing instruments/ equipment • Multimedia, TV, Computer • Drawing materials • Reading texts	1. Can the student draw a floor plan using appropriate dimensions, annotation and label? 2. Can the student indicate the exterior (overall) dimensions, annotation and labels of a floor plan? 3. Can the student complete the floor plan drawing by labeling.?	4

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
			iii) With the aid of prepared assessment guideline the teacher to guide students to cross check with the check list for any discrepancies on drawing floor plan. iv) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in part (i).			
3.0 FOUNDATION	3.1 Drawing of foundation plan	The student should be able to: a) Explain the techniques of drawing foundation plan. b) Draw foundation plan.	i) The teacher to use questioning strategies to guide students to explain the techniques of drawing a foundation plan. ii) The teacher to design activities for students to draw foundation plan.	• Drawing instruments/ equipment • Multimedia, TV, Computer • Drawing materials • Reading texts	1. Is the student able to explain the techniques of drawing a foundation plan? 2. Is the student able draw a foundation plan?	4

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
			iii) The teacher should monitor and facilitate students on performing the tasks given in part (i). iv) With the aid of prepared assessment guideline, teacher should guide students to assess the activities performed on drawing foundation plan. v) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in part (i) and (ii).			

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
	3.2 Dimensions and Annotations of Foundation Plan	The student should be able to: a) Identify correctively dimensions, and annotation of a foundation plan. b) Present dimensions and annotations of a foundation plan.	i) The teacher to organise students in groups and guide them to : – Identify correctively dimensions and annotation of a foundation plan (i.e. indicate dimensions, conventional symbols, notes, scale used title block. – Present dimensions and annotations of a foundation plan. ii) The teacher should monitor and facilitate students on performing the tasks given in part (i). iii) Student to present dimensions and annotations of a foundation plan for sharing and discussion.	• Drawing instruments/ equipment • Multimedia, TV, Computer • Drawing materials • Reading texts	1. Can the student identify correctively dimensions, and annotation of a foundation plan? 2. Can the student present dimensions and annotations of a foundation plan?	4

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
			iv) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in part (i-iii).			
4.0 ROOFS	4.1 Roof Plan	The student should be able to: a) Illustrate drawing of roof plans of different types of pitched roof. b) Draw roof plans of different types of pitched roof (gable and hipped roof) and flat roof.	i) The teacher to create activities for students to: – Illustrate drawing of roof plans of different types of pitched roof. – Draw roof plan of different types of pitched roof (gable and hipped roof) flat. ii) The teacher should monitor and facilitate students on performing the tasks given in part (i). iii) Students to present their work for sharing and discussion.	• Drawing instruments/ equipment • Multimedia, TV, Computer • Drawing materials • Reading texts	Illustrate drawing of roof plans of different types of pitched roof. Can the student draw roof plans of different shape and forms?	3

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
			iv) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in part (i).			
	4.2 Single and Double Roof	The student should be able to draw the structure for single and double roofs.	i) The teacher to create activities for students to: – Illustrate drawing of single and double roofs. – Draw structure for single and double roofs. ii) The teacher should monitor and facilitate students on performing the tasks given in part (i). iii) Students to present their work for sharing and discussion.	• Drawing instruments/ equipment • Multimedia, TV, Computer • Drawing materials • Reading texts	Can the student draw structure for single and double roof?	2

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
			iv) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in part (i).			
	4.3 Eaves, Ridge, Collar and Spar	The student should be able to a) Define the roofing terminologies. b) Identify steps for drawing eaves, collars and spars. c) Draw eaves, collars and spars.	i) The teacher to use questions to guide students to: – Define the roofing terminologies. – Identify steps for drawing eaves, collars and spars. ii) The teacher to create activities for students to: – Illustrate drawing of eaves, collars and spars. – Draw eaves, collars and spars. iii) Students to present their work for sharing and discussion.	• Drawing instruments/ equipment • Multimedia, TV, Computer • Drawing materials • Reading texts	1. Can the student define the roofing terminologies? 2. Can the student identify steps for drawing eaves, collars and spars? 3. Can the student draw eaves, collars and spars?	2

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
			iv) The teacher should monitor and facilitate students on performing the tasks given in part (ii). v) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in part (i) abd (ii).			
	4.4 Dimensioning and labelling	The student should be able to: a) Describe ways of dimensioning and labelling roof structures. b) Identify architectural graphic standards of dimensioning roof structure.	i) The teacher to use questioning strategies (what, why and how questions) to guide the students to; – Describe ways of dimensioning and labeling roof structures. – Identify architectural graphic standards of dimensioning roof structure.	• Drawing instruments/ equipment • Multimedia, TV, Computer • Drawing materials • Reading texts	1. Is the student able to describe ways of dimensioning and labelling roof structures in details?	4

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
		c) Use ways of dimensioning and labeling roof structures in designing roof structure.	ii) The teacher to design practical activities for students to use ways of dimensioning and labeling roof structures in designing roof structure. iii) The teacher should monitor and facilitate students in performing the tasks given in part (i). iv) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in part (i) and (ii).		2. Is the student able to identify architectural graphic standards of dimensioning roof structure? 3. Is the student able to use ways of dimensioning and labeling roof structures in designing roof structure?	

