

PHOTOGRAPHY CODE 410

PHOTOGRAPHIC PRACTICE

AIM AND OBJECTIVES

1. To provide the trainees with the essential of photography and an introduction to the camera.
2. To provide the trainee with the knowledge of the nature of films and their characteristics
3. To acquaint the trainees with the skills needed in taking good pictures and identify the place of light in photography.
4. To provide the trainees with the knowledge of darkroom procedure in developing film and printing pictures.
5. Designed to provide the trainees with different methods of handling and framing prints.
6. Designed to provide the trainees with knowledge in camera handling techniques.
7. Designed to provide the trainees with a knowledge of different types of cameras, lenses and accessories.

Examination Structure

There will be two papers. Paper 1 (objectives and Essay) and Paper 2 (Practical), both of which must be taken with a total of 200 marks.

Paper 1 (objective and essay)

This paper consists of two sections: A and B.

Section A Consists of forty (50) multiple choice objective questions for a duration of 50 minutes and it carries 25 marks.

Section B: Consists of 5 essay questions. Candidates will be expected to answer three (3) questions in 2 hours and the total 75 marks.

Paper 2 (Test of Practical)

This paper shall consist of 2 practical questions to be answered in 3 hours for 100 marks.

There should be an alternative to practical.

CPC 11: INTRODUCTIONS TO PHOTOGRAPHY

Topics/Objectives	Contents	Activities
1.0 Definition of Photography (1) Give a lucid definition of photography and the various branches	1. Definition of photography. 2. Different fields of photography.	<ul style="list-style-type: none"> - The teacher is to give the definition of photography. - List the different fields of photography.
2.0 History of Photography (1) Explain the historical background and stages of development in photography	1. Historical background. 2. Early pioneers. 3. Contemporary situation.	<ul style="list-style-type: none"> - Explain the development of photography. - Enumerate the prominent people that contributed to the development of the field. - Explain the current situation and advancement.
3.0 Pinhole Camera (1) Explain the evolution of the pinhole camera, the construction and uses	1. Principles of pinhole camera. 2. Construction of a pinhole camera. 3. Operation of a pinhole camera.	<ul style="list-style-type: none"> - The teacher should: explain the nature of light. - Demonstrate how to construct a pinhole camera. - Give exercise in using the pinhole camera to take pictures.
4.0 Types of camera (1) Explain the various camera types and their functions in relation to the lenses	1. Different types of cameras. (i) TLR (ii) SLR (iii) Range finders. (iv) Instamatics (v) Digital (vi) View cameras. 2. Advantages and disadvantages of the cameras. 3. Functions of the parts and accessories.	<ul style="list-style-type: none"> - Discuss different types of camera. - Give the merits and demerits of the different cameras. - Explain the functions of camera parts and their various accessories.
5.0 Camera operation (1) Explain the operation of the camera, based on the aperture, speed etc.	1. Demonstration on the operation of a: (i) TLR (ii) SLR (iii) Range finders. (iv) Instamatics. (v) View camera.	<ul style="list-style-type: none"> - Operate the different types of camera. - Give exercises in the operation of the different cameras.

Topics/Objectives	Contents	Activities
	(vi) Digital camera.	
<p>6.0 Care and Maintenance of cameras</p> <p>(1) Explain the care for camera in relation to exposing to high temperature and extremely low temperature, removal of the battery when not in use for a long period etc.</p>	<ol style="list-style-type: none"> 1. Maintaining a camera. 2. Caring and maintaining lens. 	<ul style="list-style-type: none"> - The teacher should demonstrate the care and maintenance of cameras. - Explain why the following should be considered: <ol style="list-style-type: none"> (i) in sudden temperature or humidity changes. (ii) Touching the lens surface. (iii) Knocks to the lens.

