

ART 243 - EXAM REVIEW

EXAM FORMAT:

Questions will be multiple choice, true false, short answer

Exam will be open book: any and all notes are permissible

- you can also bring your camera

Bring calculator if you have one separate from your phone

- calculator will be used to multiply image dimensions measured in pixels

- I will have calculators to use during class

EXAM CONTENT:

Camera types: film vs digital

- how an image is formed with each

- advantages of each

Digital camera types: CDC's, SLR's, SZ's

1. compacts (CDC's)

- characteristics and advantages

- CDC sub categories:

- ILC's (interchangeable lens compacts)

- FLC's (fixed lens cameras w/ large image sensors)

- CPC's (cell phone cameras)

2. Single lens reflex (SLR's)

- characteristics and advantages

3. hybrid or super zooms (SZ's)

- characteristics and advantages

Camera care

- proper storage, environments to avoid, cold weather hazards

Color theory:

- color wheel of pigment and color wheel of light
- primary and secondary colors; how these are formed
- complementary colors
- 3 means of describing a color: value, hue, intensity
- warm colors: those associated with warm temperatures - red, orange, yellow
- cool colors: those associated with cool temperatures - blue, green, violet
- intense vs. subdued color - factors facilitating each

Built in flash:

- working range (distance from subject) for CDC's and SLR's
- flash modes: Auto, Red Eye Reduction, Forced flash, No Flash
 - description and appropriate uses for each

Exposure controls: aperture and shutter speed

- 2 functions of lens aperture
- 2 functions of shutter speed
- slowest hand held shutter speeds – in range of 1/20 sec w/ image stabilization
- favorable light conditions for freezing and blurring motion
- favorable light conditions for narrow and maximum depth of field
- depth of field – it's relationship to distance from subject
- ISO: indicates how sensitive your camera's image sensor is to light
 - lower ISO number indicates low sensitivity - use in brighter light conditions
 - higher ISO number indicates high sensitivity - use in lower light conditions

Common pre programmed shooting modes:

what shooting situations they are for, and what the camera is doing in these modes:

- macro
- landscape
- action or sports
- portrait
- night

Lenses

- define focal point and focal length

- normal focal length for CDC: 12.5mm for SLR: 30mm
- wide angle focal length for CDC: less than 12.5 for SLR: less than 30mm
- telephoto focal length for CDC: more than 12.5 for SLR: more than 30mm

- how image characteristics change w/ focal length and suitable subject matter w/ each:

- wide angle range:

- telephoto range:

- normal range:

- optical zoom vs. digital zoom on CDC's

- adjusting camera resolution when using digital zoom

- comparative depth of field: CDC's vs SLR's

Color temperature and light sources:

- definition:

- white balance adjustment on digital cameras:

- Auto WB - adjusts automatically to changes in color temperature

- Manual WB - choose WB setting to match predominant light source

- color temperatures of various light sources, e.g., fluorescent, tungsten, etc

- CDC set on Auto WB, what possible color casts will result when shooting in:
 - tungsten light sources
 - fluorescent light sources
- editing methods in Photoshop to compensate for color casts:
 - use of Photo filters - complementary colors of light
 - use of Image > Adjustments > Color Balance - complementary colors

Image resolution

- a definition:

a. camera image resolution:

- measured in total pixels
 - expressed in pixel dimensions or total pixel count
 - calculate total pixels from pixel dimensions; express in megapixels; round to nearest tenth
- image size/image quality vs. image compression
- choice of camera res depends on future use
 - screen viewing only, small prints, large prints

b. screen resolution

- relative screen res of laptops/desktops, tablets, smart phones
- calculating screen image size from pixel dimensions

c. printing resolution

- our standard printing resolution for high quality prints: 200PPI
- industry standard for publication: 300PPI
- determining maximum print size from a given camera resolution
 - example: largest print possible from pixel dimensions of 4600x3300 pixels
 - standard print sizes
- determining camera resolution necessary to make a print of a specific size
 - example: necessary resolution for printing 11x17" print at 200PPI
 - express in pixel dimensions and total pixel count

Resampling an image file

- a. downsampling: reduces the number of pixels in a given image file
 - purposes:

- b. upsampling: increases the number of pixels in an image
 - new pixels are added through a process called interpolation
 - purposes:

- c. deselecting 'resample' in the Photoshop Image Size box
 - no pixels are added to, or subtracted from, an image file
 - they are only rearranged; only their density, (pixels per inch), is changed
 - purpose: printing