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
5.0 SECTIONS	5.1 Uses of Sections	The student should be able to: a) Explain the uses of sections. b) Explain functions of sections. c) Draw the sections.	i) The teacher to arrange students in groups and guide them to: – Explain the uses of sections. – Explain functions of sections. ii) Students to present their responses for sharing and discussion. iii) The teacher to create activities for students to draw the sections. iv) The teacher should monitor and facilitate students on performing the tasks given in part (ii). v) With the aid of prepared assessment guideline, teacher should guide students to assess the activities performed on drawing the sections.	• Drawing instruments/ equipment • Multimedia, TV, Computer • Drawing materials • Reading texts	1. Is the student able to explain the uses of sections? 2. Is the student able to explain functions of sections? 3. Can a student draw the sections?	1

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
			vi) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in part (i) and (ii).			
	5.2 Types of Sections	The student should be able to: a) Describe different types of sections. b) Draw the cross section and longitudinal section. c) Draw transverse Sections.	i) The teacher to guide students in pairs to describe the different types of sections (i.e.,cross-sections, longitudinal sections and transverse sections). ii) Students to present their responses for sharing and discussion. iii) The teacher to use students' responses as feedback to support students to describe different types of sections.	• Drawing instruments/ equipment • Multimedia, TV, Computer • Drawing materials • Reading texts	1. Is the student able to describe the different types of sections? 2. Can the student draw the cross section and longitudinal section? 3. Can the student draw transverse Sections?	3

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
			iv) The teacher to create activities for students to: – Draw the cross section, longitudinal – Draw transverse section. v) The teacher should monitor and facilitate students on performing the tasks given in part (iv). vi) With the aid of prepared assessment guideline, the teacher to guide students to assess the activities performed in part (iv). vii) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in part (i) and (ii).			

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
	5.3 Cutting Plane and Viewing Directions	The student should be able to: a) Explain the meaning of the terms cutting plane and viewing direction. b) Describe the best positions for selecting cutting plane and viewing direction. c) Select the best position for cutting plane and viewing direction.	i) The teacher to organise students in groups and guide them to: – Explain the meaning of the terms cutting plane and viewing direction. – Describe the best position for selecting the cutting plane and viewing direction. ii) The teacher to create activities for students to select the best position for cutting plane and viewing direction. iii) The teacher should monitor and facilitate students on performing the tasks given in part (ii).	• Drawing instruments/ equipment • Multimedia, TV, Computer • Drawing materials • Reading texts	1. Can the student explain the meaning of the terms cutting plane and viewing direction? 2. Can the student describe the best positions for selecting cutting plane and viewing direction? 3. Can the student select the best position for cutting plane and viewing direction?	3

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
			iv) With the aid of prepared assessment guideline, the teacher to guide students to assess the activities performed on selecting the best position for cutting plane and viewing direction. v) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in part (i) and (ii).			
6.0 ELEVATIONS	6.1 General Information	The student should be able to: a) Define the term elevation. b) Describe the uses of elevations in architectural draughting.	i) The teacher to use brainstorming questions to guide students define the meaning of elevation.	• Drawing instruments/ equipment • Multimedia, TV, Computer • Drawing materials	1. Is the student able to define elevation?	2

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
		b) Illustrate the common elevations.	ii) The teacher to use questioning strategies (what, why and how questions) to guide students to describe the uses of elevations in architectural draughting. iii) The teacher to design activities for students to illustrate the common views of elevation (Front, back/rear, left and right elevation). iv) Students to present their responses for sharing and discussion. v) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in part (i-iii).	• Reading texts	2. Is the student able to describe the uses of elevations in architectural draughting? 3. Is the student able to illustrate the common elevations?	

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
	6.2 Drawing of elevations	The student should be able to: a) Explain the techniques of drawing elevations. b) Select proper scales for drawing elevations. c) Draw elevations.	i) The teacher to organise students in groups and guide them to: – Explain the techniques of drawing elevations and selection of scales. – Compare various types of scales. – Describe proper scales for drawing elevations. ii) Students to present their responses for sharing and discussion. iii) The teacher to create activities for students to: – Select proper scales for drawing elevations. – Draw elevations.	• Drawing instruments/ equipment • Multimedia, TV, Computer • Drawing materials • Reading texts	1. Can the student explain the techniques of drawing elevations and selection of scales? 2. Can the student select proper scales for drawing elevations? 3. Can the student draw elevations?	2

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
			iv) The teacher should monitor and facilitate students on performing the tasks given in part (iii). v) With the aid of prepared assessment guideline, the teacher to guide students to assess the activities performed on part (iii). vi) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in part (i-iii).			

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
7.0 DOORS	7.1 Door Types	The student should be able to: a) Select suitable scales for doors. b) Use suitable scale to draw elevations of different types of doors. c) Draw elevations of different types of doors	i) The teacher to organise students in groups and guide them to discuss how to select suitable scale for drawing different types of doors. ii) Students to present their responses for sharing and discussion. iii) The teacher to design activities for students to: – Draw elevations of different types of doors – Select suitable scales. – Draw elevation of different types of doors. – Use charts and sketches to draw elevations of different types of doors.	• Drawing instruments/ equipments • Multimedia, TV, Computer • Drawing materials • Reading texts	1. Can a student select suitable scales for doors? 2. Can a student use suitable scale to draw elevations of different types of doors? 3. Can student draw elevations of different types of doors?	4

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
			iv) The teacher should monitor and facilitate students on performing the tasks given in part (iii). v) With the aid of prepared assessment guideline, teacher should guide students to assess the activities performed in part (iii). vi) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in part (i-iii).			

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
	7.2 Details to Vertical and Horizontal Section	The student should be able to: a) Select suitable scales in drawing horizontal and vertical sections of different types of doors. b) Use suitable scales in drawing horizontal and vertical sections of different types of doors. c) Draw horizontal and vertical sections of different doors.	i) The teacher to organise students in groups and guide them to discuss how to select suitable scales in drawing horizontal and vertical sections of different types of doors. ii) Students to present their responses for sharing and discussion. iii) The teacher to design activities for students to: – Select suitable scales in drawing horizontal and vertical sections of different types of doors. – Use suitable scales in drawing horizontal and vertical sections of different types of doors.	• Drawing instruments/ equipment • Multimedia, TV, Computer • Drawing materials • Reading texts	1. Can a student select suitable scales in drawing horizontal and vertical sections of different types of doors? 2. Can a student use suitable scales in drawing horizontal and vertical sections of different types of doors? 3. Can the student draw horizontal and vertical sections of different doors?	4

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
			– Use charts and sketches draw horizontal and vertical sections of different doors. – Draw horizontal and vertical sections of different doors. iv) The teacher should monitor and facilitate students on performing the tasks given in part (iii). v) With the aid of prepared assessment guideline, teacher should guide students to use the guideline assess the activities performed in drawing horizontal and vertical sections of different doors.			

