

GOVERNMENT OF THE PUNJAB
TECHNICAL EDUCATION & VOCATIONAL
TRAINING AUTHORITY



CURRICULUM FOR
Building Painter

(3 – Months Course)

Revised April 2016

APPROVED

Date: 7-4-16

Sign: 

CURRICULUM SECTION
ACADEMICS DEPARTMENT

96-H, GULBERG-II, LAHORE

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TRAINING OBJECTIVES

In order to reduce unemployment and poverty in the society, this curriculum is designed to train the literate persons who are facing a lot of problems to do the proper work of building painter in the job market.

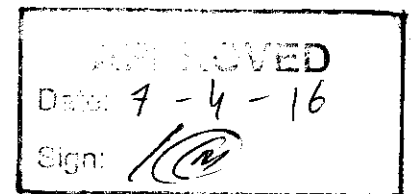
This training program will provide opportunities to those who want to equip themselves with such knowledge and skills which will be helpful for their employment within the period of 3 months instead of working as helper for years.

Further this curriculum is developed by considering the requirements of local market and need of the area enable the pass outs to meet the job in market to reduce the storage of semi skilled workers in the area.

The pass outs of this course would be able to use the water colors, oil colors and paints of different type to produce intermediate colors from basic and secondary colors to apply colors, white wash, distemper, paints inside and outside the walls etc. along with functional English and information technology.

CURRICULUM SALIENTS

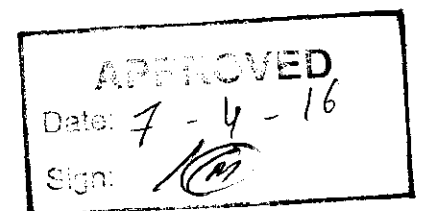
Name of course	:	Building Painter
Entry Level	:	Middle
Duration of Course	:	3 – Months
Total Training Hrs	:	400 Contact Hours
Training Methodology	:	Practical 80%
	:	Theory 20%
Medium of Instruction	:	Urdu/English



SKILL COMPETENCY DETAILS

On successful completion of this course, the trainee should be able to:-

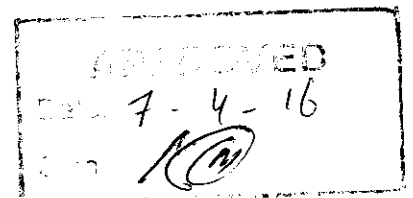
1. Use the painting tools properly
2. Make the water, oil colors, emulsion, mat finish and vinyl emulsion properly
3. Use the water, oil colors, emulsion, mat finish and vinyl emulsion properly
4. Make the white wash and color wash
5. Prepare the walls of painting
6. Paint the weather and mat sheets on wall, doors and windows
7. Prepare use of enamel paint on wood and walls



KNOWLEDGE PROFICIENCY DETAILS


On successful completion of this course, the trainee should be able to:-

- 1- Explain the Use of painting tools properly
- 2- Explain the water, oil colors, emulsion, mat finish and vinyl emulsion properly
- 3- Describe the Use of water, oil colors, emulsion, mat finish and vinyl emulsion properly
- 4- Describe to Make the white wash and color wash
- 5- Define to Prepare the walls of painting
- 6- Define to Paint the weather and mat sheets on wall, doors and windows
- 7- Explain to Prepare use of enamel paint on wood and walls



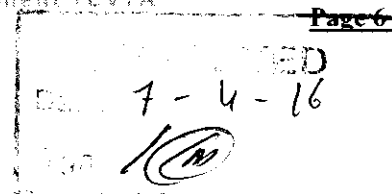
SCHEME OF STUDIES
Building Painter Course
(3-Months)

