

CMM 307 - 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

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

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

10. Photoshop editing

best method for adjusting image brightness:

best method for reducing image contrast:

best method for increasing contrast:

technique for darkening or lightening only a portion of an image:

image formats: JPEG, PSD

- advantages of JPEG's
 - files can be opened on any computer
 - compresses the image file, thereby reducing storage space

- advantages of PSD
 - image quality doesn't degrade with repeated opening of the file; JPEG's do
 - can work with Layers in Photoshop; JPEG's cannot