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CPC 12 COMPONENTS AND TYPES OF FILMS

Topics/Objectives	Contents	Activities
7.0 Components of Photographic films (1) Explain the components of photographic films in a practical situation	1. Identification of film formats (110, 120, 135 film sheets, film packages). 2. Film types: (i) Coloured (ii) Black and white	<ul style="list-style-type: none"> - Explain what films are. - List and identify various types of films. - Explain the handling of films. - Differentiate between black and white and coloured films.
8.0 Types of Films (1) Explain the various types of films, their functions and contents	1. Various types of films: (i) Film Sheets. (ii) Film packs	<ul style="list-style-type: none"> - Explain different film types. - Film sheets and film packs and how they are used.
9.0 Characteristics of film (1) Explain the characteristics of films in relation to the Iso and Asa.	1. Explanation on the characteristics of film: (i) Standard ISO, ASA. (ii) Film Speed/gains.	The teacher should: <ul style="list-style-type: none"> - Discuss the characteristics of films. - Explain ISO, Asa film speeds/gains etc.
10.0 Film Exposure (1) Explain film exposure and the role played by the aperture and shutter speed.	1. Definition of exposure 2. Function of Aperture/size variations. 3. Types of shutter/shutter speed.	<ul style="list-style-type: none"> - Explain what exposure is. - Demonstrate how to use aperture, shutter speed in picture taking.
11.0 Focus (1) Explain the art of focusing.	1. Explanation on the word 'FOCUS'. 2. Demonstration on how to focus.	<ul style="list-style-type: none"> - Teacher to Demonstrate with a camera and subject how to achieve focus.
12.0 Aperture/Shutter Speed (1) Explain the aperture/shutter speed and their functions.	1. Aperture. 2. Shutter speed. 3. Relationship between aperture and shutter.	<ul style="list-style-type: none"> - Teacher to discuss aperture. - Discuss shutter speed and its effects.
13.0 Loading and unloading film in a camera (1) Explain load and unloading film, without exposing it to light, dust and water.	1. Loading film for different cameras: (i) SLR (ii) TLR 2. Unloading film for different cameras.	<ul style="list-style-type: none"> - Explain how to load and unload different types of cameras with films.

CPC 13: TAKING PICTURES

Topic/Objectives	Contents	Activities
14.0 Light (1) Explain the various light types as used in the darkroom	1. Characteristics of light: (i) Rectilinear propagation. (ii) Reflection. (iii) Refraction. (iv) Absorption. (v) Dispersion.	- Teacher to: (i) define light (ii) demonstrate the nature of light with experiments. (iii) advice on the implications of facing the light.
15.0 Sources of Light (1) Explain the various sources of light and the implications	1. Natural light sources – SUN 2. Artificial light sources: (i) Electricity (ii) Torch light (iii) Tungsten light (iv) Flash lights	- Enumerate different light sources. - Explain the advantages and disadvantages of the different light sources. - Explain how the aperture and speed can help to regulate the amount of light that goes in.
16.0 Elements of composition (1) Explain the various element of composition and their roles in photography	1(a) Space (b) Line (c) Tones (d) Forms	- Explain with the aid of samples: (i) space (ii) line (iii) tones (iv) forms

CPC 14: DARKROOM PRACTICE

Topics/Objectives	Contents	Activities
17.0 Photographic Laboratory (1) Explain the composition and the contents of a laboratory	1. Definition of photographic laboratory. 2. Basic requirement for a photo laboratory: (i) Light tight. (ii) Electricity and water supply (iii) Adequate ventilation. (iv) allow work to proceed logically. 3. Basic layout of a photo lab: (i) Wet areas (ii) Dry areas	- Teacher should explain. (i) photographic laboratory or darkroom. (ii) Types of activities that are carried out therein. (iii) Various characteristics/requirements essential in a photo lab. - Use charts to show the layout of photo lab.
18.0 Photographic Laboratory Equipment (1) Explain the uses and care of photo/lab equipments.	1. Various equipment in a photo lab with respect to: (i) enlarger (ii) safe light (iii) processing tanks (iv) clocks (v) printing tongs (vi) divers (vii) guillotine etc.	- Explain the uses of the equipment in a photo lab.
19.0 <u>Operation of Photo lab equipment</u> <u>(1) Explain the handling of various photo lab equipments.</u>	1. Handling of various equipment with respect to: (i) processing tanks/trays (ii) enlarger (iii) contact printer (iv) dryer (v) guillotine (vi) safe light	- Show the use and handling of the various equipment.
20.0 <u>Photographic Laboratory Chemicals</u> <u>(1) Explain the chemical types and contents.</u> <u>(2) Explain the various percentages in mixing</u>	1. Various chemicals used in processing film and printing photograph. 2. Chemical contents of developer and	- Show the various chemicals both in crystals and solution. - List the chemicals contents of the various photographic chemicals. - Demonstrate how to mix the

