

‘A Technical Introduction to Photography’

Support work presentation  
Claudia Brookes AE3

# Design

- I have made an online interactive textbook which has been designed to function as an open educational resource within the iTunes U platform and all the benefits that come with it.



Overview

Instructor

Outline

Learning Outcomes:

External resources

Learning by 'doing':

How to use this interactive t...

+ New Page...



# Technical Introduction to Photography

Tech001

University of the Arts

Expected duration: 4 weeks

Instructor: Miss Claudia Brookes

Department: Media Department

Created: 05/28/14

Updated: 07/21/14

Claudia is delighted to provide this curated collection of technical information and manuals written specifically for the beginner in mind. It is essentially an online interactive textbook for students wishing to enhance their learning experience at UAL. With a specific structure, A '*Technical introduction to photography*' has been designed to introduce students to the technical aspects of analogue and digital photography, for the studio. Starting from the very beginning, the resource aims to gradually build up your knowledge in a spiral format. It covers the basics from exposure, manual settings and studio lighting skills, through to 5x4 large format photography, and equipment. This resource compliments the content covered in her workshops for BA and MA Photography at The London College of Fashion. It is designed to meet the needs of different learning styles.



Info



Posts



Materials



Admin

# Design Aspects:

- The resource separates the information about the resource, the technical content and the materials in in a clear and simple manner.

# Design Aspects:

- This design helps optimise User navigation and engagement with a complex subject. Design is a underlying significant factor in the overall success of the resource.

# Design Aspects:

- The textbook offers an overview of what I have done, about myself as an 'instructor'. I have outlined the content covered, the learning outcomes gained, recommended external resources and how to use my resource.

# Design Aspects.

- I have also included my own 'learning by doing' section which I have attempted to include suggestions for activities, but i feel this needs working on.



## Miss Claudia Brookes

Technical Tutor in Photography  
University of the Arts

[Email Instructor](#)

Claudia has been a technical tutor in photography at Ual: The London College of Fashion for over 2 years before making this free online resource. Previous to that, she spent 6 years as a technician at The University for the Creative Arts. She runs her own freelance practice in London UK, in-between teaching and making art, and producing her own online magazine about emerging art photographers.

[Claudia Brookes Photography](#)

You can engage with her and other students on a dedicated Twitter.

[Dedicated Twitter](#)

This is an opportunity to break past the usual barriers of open education and be able to engage and ask questions and pose thoughts in an open forum and hopefully feel part of a community of learners.



## **Chapter 1: Introduction to Photography**

1. Exposure
2. Aperture
3. Depth of Field
4. What is ISO?
5. Shutter speed
6. The Law of Reciprocity
7. F-stop Gallery: Shallow, mid and extended depth of field
8. What is a DSLR?

## **Chapter 2: Camera Basics**

1. What is a Prime Lens?
2. Lenses
3. A-dep mode on Canon
4. What are the different mode dials designed for?

## **Chapter 3: Lighting Basics**

1. How to use a lightmeter
2. How to use a Bowens Flash head

## Chapter 3: Lighting Basics

1. How to use a lightmeter
2. How to use a Bowens Flash head
3. Colour temperature and white balance
4. Introduction to technical lighting
5. The Inverse Square Law
6. Lighting Ratios
7. Introduction to Canon speedlites
8. Portrait lighting with a Key light



## Chapter 4: Digital and Analogue Formats

1. Formats for Digital and Film
  2. Raw and Jpegs
  3. How to set up 5x4 cameras
  4. 5x4 Technical Theory
- Course Quiz: Questions you need to ask yourself

## Learning Outcomes:

Claudia's *Technical Introduction to photography* will provide learners with a deeper knowledge and understanding of:

- Exposure and the relationship of manual settings
- The technical impact of manual settings
- The mechanical difference between SLR and TLR
- Have a clear understanding of Canon shooting modes
- How to use a light meter
- Lighting and uses in portrait photography
- How to use Bowens Flash heads
- Light formulas and laws
- Large format photography theory and equations

## External resources

This is a curation of external resources that I think you would find useful for your ongoing learning and exploration of the medium:

- [Lynda.com](https://www.lynda.com)
- [Cambridgeincolour.com](https://www.cambridgeincolour.com)
- [photographyatlcf.tumblr.com](https://photographyatlcf.tumblr.com)
- [sekonic.com](https://www.sekonic.com)
- My YouTube channel: <https://www.youtube.com/channel/UCzJS1bqc3k7XdboZKBm1OyQ>
- [cargocollective.com/haveyouseen](https://cargocollective.com/haveyouseen) for art history critique of photography
- [twitter.com/teachlcf](https://twitter.com/teachlcf)

## Learning by 'doing':

It is a well known fact that students feel they engage with learning on a deeper level through 'doing'. We know that you cannot simply learn everything through passively watching videos. So this section has been designed to offer students some suggestions of activities to learn by doing. To help you gain a deeper level of learning try some of these suggestions. Or if you have some of your own post them on Twitter to inspire other students and the instructor will retweet them!