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
			vi) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in part (i-iii).			
	7.3 Conventional Symbols	The student should be able to: a) Describe conventional symbols of standard door swings. b) Describe the uses of conventional symbols in architectural draughting c) Draw conventional symbols of standard door swings.	i) The teacher to organise students in groups and guide them to: – Describe conventional symbols of standard door swings (single, double leaf and sliding in plan and section). – Describe the uses of conventional symbols in architectural draughting ii) Students to present their responses for sharing and discussion.	• Drawing instruments/ equipment • Multimedia, TV, Computer • Drawing materials • Reading texts	1. Is the student able to describe conventional symbols of standard door swings? 2. Is the student able to describe the uses of conventional symbols in architectural draughting?	

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
			iii) The teacher to design activities for students to draw conventional symbols of standard door swings. iv) The teacher should monitor and facilitate students on performing the tasks given in part (iii). v) The teachers should give feedback and use students' responses as feedback to support students to describe conventional symbols of standard door swings (i.e. single, double leaf and sliding in plan and section) and their uses.		3. Is the student able to draw conventional symbols of standard door swings?	

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
	7.4 Dimensioning and Labelling	The student should be able to: a) Explain ways of dimensioning and labelling doors. b) Describe architectural graphic standards of dimensioning doors c) Use ways of dimensioning and labelling door structures in designing doors.	i) The teacher to use questioning strategies (what, why and how questions) to guide the students to: – Explain ways of dimensioning and labelling doors. – Describe architectural graphic standards of dimensioning doors ii) The teacher to design activities for students to use ways of dimensioning and labelling door structures in designing doors. iii) The teacher should monitor and facilitate students on performing the tasks given in part (ii).	• Drawing instruments/ equipment • Multimedia, TV, Computer • Drawing materials • Reading texts	1. Is the student able to explain ways of dimensioning and labelling doors? 2. Can the student describe architectural graphic standards of dimensioning doors? 3. Can the student use ways of dimensioning and labelling door structures in designing doors?	4

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
			iv) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in part (i) and (ii).			
8.0 WINDOWS	8.1 Types of Windows	The student should be able to: a) Select suitable scales for drawing elevations of different types of windows. b) Use suitable scales in drawing elevations of different types of window. c) Draw elevations of different types of windows.	i) The teacher to organise students in groups and guide them to discuss how to select suitable scales in drawing elevations of different types of windows. ii) Students to present their responses for sharing and discussion. iii) The teacher to create activities for students to: – Select suitable scales for drawing elevations of different types of windows.	• Drawing instruments/ equipment • Multimedia, TV, Computer • Drawing materials • Reading texts • Illustrating of different types of windows	1. Can the student select suitable scales for drawing elevations of different types of windows? 2. Can the student use suitable scales in drawing elevations of different types of window.	1

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
			– Use suitable scales in drawing elevations of different types of window. – Drawing elevations of different types of windows by using suitable scales. iv) The teacher should monitor and facilitate students on performing the tasks given in part (iii). v) With the aid of prepared assessment guideline, teacher should guide students to assess the activities performed in drawing elevations of different types of windows(i).		3. Can the student draw elevations of different types of windows?	

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
			vi) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in part (i) and (iii).			
	8.2 Details to Vertical and Horizontal Section	The students should be able to: a) Select suitable scales in drawing horizontal and vertical sections of different types of windows for residential houses.	i) The teacher to arrange students in groups and guide them to discuss how to select suitable scales in drawing elevations of different types of windows for residential house ii) Students to present their responses for sharing and discussion. iii) The teacher to create activities for students to:	• Drawing instruments/ equipment • Multimedia, TV, Computer • Drawing materials	1. Can the student select suitable scales in drawing horizontal and vertical sections of different types of windows for residential house?	2

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
		b) Use suitable scales in drawing horizontal and vertical sections of different types of windows for residential houses. c) Draw horizontal and vertical sections of different types of windows for residential house.	– Select suitable scales in drawing horizontal and vertical sections of different types of windows for residential house. – Use suitable scales in drawing horizontal and vertical sections of different types of windows for residential house. – Do practices on drawing vertical and horizontal section of different types of windows with the use of suitable scales. iv) The teacher should monitor and facilitate students on performing the tasks given in part (iii).		2. Use suitable scales in drawing horizontal and vertical sections of different types of windows for residential house? 3. Draw horizontal and vertical sections of different types of windows for residential house?	

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
			v) With the aid of prepared assessment guideline, teacher should guide students to assess the activities performed in drawing horizontal and vertical sections of different types of windows for residential house. vi) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in part (i) and (iii).			
	8.3 Dimensioning and Labelling	The student should be able to: a) Describe ways of dimensioning and labelling windows.	i) The teacher to use questioning strategies (what, how and why questions) to guide the students to: – Describe ways of dimensioning and labelling windows.	• Drawing instruments/ equipment • Multimedia, TV, Computer • Drawing materials	1. Is the student able to describe ways of dimensioning and labelling windows?	4

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
		b) Describe architectural graphic standards of dimensioning windows. c) Use ways of dimensioning and labeling window structures in designing windows.	– Describe architectural graphic standards of dimensioning windows. iv) The teacher to create activities for students to use ways of dimensioning and labeling window structures in designing windows. v) The teacher should monitor and facilitate students on performing the tasks given in part (ii). vi) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in part (i) and (ii).	• Reading texts	2. Is the student able to describe architectural graphic standards of dimensioning windows? 3. Is the student able to use ways of dimensioning and labeling window structures in designing windows?	