S.No	Main Topics	Theory Hours	Practical Hours	Total Hours
1.	Introduction of paint	4	-----	4
2.	Water base paint	4	34	38
3.	Oil base paint	4	34	38
4.	Introduction of colors and their divisions	8	-----	8
5.	Introduction of putty	4	30	34
6.	Introduction of tools used in paint work	8	34	42
7.	Surface preparation	8	34	42
8.	Use of distemper	4	26	30
9.	Vinyl emulsion	4	26	30
10.	Introduction of plastic emulsion and applications	4	15	19
11.	Introduction of exterior emulsion and applications	6	15	21
12.	Oil base paint (glassy) enamel paints	10	24	34
13.	I.T Fundamentals	4	16	20
14.	Functional English	15	25	40
Total		87	313	400

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Detail of Course Contents
Building Painter Course
(3-Months)

Sr. No.	Detail of Topics	Theory Hours	Practical Hours
1.	Introduction of paint 1.1 Paint definition 1.2 Branches of paint 1.3 Water base 1.4 Oil base and brushes of oil paints	4	
2.	Water base paint 2.1 Definition of water base paints 2.2 Classification of water base paints (distemper/vinyl emulsion/plastic emulsion) 2.3 Difference between white wash and paint applications	4	34
3.	Oil base paint 3.1 Definition of oil base paints 3.2 Branches of oil paints 3.3 Application and techniques of oil base paints	4	34
4.	Introduction of colors and their divisions 4.1 Basic color definition 4.2 Division of colors (Primary, Secondary, Intermediate colors) 4.3 How to make secondary and intermediate colors	8	
5.	Introduction of putty 5.1 Definition of putty 5.2 Preparation of chalk putty 5.3 Use of plaster of Paris putty 5.4 Definition of warmish putty and its applications	4	34
6.	Introduction of tools used in paint work 6.1 Introduction of tools 6.2 Use of brush 6.3 Use of paint roller 6.4 Use of scraper 6.5 Use of stool and ladder 6.6 Precautions after using tools	8	34
7	Surface Preparation 7.1 Surface preparation 7.2 Use of sand paper on wall and wood/steel work 7.3 Use of putty/filler on wall and wood 7.4 Use of steel putty 7.5 Use of primer and its benefits	8	34



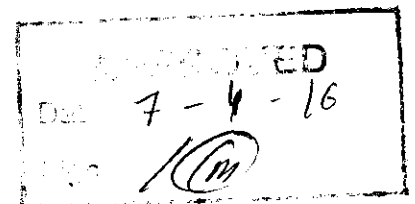
Building Painter Course (3- Months)

8	Use of Distemper 8.1 Definition of distemper 8.2 Surface preparation for distemper 8.3 Color scheme for walls 8.4 Application of distemper	4	24
9	Vinyl Emulsion 9.1 Difference between vinyl emulsion and distemper 9.2 Surface preparation for vinyl emulsion and distemper 9.3 Application method of vinyl emulsion 9.4 How to dilute the paint	4	24
10	Introduction of Plastic Emulsion and Applications 10.1 Introduction of plastic emulsion 10.2 Difference between vinyl and plastic emulsion 10.3 Surface preparation for plastic emulsion 10.4 Application method for applying plastic emulsion 10.5 How to dilute the plastic emulsion	4	15
11	Introduction Of Exterior Emulsion And Applications 11.1 Definition of exterior paint 11.2 Surface preparation 11.3 Difference between interior and exterior paint 11.4 How to dilute exterior paint	6	15
12	Oil Base Paint (Glassy) Enamel Paints 12.1 Branches of oil base paint 12.2 Difference between glossy paint and enamel 12.3 Use of solvent for enamel 12.4 Surface preparation for enamel paint 12.5 How to apply oil base paint and method On walls and wood 12.6 Surface preparation for wood and metal	10	24
Total		68	272

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LIST OF PRACTICALS
Building Painter Course