A philosophy that underpins my fundamental educational principles' is:

*'A sense of curiosity is nature's original school of education'* Smiley Blanton

Practice aperture by taking a range of images with shallow, mid and extended depth of field

Photograph running water with the fastest possible shutter speed

Take a telephoto lens to the zoo and photograph the animals

Create a 'double' exposure in a flash studio with a digital SLR camera.

Write your own name over a long exposure using a dark studio and an LED light

Use a 5x4 camera and photograph a portrait on positive paper

Using a speedlite flash, cut out ambient light and make your day scene appear night

# How to use this interactive textbook resource:

Finding your way around:

This resource has been divided up into 4 sections.

- Information: Everything you need to know about the resource and the instructor
- Posts: The interactive textbook topics. You can either look at all the posts in order in 'All' or look at them separated by weeks
- Notes: Allows you to make personal notes on your personal device or tablet
- Materials: An archive of all learning aids which can be separated by medium

Please go through the 'Info' section first. This gives you a good idea of what is to be covered, what you should gain from the resource and some activities to help you learn.

The posts section is the interactive textbook resource. Move here next to start learning. You can decide if you want to go through the chapter structure suggested, or go to 'All' and just dip in and out of what interests you. Claudia has aimed to put at least one learning aid in each section. You can click on them and download images or watch videos and listen to audio explanations. A variety of video, illustrations, audio and articles is designed to meet different learning preferences. If there is no aid attached, it's because Claudia felt it was either self explanatory or it is yet to be updated.

Notes and Materials is for your reference mostly and is not a task section. The assignments section in 'Posts' is where extra tasks has been uploaded. There won't necessarily be tasks in this section. as

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Browse

All Posts

Discussions 0

Posts By Topic

Chapter 1: Introduction to P... 8

Chapter 2: Camera Basics 4

Chapter 3: Lighting Basics 8

Chapter 4: Digital and Anal... 5

Chapter 1: Introduction to Photography

Chapter 1: Introduction to Photography

### 1. Exposure

Jun. 01, 2014 What is Exposure?Exposure refers to the amount and act of light falling on photo-sensitive material (film/card).In other words, how much light should hit the film/card, for how long? The answer to this depends on many things including factors like weather and time of day.The



Exposure triangle diagram

Claudia's audio explanation of exposure:

No Discussions [New Discussion](#)

Chapter 1: Introduction to Photography

### 2. Aperture

Jun. 01, 2014 Aperture: This is the name we give to the eye of the lens. The size of the eye of the lens is changeable. The smaller the eye, the less light is let in. The largest or maximum aperture can vary between lenses, and the most expensive ones can open up the most.In more



Aperture scale diagram

Aperture diaphragms

Claudia's audio explanation on Aperture

# Discussions:

- Discussions have been integrated into the resource and can be general and viewed as a whole or can be under each individual topic I have created.



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Claudia's audio explanation on Aperture



 No Discussions

[New Discussion](#)

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Chapter 1: Introduction to Photography

### 3. Depth of Field

Jun. 01, 2014 Depth of Field Your Aperture setting (F-number) brings both your subject and the background into focus, increasing the depth of field. Depth of field is 'The range in front of and behind the plane of optimum focus where acceptable focus can be achieved. For example: The



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depth of field illustration



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Handout Manual on exposure and depth of field

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Claudia's audio explanation of Depth of Field:



 No Discussions

[New Discussion](#)

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Chapter 1: Introduction to Photography



### 4. What is ISO?

Jun. 01, 2014 ISO stands for 'International Standardisation Organisation'. It refers to how sensitive your film/card is to light. Digital has taken the same system from film. This system tells you how sensitive your 'film' is to light. 100 being low sensitivity and 1600 or even 3200 is high sensitivity.



# Topics

- For each topic I have written a full article and added materials with it. These are relevant to the type of topic. I have also integrated my own ‘Your turn’ and ‘Next’ in each topic area, to help users keep track of their progress with the textbook.

# Topics

- ‘Your turn’ offers either a question which aims to refresh and test the user on what they have read, or a task to help consolidate knowledge.

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Claudia's audio explanation of ISO



 No Discussions

[New Discussion](#)

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Chapter 1: Introduction to Photography

## 5. Shutter Speed

Jun. 01, 2014 Shutter speedThrough shutter speed we can control how much light we let in for our exposure. The longer the shutter speed the more light we let in. Speed or time Value refers to the time it takes for the shutter to close over your lens. This is measured in fractions of a



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Claudia's audio explanation of Shutter speed:



Slow shutter speed example



Slow shutter speed example



shutter speed range chart



 No Discussions

[New Discussion](#)

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Chapter 1: Introduction to Photography

## 6. The Law of Reciprocity

Jun. 01, 2014 Aperture and the law of reciprocity Aperture has a close inter-relationship with speed.



# Content:

- The content I have chosen to include are technical aspects that students will encounter when starting out in photography. But also aspects I feel are of most concern to students.