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
9.0 STAIRS AND STAIRCASES	9.1 General Information on Stairs and Staircases	The student should be able to: a) Explain the meaning and terminologies of stairs. b) Identify types of staircases. c) Identify the requirements for drawing stairs.	i) The teacher to use brainstorming questions to guide students to: – Explain the meaning and terminology of stairs. – Identify types of staircases ii) The teacher to use questioning strategies (what, why and how questions) to guide students to identify the requirements for drawing stairs. iii) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in part (i) and (ii).	• Drawing instruments/ equipment • Multimedia, TV, Computer • Drawing materials • Reading texts	1. Can the student explain the meaning and terminologies of stairs? 2. Can the student identify types of staircases? 3. Can the student identify the requirement for drawing stairs?	1

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
	9.2 Plan and Section	The student should be able to: a) Draw plan and section of wooden stair. b) Draw plan and section of concrete straight flight stair.	i) The teacher to organise students in groups and guide students to illustrate the procedure used in drawing plan and section of wooden and concrete straight flight stair. ii) Students to present their responses for sharing and discussion. iii) The teacher to design activities for students to: – Draw plan and section of wooden stair. – Draw plan and section of concrete straight flight stair. iv) The teacher should monitor and facilitate students on performing the tasks given in part (iii).	• Chalkboard • Architectural drawing text books • Chalk	1. Can the student draw plan and section of wooden stair? 2. Can the student draw plan and section of concrete straight flight stair.?	2

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
			v) With the aid of prepared assessment guideline, the teacher should guide students to assess the activities performed in part (iii). vi) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in part (i) and (iii).			
	9.3 Details	The student should be able to: a) Describe techniques of drawing stair and staircase details.	i) The teacher to arrange students in groups and guide them to describe techniques of drawing stair and staircase details. ii) Students to present their responses for sharing and discussion.	• Drawing instruments/ equipment • Multimedia, TV, Computer • Drawing materials • Reading texts	1. Can the student describe techniques of drawing stair and staircase details?	2

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
		b) Draw stair details by showing construction details at upper floor, lower newel post and riser and tread assembled to string.	iii) The teacher to design activities for students to draw stair details by showing construction details at upper floor, lower newel post and riser and tread assembled to string. iv) The teacher should monitor and facilitate students on performing the tasks given in part (iii). v) With the aid of prepared assessment guideline, the teacher should guide students to assess the activities performed on drawing stairs details. vi) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in part (i) and (iii).		2. Can the student draw stair details by showing construction details at upper floor, lower newel post and riser and tread assembled to string.?	

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
	9.4 Dimensioning and Labelling	The student should be able to: a) Explain ways of dimensioning, labelling drawing of a stair. b) Describe architectural graphic standards of dimensioning stairs and stair cases. c) Cross-referencing the drawing stairs and stair cases.	i) The teacher to organise students in groups and guide them to: – Explain ways of dimensioning, labelling and drawing of a stair. – Describe architectural graphic standards of dimensioning stairs and stair cases. – Cross- referencing the drawing stairs and stair cases. ii) Students to present their responses for sharing and discussion. iii) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in part (i).	• Drawing instruments/ equipment • Multimedia, TV, Computer • Drawing materials • Reading texts	1. Is the student able to explain ways of dimensioning, labelling drawing of a stair? 2. Is the student able to describe architectural graphic standards of dimensioning stairs and stair cases? 3. Is the student able to cross-referencing the drawing?	1

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
10.0 ELECTRICAL SUPPLY AND DISTRIBUTION	10.1 Symbols and Conventions for Electrical Supply and Distribution	The student should be able to: a) Identify electrical supply symbols and conventions used in a residential house. b) Illustrate various standards electrical supply symbols and conventions used in a residential house. c) Draw electrical installation layout for a residential house.	i) The teacher to organise students in groups and guide them to: – Identify electrical supply symbols and conventions used in a residential house. – Illustrate various standards of electrical supply symbols and conventions used in a residential house. – Describe techniques for drawing electrical installation layout for a simple residential building ii) Students to present their responses for sharing and discussion. iii) The teacher to design activities for students to draw electrical installation layout for a residential house.	• Drawing instruments • Drawing equipment • Multimedia • Drawing Materials • Reading texts	1. Can the student identify electrical supply symbols and conventions used in a residential house? 2. Can the student illustrate various standards of electrical supply symbols and conventions used in a residential house?	4

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
			iv) The teacher should monitor and facilitate students on performing the tasks given in part (iii). v) With the aid of prepared assessment guideline, the teacher should guide students to assess the activities performed on designing electrical installation layout for a residential house. vi) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in part (i).		3. Can the student draw electrical installation layout for a residential house?	

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
11.0 FIRE PLACES AND FLUES	11.1 Location, Requirements and Regulations of Fire Places	The student should be able to: a) Define the term fire places. b) Describe the location of fire places. c) Explain the requirements and regulations of fire places governing open or traditional fireplaces.	i) The teacher to use brainstorming questions to guide students to define the term fire places. ii) The teacher to organise students in groups and guide them to: – Describe the location of fire places. – Explain the building regulations of open or traditional fire places. – Explain the building requirements of open or traditional fire places. iii) Students to present their responses for sharing and discussion.	• Drawing instruments/ equipment • Multimedia, TV, Computer • Drawing materials • Reading texts	1. Is the student able to define the term fire places? 2. Is the student be able to select the suitable place for fire places? 3. Is the student able to explain the requirements and regulations of fire places governing open or traditional fireplaces?	

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
			iv) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in part (i). and (ii).			
	11.2 Elevations, Plans and Sections	The student should be able to: a) Explain techniques of drawing elevations, plan and section of an open fireplace. b) Draw elevations, plan and section of an open fireplace.	i) The teacher to arrange students in groups and guide them to explain techniques of drawing elevations, plan and section of an open fireplace. ii) Students to present their responses for sharing and discussion. iii) The teacher to design activities for students to draw elevations, plan and section of an open fireplace	• Drawing instruments/ equipment • Multimedia, TV, Computer • Drawing materials • Reading texts	1. Can the student explain techniques of drawing elevations, plan and section of an open fireplace? 2. Can the student draw elevations, plan, and section of an open fireplaces?	2

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
			iv) The teacher should monitor and facilitate students on performing the tasks given in part (iii). v) With the aid of prepared assessment guideline, teacher should guide students to use the guidelines to assess the activities performed in drawing elevations, plan and section of an open fireplace. vi) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in part (i) and (iii).			