1. Preparation of intermediate & secondary colors with basic colors
2. Preparation of water base paints and apply to new & old surface
3. Preparation of oil base paints and apply to new & old surface
4. Preparation of putty and apply to new & old surface
5. Surface preparation for paint work
6. Preparation of distemper and apply to new & old surface
7. Preparation of white wash and apply to new & old surface
8. Preparation of color wash and apply to new & old surface
9. Preparation of vinyl emulsion and apply to new & old surface
10. Preparation of plastic emulsion and apply to new & old surface
11. Preparation of exterior paint and apply to new & old surface
12. Preparation of wood surface and filling of putty
13. Preparation of steel surface and filling of steel putty
14. Preparation of enamel(glossy/mat)paints and apply to new & old surface/metal & wood




SCHEME OF STUDIES
I.T Fundamentals

S.No	Main Topics	Theory Hours	Practical Hours	Total Hours
1.	Introduction to Computers	1	4	5
2.	Typing - Microsoft Word	2	6	8
3.	Internet & Electronic Mail	1	6	7
Total		04	16	20

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DETAIL OF COURSE CONTENTS
I.T Fundamentals

S. No	Detail of Topics	Theory Hours	Practical Hours
1	<p>Introduction to Computers</p> <p>1.1 What is a computer- Definition, functions and general features?</p> <p>1.2 What is Hardware – 1.2.1 Computer parts and units 1.2.1.1 Input Unit - Keyboard, Mouse etc. 1.2.1.2 Central Processing Unit 1.2.1.3 Output Unit</p> <p>1.3 What is Software – 1.3.1 Electronic Parts of a Pc it is 1.3.1.1 Software and Its types 1.3.1.2 System Software, Application Software</p> <p>1.4 Working with windows Operating System 1.4.1 How does windows desktops work?</p> <p>1.5 What are the Icons, Shortcuts and other graphic, 1.5.1 How to see computer contents on different drives etc</p>	1	4
2	<p>Typing and Word processing (MS Word)</p> <p>2.1 Proper way of typing correct and speedy - getting familiar with the keys</p> <p>2.2 Where to type in computer? How to save a file? How to get it back? Where to find your saved work?</p> <p>2.3 How to get it printed?</p>	2	6
3	<p>Emailing and Internet Surfing</p> <p>3.1 How to go to Internet, what is required for an internet connection etc.</p> <p>3.2 How to use email? How to search on web? Etc</p> <p>3.3 How to make new email account, login and logout an email account etc.?</p>	1	6
Total		04	16

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LIST OF PRACTICALS
I.T Fundamentals

S. No.	Name of Practical
1.	Turn On/Off and setting of power supply
2.	Accessing The Desktop
3.	Using of Icons and Shortcuts
4.	Setting / customizing the desktop
5.	Viewing the contents of computer – Directory
6.	Copying, Deleting and Moving Files in a folder
7.	Working with different Applications
8.	Opening MS Word for typing
9.	First lesson of Typing A S D F
10.	Second Lesson of typing J K L ;
11.	Third Lesson U I O P
12.	Fourth Lesson R E W Q
13.	Fifth Lesson N M , .
14.	Sixth Lesson V C X Z
15.	Seventh Lesson All letter using R index Finger
16.	Eighth Lesson All letter using L index Finger
17.	Formatting in MS Word Bold, Italic etc.
18.	Using Internet
19.	Opening Email, making new account
20.	Sending Receiving Emails

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SCHEME OF STUDIES
Functional English

S.No	Main Topics	Theory Hours	Practical Hours	Total Hours
1.	Introduction of English Sentence Structure	2	3	5
2.	Use of present indefinite tense	2	3	5
3.	Use of 'is' 'are' 'am' questions and negatives	2	3	5
4.	Ask questions	2	3	5
5.	Express daily routines	2	3	5
6.	Know how to address people	1	2	3
7.	Provide written feedback	1	2	3
8.	Dialogues	1	2	3
9.	Understand vocabulary	1	2	3
10.	Application/C.V.	1	2	3
Total		15	25	40

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DETAIL OF COURSE CONTENTS
Functional English