Topics/Objectives	Contents	Activities
<u>chemicals.</u>	fixer. 3. Procedure and ratio of mixing the different chemicals to make stock solutions and working solution.	different solutions
21.0 <u>Film Development</u> (1) Explain the process of film development. (2) Explain or state the timing of film development	1. Process of film development: (i) Developer (ii) Stop bath (iii) Fixer (iv) Water (v) Drying 2. Different development techniques with respect to: (i) Hard processing - dish (ii) Hard processing - tank (iii) Machine processing 3. Factors affecting film development: (i) Developer solution (ii) Dilution (iii) Time (iv) Temperature agitation.	<ul style="list-style-type: none"> - Explain film development process. - Explain the different developing techniques. - Demonstrate each technique - Show the merits and demerits of each technique. - Show samples of negative and photographs affected by development. - Explain how the quality of the developed film can affect the final print, in terms of light and dark
22.0 <u>Printing Procedure and Techniques</u> <u>(1) Explain the different printing procedures.</u>	1. Definition of printing in photography. 2. Printing process in photography. 3. Printing techniques in photography with respect to: (i) Contact printing (ii) Enlargement 4. Photographic paper and their characteristics 5. Enlarger and its	<ul style="list-style-type: none"> - Explain what printing is - Explain the different process in printing. - Guide the students on the printing process. - Show the different types of photographic paper. - Show the student an enlarger and explain the various parts.

Topics/Objectives	Contents	Activities
	operation 6. Methods of drying prints.	
23.0 <u>Safety Measures in a photo lab</u> (1) Outline the lab design and lay-out to avoid mishaps.	1. The need for safety in a photo lab. 2. Importance of careful handling of chemicals 3. Measures to take in the event of an accident or chemical burns.	<ul style="list-style-type: none"> - Discuss how the layout of the lab can reduce accident. - Discuss chemical mixing and dangers. - Emphasize the importance of storage of chemicals. - Explain how to treat accidents.

CPC 15: PRINT FINISHING

Topics/Objectives	Contents	Activities
24.0 <u>Dry Mount</u> (1) Explain the drymount technique – fixing pictures into album.	<ol style="list-style-type: none">1. Definition of dry mount2. Process of dry mounting3. Problems of dry mounting and how to solve them.	<ul style="list-style-type: none">- Teacher to explain dry mounting and why its is necessary.- Carry out dry mounting of prints.- List the various problems that may arise in dry mounting.
25.0 <u>Print Frames</u> (1) Explain why pictures are framed_	<ol style="list-style-type: none">1. Necessity of framing a print.2. Process of framing a print:<ol style="list-style-type: none">(i) Cropping of print.(ii) Bleeding of print.(iii) Mounting without an overmat.(iv) Mounting with an overmat.	<ul style="list-style-type: none">- List reasons why prints need to be framed.- Show students how to successfully frame prints using different methods.
26.0 <u>Storing of Photographic material</u> (1) Explain the various storing methods and their consequences	<ol style="list-style-type: none">1. The need for storage of photographic materials.2. Equipment needed for the storage of unexposed photographic materials, and the exposed photo-materials.	<ul style="list-style-type: none">- Identify the problems of inadequate storage of both unexposed photographic materials.- State the need for the use of the equipment.