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
	11.3 Detail	The student should be able to: a) Explain the details of fire places around chimney stacks and roof intersection. b) Draw details of fire places.	i) The teacher to organise students in groups and guide them to explain the details of fire places around chimney stacks and roof intersection. ii) Students to present their responses for sharing and discussion. iii) The teacher to design activities for students to draw details of fire places around chimney stacks and roof. iv) The teacher should monitor and facilitate students on performing the tasks given in part (iii).	• Drawing instruments/ equipment • Multimedia, TV, Computer • Drawing materials • Reading texts	1. Is the student able to explain the details of fire places around chimney stacks and roof intersection? 2. Is the student able to draw details of fire places?	4

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
			v) With the aid of prepared assessment guideline, the teacher should guide students to assess the activities performed in drawing details of fire places. vi) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in part (i) and (iii).			
	11.4 Dimensioning and Labelling	The student should be able to: a) Explain ways of dimensioning, labelling and cross-referencing drawing of an open fireplace.	i) The teacher to organise students in groups and guide them to: – Explain ways of dimensioning, labelling and cross - referencing the drawing of an open fire places	• Drawing instruments/ equipment • Multimedia, TV, Computer • Drawing materials • Reading texts	1. Is the student able to explain ways of dimensioning, labelling and cross-referencing drawing of an open fireplace?	2

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
		b) Describe architectural graphic standards of dimensioning fire places. c) Use ways of dimensioning on drawing fire places d) Cross-referencing the drawing of fire places	– Describe architectural graphic standards of dimensioning fire places. ii) Students to present their responses for sharing and discussion. iii) The teacher to design activities for students to: – Use ways of dimensioning on drawing fire places – Cross- referencing the drawing of fire places iv) The teacher should monitor and facilitate students on performing the tasks given in part (iii).		5. Is the student able to describe architectural graphic standards of dimensioning fire places? 6. Is the student able to use ways of dimensioning on drawing fire places?	

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
			v) With the aid of prepared assessment guideline, the teacher should guide students to assess the activities performed in (iii). vi) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in part (i) and (iii).		4. Is the student able to cross-referencing the drawing of fire places?	

FORM IV

CLASS LEVEL COMPETENCIES

By the end of Form IV, the student should have ability to:

a) draw water and drainage system layouts for the residential house;
b) draw perspective drawing for a simple residential house;
c) prepare opening schedules, specifications and progress charts;
d) reproduce and store drawings; and
e) use computer aided draughting to draw simple residential house drawings.

CLASS LEVEL OBJECTIVES

By the end of Form IV, the student should be able to:

a) develop layout plans of water and drainage systems;
b) prepare opening, specifications schedules and progress charts;
c) demonstrate appropriate use of computer aided draughting to produce simple drawings of residential house;
d) develop perspective drawings of residential house by application of computer aided draughting; and
e) reproduce and store drawings.

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
1.0 WATER SUPPLY	1.1 Conversions Symbols	The student should be able to: a) Describe the conventional symbols of domestic water supply. b) Describe the conventional symbols of sanitary appliances and fittings.	i) The teacher to organise students in groups and guide them to: – Describe the conventional symbols of domestic water supply. – Describe the conventional symbols of sanitary appliances and fittings. ii) Students to present their responses for sharing and discussion.	• Chalkboard • Architectural drawing textbooks • Architectural drawings of water supply systems	1. Is the student able to describe the conventional symbols of domestic water supply? 2. Is the student able describe the conventional symbols of sanitary appliances and fittings?	2

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
			iii) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in part (i).			
2.0 DRAINAGE SYSTEM	2.1 Drawing Elements of Drainage	The student should be able to: a) Describe elements required for drawing drainage scheme. b) Draw the elements of a drainage system.	i) The teacher to organise students in groups and guide them to describe the elements required for drawing drainage system. ii) Students to present their responses for sharing and discussion. iii) The teacher to design activities for students to draw elements of drainage.	• Drawing instruments/ equipment • Multimedia, TV, Computer • Drawing materials • Reading texts	1. Is the student able to describe elements required for drawing drainage scheme? 2. Is the student able draw elements of drainage?	4

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
			iv) The teacher should monitor and facilitate students on performing the tasks given in part (iii). v) With the aid of prepared assessment guideline, the teacher should guide students to assess the activities performed in drawing elements of drainage. vi) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in drawing elements of drainage.			

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
	2.2 Drainage types and Layout System	The student should be able to: a) Explain procedures for drawing drainage layout system b) Draw drainage layout system.	i) The teacher to organise students in groups and guide them to explain procedures for drawing drainage layout system (i.e., separate, combined and partially combined drainage system). ii) Students to present their responses for sharing and discussion. iii) The teacher to design activities for students to draw drainage layout system (i.e., separate, combined and partially combined drainage system).	• Drawing instruments/ equipment • Multimedia, TV, Computer • Drawing materials • Reading texts	1. Is the student able to explain procedures for drawing drainage layout system? 2. Is the student able to draw the plan layout of drainage system?	2

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
			iv) The teacher should monitor and facilitate students on performing the tasks given in part (iii). v) With the aid of prepared assessment guideline, the teacher should guide students to assess the activities performed in drawing drainage layout system. vi) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in drawing drainage layout system.			