S. No	Detail of Topics	Theory Hours	Practical Hours
1	Introduction of English sentence structure	2	3
2	Use of present indefinite tense with exercises	2	3
3	Use of 'is' 'are' 'am' questions and negatives	2	3
4	4.1 Ask questions 4.1.1 At work place 4.1.2 In the market 4.1.3 In classroom	2	3
5	5.1 Express daily routines 5.1.1 Before going to college 5.1.2 Dealing with colleagues 5.1.3 Going to market	2	3
6	6.1 Know how to address people 6.1.1 In Meetings 6.1.2 In class	1	2
7	7.1 Provide written feedback 7.1.1 After visiting the market 7.1.2 On some official task	1	2
8	8.1 Dialogues 8.1.1 With colleague 8.1.2 Teacher/student 8.1.3 Employer/employee 8.1.4 Booking on railway station	1	2
9	Understand vocabulary	1	2
10	Application / C.V.	1	2
Total		15	25

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LIST OF PRACTICALS
Functional English

S. No.	Practical
1.	Group discussion
2.	Interviews
3.	Role play

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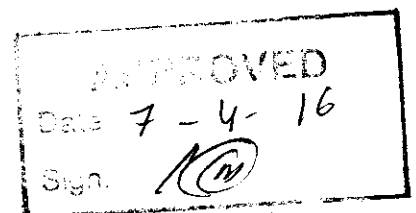
LIST OF LABS

Building Painter

- 1- Store 12x12
- 2- Painting lab
- 3- Scaffolding area 40x40 (open to sky)

I.T Fundamentals

- Computer Lab




LIST OF TOOLS AND EQUIPMENT

FOR CLASS OF 25

**Building Painter
(3-Months)**


Name of Trade	Building Painter
Duration of Course	(3-Months)

S. No.	Nomenclature of Equipments /Tools	Quantity
1	Desk with drawers	25
2	stools	25
3	Easels	10
4	Teacher chair	1
5	Teacher table 5'x3' with 6 draws	1
6	Demonstration board 4x8	1
7	Brushes different sizes	10
8	Nehla set	25 each
9	Vin/wooden board 4'x4'	25 each
10	Flat scraper	25
11	Steel rule	25
12	Measuring tape steel 3 feet	25
13	Measuring tape fiber 50 feet	2
14	Steel Elmira 7x4x2	1
15	Folding ladder	4
16	Drum	2
17	Plastic bucket	10
18	Paint roller simple	25
19	Paint roller different design	25
20	Spray machine with trolley and pipe 50' medium size	1
21	Spray gun	1
22	Paint application board with stand	4

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COMPUTER LAB


S. No.	Tools / Equipment	Quantity
1.	Desktop computer (Specifications as per notification issued by MIS Section, TEVTA)	26 (1 for each student & 1 for the teacher)
2.	Printer (Laser)	01
3.	Scanner	01
4.	Internet Connection (At least 1 MB speed)	01
5.	UPS 10 KVA	01
6.	Air Conditioner 1 ½ Ton	02
7.	Multimedia Projector	01

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LIST OF CONSUMABLE MATERIALS

Building Painter

S.No	Material	Quantity
1	Oil paint glossy	10 gallon
2	Oil paint matt enamel	10 gallon
3	Distemper	15 gallon
4	Vinyl emulsion	15gallon
5	Plastic emulsion	15 gallon
6	Exterior emulsion	15gallon
7	Masking tape 1 inch	20 No's
8	Chalk powder	20kg
9	Wall putty	20 gallon
10	Gypsum powder	10kg
11	Glue	20kg
12	Sand paper of different numbers	24Nos each
13	Grinding stone	20 No's
14	Oxide pigments	4 packet each
15	Thinner	4 gallons
16	Turpentine oil	4 gallons
17	Kerosene oil	6 gallons
18	Malmal cloth	20 meter
19	Cotton waste	2 bags
20	Goggles	25 No's
21	Mask	10 packs


