Photo 148 Test Review

Bring Scantron # 4521
In addition to the following material, the test will cover information on all handouts and discussions.

Exam date, Wednesday, December 3rd

FLASH EXPOSURE
Exposure = Intensity X Time
Intensity = f/stop

f stop is determined by the flash to subject distance

Time is determined by the flash duration
or
The time film/sensor is exposed to light

FLASH DURATION / ABILITY TO STOP ACTION
When more power is used the flash duration is longer and the ability to stop action is reduced.
With many flash units the duration of the flash will be 1/1000th of a second or faster.
More flash heads or power used = longer flash duration
examples:
1/500th of a second with 4 heads in use.
1/2000th of a second with one head in use.

Power settings with manual flash
examples:
1/16 power = 1/15,000 second
1/32 power = 1/19,000 second

LIGHTING PRINCIPLES
Inverse Square Law: doubling the distance between the light and the subject results in one quarter of the amount of light striking the subject.
Law of Reflection
The angle of incidence is equal to the angle of reflection
Size, Direction & Distance of Light Source determine image contrast

1. The farther the main light is from the subject the greater the contrast.
2. The closer the main light is to the subject the softer the contrast
3. The larger the main light the softer the contrast.
4. The smaller the main light the harder the contrast.
5. Front lighting reduces contrast
6. Side lighting increases contrast

LIGHT / FLASH METERS
Incident -- use a translucent dome to gather and read the light falling on a subject. With a consistent light source, reading does not change regardless of subject. Most common for flash, but also available for daylight.

Reflective-- reads the light reflected from a subject. With a consistent light source, reading changes depending on reflective value of subject.
Most common for daylight, but also available for flash.

SYNC SPEED
Sync speed: The fastest shutter speed that will synchronize with electronic flash
1. Focal plane shutters, generally found on DSLR cameras, have sync speeds of 1/80th to 1/500.
2. Selecting shutter speeds that are faster than the sync speed results in only a fraction of the frame being exposed.
3. Leaf shutters, generally found on view cameras, will sync at any speed.

High Speed Sync: Canon's High Speed Sync and Nikon's Auto FP both allow the flash to sync at any shutter speed, effectively doing away with the limits of maximum sync speed.

Slow Sync: a dedicated flash setting that adjusts the camera's shutter speed automatically to compensate for low-light level backgrounds.

Rear-Curtain Flash Sync: With normal flash synchronization the flash fires as soon as the shutter opens. With very long shutter speeds ambient light obscures a moving subject. When using rear-curtain sync the flash fires at the end of the exposure, rather than the beginning.

LENSES
A lens with a larger maximum aperture, relative to the lens focal length, is called a "fast lens". That is: an 85mm 1.8 lens is considered fast.
A 2.8 200mm lens is considered fast.

Wide Angle (short lens) :
2. Common wide angle lenses for a DSLR are: 10mm, 18mm, 21mm
3. Have more depth of field than longer lenses.
4. Increase feeling of space in interiors and exaggerate "round" forms in product shots.

LENSES (CONT.)

Telephoto (long lens):

2. Common long lenses for a DSLR: 135, 200 and 300mm
3. Narrow angle of view, useful in the studio because long lenses require less background material.
4. Tend to be slower and heavier than wide lenses.
5. Less depth of field than shorter lenses. (Softens backgrounds and horizon lines in table-top scenes, separates backgrounds from subject on location.
6. Compress distance.

LIGHTING PRINCIPLES

Inverse Square Law: doubling the distance between the light and the subject results in one quarter of the amount of light striking the subject.

Law of Reflection

The angle of incidence is equal to the angle of reflection

Size, Direction & Distance of Light Source determine image contrast

1. The farther the main light is from the subject the harder-edged the shadows.
2. The closer the main light is to the subject the softer the shadows.
3. The larger the main light the softer the shadows.
4. The smaller the main light the softer the shadows.
5. Front lighting reduces contrast
6. Side lighting increases contrast

MODEL RELEASES

Model releases are documents signed by a person, guardian, or property owner granting permission for a photograph of a recognizable person or structure to be used, generally for advertising purposes.
Note: releases are for usage, not permission to take photographs

INTELLECTUAL PROPERTY / U. S. COPYRIGHT:

A photographer owns a photograph and sells only the right to use that image to a client for a stated purpose, for a particular time period.
Copyright lasts for life plus 70 years.
This need not be stated in writing when the use of an image is sold.
Violation of copyright is the duplication of the entire or a substantial portion of a photograph exactly or by simulation or imitation.
Copyright notation: © 2014, Sue Smith
Place this notation on all digital files, prints, & negatives that leave your possession.

COPYRIGHT EXCEPTIONS:

a. Work for hire - the photographer is an employee of the company, with all usual rights of a regular employee.
b. Fair use - educational use, scholarly research, book review, or the photograph itself becomes newsworthy.

It is a serious violation of ethics, as well as copyright, to emulate, use or copy even a portion of another photographer's work, without their permission.

ADVERTISING FEES

Understanding copyright is essential to understanding commercial pricing. A commercial photographer is selling the right to use a photograph (licensing or usage), not the photograph itself.

License for use must be conveyed in written form. All use beyond which the assignment was originally undertaken requires additional compensation to /and or permission of the photographer.
Fees are often based on these criteria:

1. Usage
    a. The more people that view an image the greater potential revenue.
    b. Usage is generally limited to a certain time period.
2. Materials / Expenses

Might include: digital capture, lab costs, travel, model fees, assistants, props, food stylists, equipment rental.

EDITORIAL-- An editorial photographer is a visual reporter that produces work for books, magazines or newspapers. He is dissimilar to an advertising photographer in that he generally does not try to sell a product or a service.