# New Chapters:

- Photography can be an exploration in an on-going process, so I have left it open for me to expand the book with more chapters.

# Content:

- Through making this resource online for ‘anyone’ it has provided me with an opportunity to present my teaching material and also rethink it for the outside world, outside of the photographic studio and academic environment of the university workshops.

# Content:

- I have been able to expand my teaching ideas and strategies outside of what is familiar and comfortable. Students are able to transfer their learning to the home and personal environment.



This can be seen with the Law of Reciprocity. Reciprocity refers to the inverse relationship between the intensity and duration of light that determines the reaction of light-sensitive material.

Diagram of reciprocity law



settings for reciprocity law



 No Discussions

[New Discussion](#)

Chapter 1: Introduction to Photography

## 7. F-stop Gallery: Shallow, mid and extended depth of field



Jun. 01, 2014 XCXCX

 No Discussions

[New Discussion](#)

Chapter 1: Introduction to Photography



## What is a DSLR?

Jun. 01, 2014 DSLR stands for Digital Single Lens Reflex. This type of camera typically uses a mirror and prism system to allow the photographer to see exactly what the lens is seeing. The mirror and prism creates a view finder pathway exactly above the lens, so you are looking in the same path



SLR illustration

TLR illustration

## 1. How to Use a Lightmeter

Jun. 01, 2014 Light can be measured as an incidental or reflective reading. An Incidental light reading is a reading of light falling directly onto the subject. A reflective reading is a reading of the light being reflected into the camera lens. You use this type of reading when you cannot physically



Handout manual for Sekonic lightmeter

Claudia's audio explanation of using a light meter



Video on how to use a Sekonic Flash mate L-308B

No Discussions

[New Discussion](#)



## 2. How to Use a Bowens Flashhead

Jun. 01, 2014 I have made a video to visually instruct how to use this equipment. Your Turn With what you have learnt so far with manual settings, why not try setting the bowens flash head up correctly to create a 'double' exposure with flash in your digital Slr. What is the role of the modelling bulb?



Video on how to use a Bowens Flash head

audio file from video tutorial



## 4. Introduction to Technical Lighting



Jun. 01, 2014 lightingSingle Point Lighting:Multiple Point Lighting:

Handout manual for multiple lighting

Handout manual for single point lighting

No Discussions

[New Discussion](#)

Chapter 3: Lighting Basics



## 5. The Inverse Square Law

Jun. 01, 2014 The Inverse square Law:In technical terms, an inverse square law is defined as 'any physical law stating that some physical quantity or strength is inversely proportional to the square distance from the source of that physical quantity.'The law itself in photography applies to lighting.



Illustration for the law of light



No Discussions

[New Discussion](#)

Chapter 3: Lighting Basics

## 6. Lighting Ratios

Jun. 01, 2014 Your Turn:Try taking a portrait in the studio, using lighting ratio theory. For 2:1 ratio what aperture should my fill light be if my Key light is F5.6?Next Lesson:Next I will introduce you to



Topic: Chapter 3: Lighting Basics

Title: 7. An Introduction to Canon Speedlites

MESSAGE

**B** *I* U  **H**  [WWW](#)

**What is a Canon Speedlite useful for?**

On camera, speedlites are great for fill-in-flash on location. Off camera, they are great for creating interesting shadows. Inherently, speed lights create hard light. Hard light hits subjects with a narrow set of angles. But we can soften the flash fire so that our light can hit subjects with a wider set of angles and appear more flattering. You can fill in shadows with flash in bright sunshine through to backlighting a subject to create rim light, then add flash into shadows in the studio.

ASSIGNMENTS

Description: Handout manual for Fill Flash

Due date: Due date



**Bounce and Fill-in Flash**  
Claudia Brookes



Description: Table for flash power calculations

Due date: Due date



**flash power calculation table**  
No author name



[Add Assignment](#)





<https://www.youtube.com/channel/UCzJS1bqc3k7XdboZK...>

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<https://www.youtube.com/channel/UCzJS1bqc3k7XdboZKBm1OyQ>

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**Online video tutorials & training | lynda.com**

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**quiz questions**

Claudia Brookes

[quiz questions.docx - Uploaded](#)

Added On  
07/1/14



**Claudia Brookes (TeachLCF) on Twitter**

Claudia Brookes

<https://twitter.com/TeachLCF>

Added On  
06/21/14



**LBowens\_3**

Claudia Brookes

[4.4MB](#)

Added On  
06/18/14



# Next steps:

- I already have a Tumblr, Twitter and Youtube, but I now need to concentrate on maintaining this resource and completing it by expanding the topics, so I can roll it out to students in the new academic year. I need to work on the visibility aspect, which is a slight disappointing factor.

# Next steps:

- It is accessible, it just needs a one-time-access code. Thats all. So I am going to work on the visibility by promoting it as much as possible. I plan to expand the discussions feature of the resource and see if I can promote it through Moodle or Twitter?