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Functional English

S. No.	Item	Quantity
1.	Stationery	As per requirement
2.	Board Markers	As per requirement

I.T Fundamentals

S. No.	Item	Quantity
1.	Printing Paper	As per requirement
2.	Printer Toner	As per requirement

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MINIMUM QUALIFICATION OF INSTRUCTOR

- Matric / Intermediate with 10 years relevant experience

OR

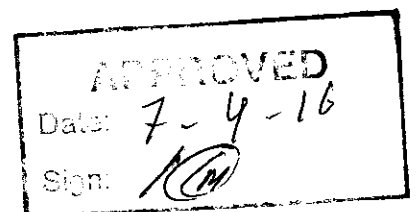
- DAE civil with 5 years relevant experience

Functional English

- M.A. (English)

I.T Fundamentals

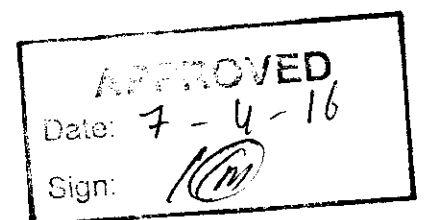
- DAE CIT/ BCS from HEC recognized university



EMPLOYABILITY OF PASS OUTS

After completion of course the trainee may find job / employment in the following areas/sectors:

1. Work as building painter in building structures with contractors.
2. Work as building painter with public sector construction companies.
3. Work as building painter with construction companies abroad.
4. Work as skilled person independently as building painter
5. All Mechanical / Civil work Industries & Chemical Industries etc



REFERENCE BOOKS

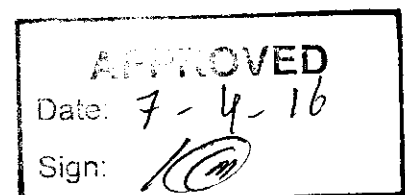
- 1- Fanne - Musavirri By Sarfraz (Artist Writer)
- 2- Drawing Book By Mr. Sharif Zia

Functional English

1. High School English Grammar By Wren & Martin
2. Oxford English Grammar

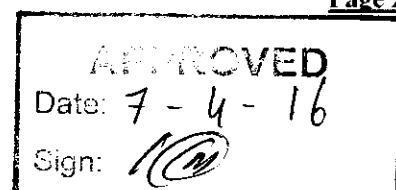
I.T Fundamentals

1. Introduction to Computer by Peter Norton
2. 2007 Microsoft® Office System Step by Step by Joyce Cox, Steve Lambert and Curtis Frye
3. Internet and E-mail with Windows 7 by Studio Visual Steps



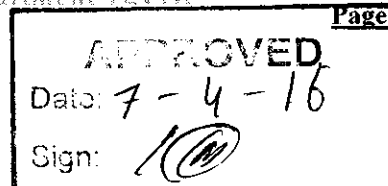
LIST OF TRADE RELATED JARGON

ACCELERATOR:	Additive to paint to speed the cure of a coating.
ACRYLIC:	A plastic like material used in the manufacturing of paint to increase gloss and durability.
ADDITIVE:	Chemicals added to a paint to improve specific characteristics
ADHESION PROMOTER:	Material used over an O.E.M. or cured insoluble finish to increase the adhesion of the topcoat.
AIR DRY:	The drying/solvent evaporation of a topcoat at room temperature.
ALTERNATE COLOR:	A color matched to a verifiable O.E.M. color shift.
ALUMINUM PIGMENT:	Small aluminum particles used in paint to reflect light.
ATOMIZE:	The breaking-up of paint into fine particles/droplets by a paint gun.
BAKING:	The process of applying heat to a finish to speed the cure or dry time of the finish.
BARE SUBSTRATE:	Any material (steel, aluminum, plastic, etc.) which does not have a coating of paint or primer.
BASECOAT:	A highly pigmented color which requires a coating of clear for protection, durability and gloss.
BLEEDING:	Soluble dyes or pigments in old finishes dissolved by solvents in new color and bleed through to the new finish color.
BLENDING:	The tapering of finishes or colors so slight differences cannot be distinguished.
BLISTERING:	Effect of pressure from either solvent or moisture under a coating causing a swelling or blister in the finish; i.e. water blister.
BLUSHING:	A milky appearance of a topcoat caused by high humidity where water condenses on or in the wet coating.
BODY FILLER:	An activated polyester type material used on bare substrate to fill dents in damaged auto body parts.
BRIDGING:	Occurrence where a primer or surfacer does not totally fill a sand scratch or imperfection.
BRITTLE:	A paint coating lacking flexibility.
BUBBLES:	Air or solvent trapped in a paint film caused by poor atomization during spraying.