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
	2.3 Elevations, Plan and Section of Drainage System	The student should be able to: a) Explain the procedure of drawing elevations, plan and section of drainage system. b) Draw elevations, plan and section of drainage system.	i) The teacher to arrange students in groups and guide them to explain procedures of drawing elevations, plan and section of drainage system (of septic tank, cesspool, inspection chamber and manholes). ii) Students to present their responses for sharing and discussion. iii) The teacher to design activities for students to draw elevations, plan and section of drainage system (of septic tank, cesspool, inspection chamber and manholes).	• Drawing instruments/ equipment • Multimedia, TV, Computer • Drawing materials • Reading texts	1. Can the student explain the procedure of drawing elevations, plan and section of drainage system? 2. Can the student draw elevation, plan and section of septic tank, cesspool, inspection chamber and manholes?	4

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
			iv) The teacher should monitor and facilitate students on performing the tasks given in part (iii). v) With the aid of prepared assessment guideline, teacher should guide students to assess the activities performed in drawing elevations, plan and section of drainage systems. vi) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in drawing elevations, plan and section of drainage systems.			

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
3.0 BUILDING SPECIFICATIONS	3.1 Definition	The student should be able to: a) Define the term "building specifications". b) Explain the purposes of building specifications.	i) The teacher to use questions to guide students to: – Define the term "building specifications". – Explain the purposes of building specifications ii) The teacher should give feedback and use students' responses as feedback to support students to define the term "building specifications and their purposes.	• Drawing instruments/ equipment • Multimedia, TV, Computer • Drawing materials • Reading texts	1. Is the student able to define the term building specification? 2. Is the student able to explain the purposes of building specifications?	2

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
	3.2 Relationship with Drawing	The student should be able to a) Identify building specifications. b) Describe the relationship between specifications and drawings.	i) The teacher to use questioning strategies (what, why and how questions) to guide students to: – Identify building specifications. – Describe the relationship between specifications and drawings. ii) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in part (i).	• Drawing instruments/ equipment • Multimedia, TV, Computer • Drawing materials • Reading texts	1. Is the student able to identify building specifications? 2. Is the student able to describe the relationship between specifications and drawing?	2

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
	3.3 Preparation of Building Specification	The student should be able to: a) Explain the method of writing building specifications for construction of opening schedules. b) Prepare building specifications for construction of opening schedules (i.e. of doors and windows sizes).	i) The teacher to use questioning strategies (what, why and how questions) to guide students to explain the method of writing building specifications for construction of opening schedules (i.e. of doors and windows sizes). ii) The teacher to create activities for students to prepare building specifications for construction of opening schedules (i.e. of doors and windows sizes).	• Drawing instruments/ equipment • Multimedia, TV, Computer • Drawing materials • Reading texts	1. Can the student explain the method of writing building specifications for construction of opening schedules? 2. Can the student prepare building specifications for construction of opening schedules?	4

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
			iii) The teacher should monitor and facilitate students on preparing building specifications for construction of opening schedules. iv) Students to present their responses for sharing and discussion. v) With the aid of prepared assessment guideline, teacher should guide students to assess the activities performed in preparing building specifications for construction of opening schedules.			

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			vi) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in part (i) and (ii)			
4.0 REPRODUCTION AND STORAGE OF DRAWINGS	4.1 Introduction and Equipment for Reproduction Drawings	The student should be able to: a) Define "reproduction of drawings". b) Identify equipment used for reproduction of drawings. c) Describe equipment used for reproduction of drawings.	i) The teacher to use brainstorming questions to guide students define the term "reproduction of drawings". ii) The teacher to organise group discussions for students to: – Identify equipment used for reproduction of drawings	• Drawing instruments/ equipment • Multimedia, TV, Computer • Drawing materials • Reading texts	1. Is the student able to define the term reproduction of drawings? 2. Is the student able to identify equipment used for reproduction of drawings?	2

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
			(i.e. printer, photocopier, computer). – Describe equipment used for reproduction of drawings (i.e. printer, photocopier, computer). iii) Students to present their responses for sharing and discussion. iv) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in part (i) and (ii).		3. Is the student able to describe equipment used for reproduction of drawings?	

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	4.2 Drawing Materials	The student should be able to: a) Identify materials used for reproduction of drawings. b) Describe materials used for reproduction of drawings.	i) The teacher to organise students in groups and guide them to: – Identify materials used for reproduction of drawings (e.g. tracing paper, pens, ink, printing paper etc). – Describe materials used for reproduction of drawings (e.g. tracing paper, pens, ink, printing paper etc). ii) Students to present their responses for sharing and discussion.	• Drawing materials • Multimedia, TV, Computer • Reading texts • Illustration	1. Can a student identify materials used for reproduction of drawings? 2. Can a student describe materials used for reproduction of drawings?	2

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			iii) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in part (i).			
	4.3 Reproduction Technique	The student should be able to: a) Identify the various techniques used in reproducing drawings. b) Explain the various techniques used in reproducing drawings.	i) The teacher to use questioning strategies (what, why and how questions) to guide students to: – Identify various techniques used in reproducing drawings (i.e. dyeline, T.T.S, blueprint, contact copying, optical, photocopying etc).	• Drawing instruments/ equipment • Multimedia, TV, Computer • Drawing materials	1. Is the student able to identify the techniques used in reproducing drawing? 2. Is the student able to explain the techniques used in reproducing drawing?	4

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
			– Explain the various techniques used in reproducing drawings (i.e. dyeline, T.T.S, blueprint, contact copying, optical, photocopying etc). ii) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in part (i).			

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	4.4 Storage of Drawings	The student should be able to: a) Identify techniques for storage of drawing. b) State proper organization of a drawing office and storage of drawings. c) Select proper techniques for storage of drawing.	i) The teacher to use questions to guide students to identify techniques for storage of drawing. ii) The teacher to use questioning strategies (what, why and how questions) to guide students to state proper organization of a drawing office and storage of drawings. iii) The teacher to create activities for students to select proper techniques for storage of drawing. iv) The teacher should monitor and facilitate students on performing the task given in part (iii).	• Chalkboard • Architectural Drawing textbook • Drawing materials	1. Is the student able to identify techniques for storage of drawing? 2. Can the student state proper organization of a drawing office and storage of drawing? 3. Can a student select proper techniques for storage of drawing?	1

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
			v) With the aid of prepared assessment guideline, teacher should guide students to assess the activities performed in selecting techniques for storage of drawing. vi) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in part (i-iii).			