Photographs used for editorial purposes generally do not require models releases. The First Amendment protects a photographer's right to use a photograph when content & intent is for news or information.

When a commercial photographer accepts an editorial assignment he generally charges a lower rate than those billed to advertising clients.

Pay for editorial work is based on circulation of the publication. High circulation publications pay more for the same image than lower circulation publications.

EDITORIAL (CONT.)
Reasons to accept editorial assignments:
1. Self promotion
2. Future revenue for the images
3. Interest in assignment and creative potential.

STOCK PHOTOGRAPHY. Use of images sold by an agent or the photographer for a specific purpose.
Stock Agencies:
1. Distribute thousands of images a year.
2. Represent many different photographers.
3. Charge approximately 50 % (or more) of sales price for services.
4. Ownership is retained by the photographer.

Royalty Free Images
1. Clients are able to purchase a license to use the photo, for an unlimited number of purposes. (Don't have to pay royalties to the photographer each time photo is used.)
2. May be purchased on CD's with hundreds of photos or as single images off the web.

Rights-managed Images
1. Images licensed for a defined scope of usage.
2. May be purchased on-line.

Clients use stock because:
1. Can view images before purchasing
2. Lower cost:
   no expenses of shoot, non-exclusive use
3. Huge selection
4. Fast access

Photographers shoot for stock because:
1. Using images more than once increases revenue.
2. Recoups cost of images where there is no client.
3. Marketing, distribution and billing duties are handled by agents.

FOOD
Legal requirements vary depending on the use of the food photograph. The criteria for content of food photographs are much tighter for advertising specific brands than for editorial photography, photographer may be required to sign a form stating only foods made by supplier were used in shoot.

ADDITIONAL TERMS

AMBIENT LIGHT
Existing continuous light source (natural or artificial).

BACK LIGHT
Illumination from behind subject, helps separate subject from background

BROAD LIGHT
Illuminates the side of the face that is turned towards the camera.

CLAMSHELL LIGHTING
Produced by placing one light above the subject & one reflector or light source below the subject. Used for portraits; it is flattering for most skin textures.

CONTINUOUS LIGHT SOURCE
1. Hot light
A continuous light source, generally tungsten -- has a low color / Kelvin temperature.
2. Day light fluorescent
A bank of fluorescent lights with a high color/Kelvin temperature.

FILL CARD
Reflector (while, silver, gold) used to fill shadows created by the main light.

FILL LIGHT a light source used to fill shadows created by the main light.

FEATHERING THE LIGHT
Light is turned towards the camera so just the front edge of the main light hits the subject none hits the background

FLASH METERS used to verify correct exposure with brief-duration light sources

GEL
Transparent material placed in front of existing lights, hot lights, strobes or windows,
Used for:
- Color Correction
- Diffusion
- Color Accent
- Neutral Density

Can be applied to
- Lenses
- Light Sources:
- Existing light fixtures
- Windows

GOBO
A light-blocking device to prevent illumination of a portion of a scene. (Slang for something that goes between your light and subject.)
Can be opaque cardboard (flag)
OR
a pattern (cookie).

GUIDE NUMBER
Number that indicates the aperture setting for a given light-to-subject distance at a given ISO. Small flashes have a guide number which indicates the flash's power.

HONEYCOMB / GRID / EGG CRATE / WAFFLE
Narrows and diffuses a beam of light.

HOT SHOE
U-shaped connection on the top of 35mm / DSLR cameras for battery operated flash connections and provides an electrical connection for studio strobes

KEY LIGHT/MAIN LIGHT
Dominant source of light, determines contrast.
Higher contrast:
The farther the main light is from the subject the deeper the shadows.
The smaller the main light is, relative to the subject,the darker the shadows

Lower contrast:
The closer the main light is to the subject the softer the shadows.
The larger the main light is, relative to the subject,the softer the shadows

KICKER LIGHT skims a surface to highlight a portion of the subject, often opposite the main light

MODELING LIGHT a low color temperature, continuous light source in a flash head.

MONOLIGHT (AKA MONOBLOC) a self-contained flash lighting unit, that contains a modeling light and a flash. Utilizes a battery OR AC power.

PATCH CORD OR PC CORD
Cable that signals flash to fire from strobe to camera.

RECYCLE TIME is the amount of time it takes for a flash to reach full power after being fired.

REMBRANDT LIGHTING
a triangle of light illuminates the shadowed side of a face.

RIM LIGHT / BACK LIGHT
Usually placed behind the subject, to light hair or the edges of a subject, to ensure separation between a subject and background.

SHORT LIGHT
Illuminates the side of the face that is turned away from the camera.

SUBTRACTIVE LIGHTING
Taking light off of a subject rather than lighting it directly (often used for glass)

WIRELESS FLASH TRIGGERING METHODS
1. Slave:
A flash unit set up to fire by detecting the flash from another flash unit in a multi-light setup.
2. Radio Signal (such as Pocket Wizard)
    a. Need not be line-of-sight, signal will pass through walls.
    b. Uses different radio frequencies to trigger flash.
3. Infrared
    Uses infrared source to trigger flash.
    Must be line-of-sight.

SPOT LIGHT
Focusable light source containing a lens.

SUBTRACTIVE LIGHTING Taking light off of the subject rather than lighting it directly.
Most commonly used for reflective surfaces such as glass.

(TTL) Through-the-lens metering: occurs at film plane/digital sensor. Very accurate means of determining correct exposure for both a dedicated speedlights and ambient light.

WATT SECONDS (WS)
Measure of electrical energy used in flash systems to indicate the amount of energy in the flash capacitors. The higher a strobe's watt second rating the more powerful the flash

The Dynalite systems used in the Sac State studio are 1000 watt seconds. Also common are 2000 watt-second units (more powerful) and 500 watt-second units (less powerful)