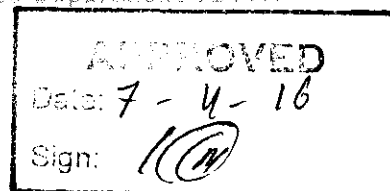


Building Painter Course (3- Months)

CAST:	A variation of a color; example, a red shade blue.
CATALYST:	Additive for paint to speed the cure, give better recoat ability, better durability to weather and provides gloss.
CELLULOSE:	Natural polymer or resin from cottonseed oil to make paint coatings.
CHALKING:	The result of weathering of a paint film resulting in a white powdery appearance.
CHIPPING:	Removal of finish usually due to the impact of rocks and stones.
COAT/SINGLE:	Applying of undercoat or topcoat over the surface using a 50% overlap of spray.
COAT/DOUBLE:	Two single coats with longer flash time.
COLORANT:	Made with ground pigments, solvent and resin. Used in the intermix system to produce colors.
COLOR BLIND:	A handicap in a person's color vision; incapable of distinguishing or perceiving certain colors or any color.
COLOR COAT:	The application of color to a prepared finish.
COLOR DEFICIENCY:	A handicap in color vision, incapable of distinguishing or perceiving some colors or levels of any color.
COLOR MATCH:	Two colors exhibiting no perceptible difference when viewed under the same conditions.
COLOR RETENTION:	The ability of a color to retain its true shade over an extended period of time.
COLOR STANDARD:	A small sprayed-out sample of OEM color. This is the established requirement for a given color code. This is the color the car is supposed to be from the factory.
COLOR VERSION:	A color matched in a different quality finish,
CONCENTRATION:	The ratio of pigment in paint to resins in paint.
COVERAGE:	The ability of a pigmented color to conceal or cover a surface.
CRATERING:	The forming of holes in a film due to contamination.
CRAZING:	Fine line cracks in the surface of the paint finish;
CROSSCOAT:	Applying paint in a crisscross pattern.
CROWSFOOT:	Tiny cracks in the surface of a paint film usually seen in a lacquer;

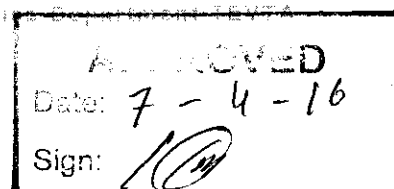


CURE:	The chemical reaction of a coating during the drying process.
CURLING:	The gelling or partial cure of paint due to incompatible materials.
CURTAINS:	Large sagging or runs of paint due to improper application.
"CUT-IN":	Painting of the edges of parts before installation.
DELAMINATION:	The peeling of a finish having improper adhesion.
DEPTH:	Lighter or darker in comparing two colors.
DIE-BACK:	The gradual loss of gloss due to continued evaporation of solvent after polishing.
DIRECT (FACE):	The color viewed from head-on (90°).
D.O.I.	(Distinctness Of Image): How clear a finish reflects an image.
DIPPING:	Fairly technique introduced to model painting.
DOUBLE COAT:	One single coat of paint followed immediately by another.
DRIER:	A material used in a paint which enables it to cure.
DRY:	The evaporation of solvent from a paint film.
DRY SPRAY:	The process of applying paint in a lighter or not as wet application.
DURABILITY:	How well a film weathers and lasts.
ENAMEL:	Enamel paints aren't as well defined as acrylic paints
ETCH:	The process of chemically treating a material for corrosion resistance and adhesion of a primer, or to remove rust.
ETCHING PRIMER:	A primer which contains an acid which etches the substrate as well as applying a primer. To protect against corrosion.
(F.P.C.):	Factory Package Color
FADING:	A gradual change of color or gloss in a finish.
FEATHEREDGE:	A sanding process of tapering a broken paint edge to a smooth finish.
FEATHERING:	Slang term for blending or slowly moving the edge of one color into a second color.