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5.0 COMPUTER AIDED DRAUGHTING (CAD)	5.1 Introduction to Auto CAD	The student should be able to: a) Define the term Computer Aided Drafting. b) Explain the importance of CAD in architectural draughting. c) Identify applications of CAD in architectural draughting engineering.	i) The teacher to use brainstorming questions to guide students to define the term Computer Aided Drafting (CAD). ii) The teacher to organise students in groups and guide them to: – Explain the importance of computer aided CAD in architectural draughting/ engineering. – Identify applications of CAD in architectural draughting/ engineering.	• Posters with pictures of objects drawn using CAD • Reading texts	1. Is the student able to define Computer Aided Drafting? 2. Can the student explain the importance of CAD in architectural draughting? 3. Can a student explain applications of CAD in architectural draughting/ engineering?	14

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
			iii) Students to present their responses for sharing and discussion. iv) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in part (i) and (ii).			
	5.2 Application of Auto CAD in Drawing	The student should be able to: a) Open an auto CAD software. b) Apply drawing commands in creating simple geometrical figure rectangle and circles.	i) The teacher to use questioning strategies (what, why and how questions) to guide students to: – Describe techniques for drawing a simple residential building.	• Software (CorelDraw, Page Maker, Microsoft Office, • Auto CAD, Paint, Corel CAD etc) • Manila sheet • Mark pen	1. Can the student open auto CAD? 2. Can the student apply draw command in drawing different figures?	4

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
		c) Apply drawing commands in creating dimension geometrical figures and residential house. d) Assign layers to draw elements. e) Make simple layout and working drawing of simple residential house by using Auto CAD.	– Describe techniques for applying Auto CAD in Drawing. vi) The teacher to create practical activities for students to: – Open an auto CAD software. – Demonstrate step by step how to use element of drawing to draw objects. – Applying draw commands in drawing different figures. – Assign layers to draw elements.	• Computer loaded with CAD software • Computer	3. Can the student apply drawing commands in creating dimension geometrical figures and residential house? 4. Can the student assign layers in drawing elements? 5. Can the student make simple layout and working drawing of simple residential house by using Auto CAD?	

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
			– Make simple layout and working drawing of simple residential house by using Auto CAD. iii) The teacher should monitor and facilitate students on performing the task given in part (ii). iv) With the aid of prepared assessment guideline, the teacher should guide students to assess the activities performed in part (ii). v) Students to present their responses for sharing and discussion.			

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			vi) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in part (i) and (ii).			
	5.3 Introduction to ArchiCAD.	Student should be able to: a) Define the term ArchiCAD. b) Describe the functions of ArchiCAD. c) Describe ArchiCAD working environment. d) Describe tool bar components.	i) The teacher to use questions to guide students to: – Define the term ArchiCAD. – Describe the functions of ArchiCAD. – Describe ArchiCAD working environment. – Describe tool bar components	• Computer with ArchiCAD programme • Multimedia, TV • Handouts • Text books • Manila sheets • Marker pen • Drawing Board	1. Is the student able to define the term ArchiCAD? 2. Is the student able to open and access ArchiCAD programme? 3. Is the student able to describe ArchiCAD working environment?	4

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
		e) Access all tool bar components. f) Open ArchiCAD. g) Create a New Project. h) Browse for a Solo Project.	ii) The teacher to use questioning strategies (what, how and why questions) to guide students to discuss techniques for accessing ArchiCAD. iii) The teacher to create activities for students to: – Access all Tool Bar components. – Open ArchiCAD – Create a New Project. – Browse for a Solo Project. iv) The teacher should monitor and facilitate students on performing the task given in part (iii).		4. Is the student able to describe tool bar components? 5. Access all tool bar components? 5. Is the student able to operate all ArchiCAD tool bar component? 6. Is the student able to create a new project? 7. Can the student browse for a solo project?	

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
			v) With the aid of prepared assessment guideline, teacher should guide students to assess the activities performed in part (iii). vi) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in part (i-iii).			

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	5.4 ArchiCAD Working Environment	Student should be able to: a) Identify various components of tool bar elements. b) Describe various components of tool bar elements. c) Operate various components of tools bar in architectural draughting activities. d) Use various components of tool bar in designing architectural draughting activities.	i) The teacher to organise students in groups and guide them to: – Identify various components of tool bar elements (i.e. file, edit, view, design, document, options, teamwork, window, and help). – Describe various components of tool bar (i.e. file, edit, view, design, document, options, teamwork, window, and help). ii) The teacher to create activities for students to:	• Computer with ArchiCAD programme • Multimedia, TV • Handouts • Text books • Manila sheets • Marker pen • Drawing Board	1. Is the student able to identify various components of tool bar elements? 2. Is the student able to describe basic tool bar elements? 3. Is the student able to operate various components of tools bar in architectural draughting activities?	4

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
		e) Use Palettes in architectural draughting activities.	– Operate various components of tool bar (i.e. file, edit, view, design, document, options, teamwork, window, and help) in architectural draughting. – Use various components of the tool bar (i.e. file, edit, view, design, document, options, teamwork, window, and help) in architectural draughting.		4. Is the student able to use various components of tools bar in architectural draughting activities? 5. Can a student use palettes in architectural draughting activities?	

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			– Use computer palettes components (i.e. Navigator, Drawing Manager, Organiser, Profile Manager, Tool Box, Status Bar, Quick layers, Control Box, Renovation, Team Work, Element Information, etc). iii) The teacher should monitor and facilitate students on performing the task given in part (ii). iv) With the aid of prepared assessment guideline, the teacher should guide students to use the guideline to assess activities performed in part (ii).			