CPC 16: CAMERA HANDLING

Topics/Objectives	Contents	Activities
27.0 <u>Shutter and aperture</u> (1) Explain the uses and functions of shutter and aperture and the relationship	<ol style="list-style-type: none">1. Description of shutter and aperture.2. Shutter speed.3. Relationship between shutter and aperture in picture taking and explain F – Number scale.	<ul style="list-style-type: none">- Explain the use of a shutter and aperture.- Explain shutter.- Demonstrate how to use all these in picture taking.- Explain the implications of using the wrong aperture number.
28.0 <u>Indoors camera</u> (1) Explain the functions of indoor cameras	<ol style="list-style-type: none">1. The process of loading and unloading.2. The use of exposure-meter in setting the various controls in camera.3. Framing and taking pictures.4. Artificial lighting for indoor pictures e.g. flash, lamps.	<ul style="list-style-type: none">- Show how to load a camera.- Show how to use exposure meter.- Discuss the use of artificial light in picture taking.- Give exercises.- Show how to eliminate shadow in indoor photography.
29.0 <u>Outdoors camera</u> (1) Explain the functions of outdoor cameras	<ol style="list-style-type: none">1. Outdoor photography and the accessories required.2. Method of panning when photographing a moving object.	<ul style="list-style-type: none">- Give exercises in outdoor photography.- Demonstrate how to pan.- Show or demonstrate why it is necessary to keep changing your aperture number as the climatic condition changes.

CPC 17: CAMERAS, LENSES AND ACCESSORIES

Topics/Objectives	Contents	Activities
<p>30.0 <u>Types of camera and their uses</u> (1) Explain the various camera types and their functions/uses.</p>	<p>1. Different types of cameras e.g. (i) View finder cameras (ii) Reflex cameras (a) Twins lens reflex cameras (b) Single lens reflex camera (c) Field cameras (d) Digital cameras (e) Technical cameras 2. Merits and Demerits of different types of cameras 3. Operations of different types of camera.</p>	<ul style="list-style-type: none"> - Discuss and explain the different types of cameras - Explain the differences between the cameras showing their uniqueness . - Demonstrate how to operate the various cameras.
<p>31.0 <u>Camera parts</u> (1) Explain the various components of cameras</p>	<p>1. Different parts of camera e.g. (i) lens (ii) View finder (iii) Take-up spool (iv) Sproket wheel etc 2. The usefulness of various parts of a camera.</p>	<ul style="list-style-type: none"> - Discuss the various part of a camera and list them - Discuss the uses of the various components parts.
<p>32.0 <u>Camera Accessories and their uses</u> (1) Explain the various camera accessories their relevance and uses in photograph.</p>	<p>1. Difference camera accessories e.g. (i) tripod (ii) flash unit (iii) cable release (iv) Variety of lenses (v) Filters etc. 2. The uses of the various accessories and their ability to enhance picture taking</p>	<ul style="list-style-type: none"> - List different types of camera Accessories - Discuss the functions of the various accessories.
<p>33.0 <u>Principles of lenses and their uses</u> (1) Explain the composition of lenses and their functions</p>	<p>1. The principles of lenses when light passes through them: (i) principal focal point</p>	<ul style="list-style-type: none"> - Discuss the principles governing lenses (concave and convex) Calculate using the formulae $M = I/O = V/U$

Topics/Objectives	Contents	Activities
	optical centre (ii) optical centre (iii) Axis etc. 2. Calculation on the image size, total length, object distance using mathematical formulae 3. The use of various types of lenses of: (i) fish eye lens (ii) normal lens (iii) telephoto lens	$V = (M + I)F$, $U = (I/M + I)F$ - Discuss the uses to which different lenses are put.
34.0 <u>Caring for camera and lenses</u> (1) Explain the procedures of caring for camera lenses.	1. Various methods of taking proper care of camera and its accessories e.g. (i) Keep your lens cap on when the camera is not in use. (ii) Protect camera from dust or moisture. (iii) Use soft tissue to clean lens. (iv) Remove battery when camera is not in use. (v) Avoid the use of abrasive chemicals.	- Discuss the need to care for cameras. - Demonstrate how to care and service the camera.