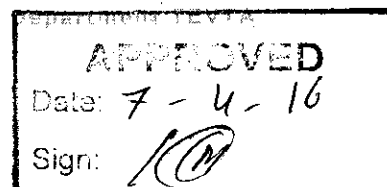


Building Painter Course (3- Months)

FILM BUILD:	The wet or dry thickness of applied coating measured in mils
FISHEYE:	Round ring-like craters caused by contamination.
FLAKE-OFF:	Large pieces of paint or undercoat falling off of substrate also called delamination.
FLASH/TIME:	The time needed to allow solvents to evaporate from a freshly painted surface before applying another coat or heat.
FLATTING AGENT:	Material used in paint to dull or eliminate gloss.
FLEX AGENT:	Material added to paint for additional flexibility, usually used for rubber or plastic flexible parts.
FLOCKING:	Glue flock to the base of a model.
FLOW:	The leveling properties of a wet paint film.
FOGCOAT:	A final atomized coat of paint, usually applied at higher air pressure and at greater distance than normal.
FORCE DRY:	Speed of dry due to application of heat.
GLAZE:	A very fine polishing material used to gain gloss and shine.
GLOSS:	Reflectance of light from a painted surface. Measured at different degrees by instruments.
GRAYNESS:	The amount of black or white in a specific color.
GRINDING:	Using a coarse abrasive, usually a spinning disc to remove paint, undercoat, rust
GROUND COAT:	Highly pigmented coat of paint applied before a transparent color to speed hiding.
Guide coat:	A guide coat is an all-over wash applied to a model after you undercoat it but before you start painting it properly.
Highlights:	A highlight is a paint applied to the raised or prominent areas of a model.
Ink:	The terms glaze, ink and wash are often used interchangeably but there are some subtle differences between the three.
Layering:	This is essentially another name for blending (see above).




Lining-in:	Lining-in refers to painting a very thin black line in between the different parts of a model.
Matt:	A matt varnish is simply a varnish that is not reflective.
Mould lines:	These are small lines of material around the edge of a model.
Non-metallic metal:	This is one of the more advanced model painting techniques used to paint metallic surfaces.
Object source lighting:	Another advanced painting technique.
Over brushing:	This is very similar to dry brushing.
Pinning:	Some models, particularly large or metal ones, have components that are too heavy to be held in place by glue alone.
Sanding:	Like flocking, this is gluing sand onto the base of your models to provide more texture.
Shading:	In order to make a model look realistic it is often necessary to exaggerate aspects of the model.
Spot colour:	A spot colour is a colour that is applied in small amounts to all the models in an army in order to tie them together visually.
Staining:	The idea behind a stain is to apply new colour to a white area of the model using a translucent paint.
Stippling:	Stippling is another technique for either highlighting or shading.
Thinning paint:	Nearly all paints need thinning to some extent before being applied to the model.
Transfers:	Transfers are small pre-painted designs that you can slide on to your models to save you the trouble of painting the symbols yourself.
Undercoating:	An undercoat is a layer of paint applied directly onto the model.
Vents:	Vents are another form of model defect that must be removed prior to painting the model.



Building Painter Course (3- Months)

Wash: The terms glaze, ink and wash are often used interchangeably but there are some subtle differences between the three.

APPROVED
Date: 7-4-16
Sign: 

Curriculum Revision Committee

1. **Engr. Mazhar Abbas Naqvi** **Convener**
Principal,
Govt. Staff Training College, Faisalabad
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