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			v) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in part (i) and (ii).			
	5.5 Application of ArchiCAD in Draughting	Student should be able to: a) Use ArchiCAD in design various part of the house. b) Use ArchiCAD to place columns and beams in a building. c) Use ArchiCAD in drawing various parts of the house walls.	i) The teacher to create activities for students to: – Use ArchiCAD in design various part of the house (i.e. walls, columns, beams, roofs, doors and windows etc.). – Use ArchiCAD in drawing various parts of the house walls.	• Computer with ArchiCAD programme • Multimedia, TV • Handouts • Text books • Manila sheets • Marker pen • Drawing Board	1. Is the student able to use ArchiCAD in design various part of the house? 2. Is the student able to use ArchiCAD to place columns and beams in a building?	

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
		d) Use ArchiCAD in developing different roofs. e) Use ArchiCAD to place slabs to a house plans. f) Use ArchiCAD to locate and insert doors, windows in a house plan.	– Use ArchiCAD to place columns and beams in a building? – Use ArchiCAD to place a slab in a house plan? – Use ArchiCAD to locate and insert doors and windows in a house plan? – Use ArchiCAD in developing roofs. ii) The teacher should monitor and facilitate students on performing the task given in part (i).		3. Is the student able to use ArchiCAD in drawing various parts of the house walls? 4. Is the student able to use ArchiCAD in developing different roofs? 5. Is the student able to use ArchiCAD to place slabs to a house plans? 6. Is the student able to use ArchiCAD to locate and insert doors and windows in a house plan?	

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		f)	iii) With the aid of prepared assessment guideline the teacher should guide students to use the guideline to assess activities performed in application of ArchiCAD in Draughting. iv) Students to present their responses for sharing and discussion. v) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in part (i).			

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6.0 PASSIVE REGULATED HOUSE DEVELOPMENT	6.1 Concept of Passive Regulated House	Student should be able to: a) Define the term passive cooling/ warming/ heating. b) Describe passive house development. c) Describe human comfort zone.	i) The teacher to use questions to guide students to: – Define the term passive cooling/ warming/heating. – Describe passive house development. – Describe human comfort zone. ii) The teacher to create activities and guide students to develop passive cooled/ warmed/heated houses in tropics. iii) The teacher should monitor and facilitate students on performing the task given in part (ii).	• Drawing instruments/ equipment • Multimedia, TV, Computer • Drawing materials • Handouts • Text books • Meteorological data • Existing houses in various climatic zones	1. Is the student able to define the term passive cooling/ warming/ heating? 2. Is the student able to describe passive house development? 3. Is the student able to describe human comfort zone?	

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			iv) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in part (i) and (ii).			
	6.2 Factors affecting comfort within buildings	Student should be able to: a) Identify factors that affect human comfort within buildings. b) Describe the effect of air temperature on human comfort. c) Describe the effect of mean radiant temperature on human comfort.	i) The teacher to organise students in groups and guide them to: – Identify factors that affect human comfort within buildings. – Describe the effect of air temperature on human comfort. – Describe the effect of humidity on human comfort. ii) Students to present their responses for sharing and discussion.	• Drawing instruments/ equipments • Multimedia, TV, Computer • Drawing materials • Handouts • Text books • Meteorological data • Existing houses in various climatic zones	1. Is the student able to identify factors that affect human comfort within buildings? 2. Is the student able to describe the effect of air temperature on human comfort?	

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		d) Describe the effect of humidity on human comfort e) Describe the effect of air flow on human comfort.	iii) The teacher to use questioning strategies to guide students to: – Describe factors that affect human comfort within buildings. – Describe the effect of mean radiant temperature on human comfort. – Describe the effect of air flow on human comfort. iv) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in part (i) and (iii).		3. Is the student able to describe the effect of mean radiant temperature on human comfort? 4. Is the student able to describe the effect of humidity on human comfort? 5. Is the student able to describe the effect of air flow on human comfort?	

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	6.3 Climate influence on human comfort zone	Student should be able to: a) Identify Tanzania climatic zones. b) Establish the conditions for human comfort in different climatic zones. c) Describe the effects of climatic zones on building.	i) The teacher to organise students in groups and guide them to: – Identify Tanzania climatic zones. – Establish the conditions for human comfort in different climatic zones. – Describe the effects of climatic zones on building. ii) The teacher to use questioning strategies (what, why and how questions) to guide students to describe the prerequisite conditions that achieve human comfort within buildings in different climatic zones.	• Drawing instruments/ equipments • Multimedia, TV, Computer • Drawing materials • Handouts • Text books • Meteorological data • Existing houses in various climatic zones	1. Is the student able to identify Tanzania climatic zones? 2. Is the student able to establish the conditions for human comfort in different climatic zones? 3. Is the students able to describe the effects of climatic zones on building?	2

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
			iii) Students to present their responses for sharing and discussion. iv) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in part (i) and (ii).			
	6.4 Development of passive cooled/ warmed/ heated house in various climatic zones in Tanzania/ Tropics	Student should be able to: a) Identify the prerequisite conditions for a house that achieves human comfort in any Tanzania/ Tropics climatic zones.	i) The teacher to organise students in groups and guide them to: – Identify the prerequisite conditions for a house that achieves human comfort in any Tanzania/Tropics climatic zones.	• Drawing instruments/ equipments • Multimedia, TV, Computer • Drawing materials • Handouts • Text books • Meteorological data.	1. Is the student able to identify the prerequisite conditions for a house that achieves human comfort in any Tanzania/ Tropic climatic zone?	2

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
		b) Establish the conditions for human comfort in various climatic zones. c) Describe prerequisites for developing a house that meets the tenable human comfort in a given climatic zone.	– Establish the conditions for human comfort in various climatic zones. ii) Students to present their responses for sharing and discussion. iii) The teacher to use questioning strategies (what, why and how questions) to guide students to describe prerequisites for developing a house that meets the tenable human comfort in a given climatic zone.	• Existing houses in various climatic zones	2. Is the student able to establish the conditions for human comfort in various climatic zones? 3. Is the student able to describe prerequisites for developing a house that meets the tenable human comfort in a given climatic zone?	

TOPIC	SUB-TOPICS	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NO. OF PERIODS
			iv) The teacher should give feedback and use students' responses as feedback to support students in performing the tasks given in part (i) and (ii).			