USC School of Architecture

DIGITAL ARCHITECTURAL PHOTOGRAPHY 421

Instructor: Michael Arden
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2 units
No prerequisites
Fall Semester / Spring Semester
Thursday's

Location: Watt Hall 10b Basement
(Access from 2nd floor rear stairwell all the way to the basement)

Office Hours: Thursdays 1-2 pm
Fridays 9-10 am

COURSE DESCRIPTION

Introduction & Learning Objectives

All architecture students can prosper by learning to see light and how light alters the visual impact of architectural forms. Just as drawing allows students to refine their vision and perspective teaches how we see, the camera allows for yet another discipline to organically create with form and light.

This course will teach students to create successful images of exterior architecture, interior architectural design, as well as architectural models. The student will become a highly competent creative digital photographic image creator with accurate exposure, proper color correction, and excellent printing output. They will successfully use specific digital tools for the architectural image (free-transform/HDR) to correct distortion and capture mixed lighting with multiple exposures. Students will be able to utilize light, architectural structures and Adobe Photoshop in new ways.
Upon completion of this course each student will possess the following skills:

- Comprehensive understanding of architectural lighting.
- Heightened sensitivity to light and how it strengthens architectural design

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- Ability to use High Dynamic Range (HDR): multiple exposures to create dramatic architecture/interior images without additional professional lighting.
- Control of Parallax (Free Transform Procedure) to correct distortion and perspective so buildings do not look like they are leaning to one side or falling back.
- Creation of exceptional images with light and architecture, including dusk imagery.
- Advanced amateur use of most Single Lens Reflex (SLR) digital camera functions, including: shooting raw, processing in Adobe Bridge and Photoshop CS6, batch processing, organization, color temperature, exposure/histograms, color management (curves/levels).
- Advanced use and knowledge of Adobe Lightroom 6/Creative Cloud.
- Knowledge of how to do a monitor calibration.
- Advanced eleven color profiled printing.

Text and Reading Materials

Required:

Seth Resnick and Jamie Spritzer, *D-65's Lightroom Workbook, Workflow, Not Workslow in Lightroom 4* (2012)
Joseph Rosa and Esther McCoy, *A Constructed View: The Architectural Photography of Julius Shulman*,(2008, Rizzoli International Publications).
ISBN: 0847817776 (on sale on Amazon for $29.95
Seth Resnick and Jamie Spritzer, *What's New in Lightroom 5*, available on iTunes and Amazon. **And The NEW Free PDF for *LIghtroom* 6** (Link will be made available in class).
Jim Lowe, *Architectural Photography Inside and Out* (2006 Photographers Institute Press) ISBN:1861084471
Film vs. Digital by Ken Rockwell
http://www.kenrockwell.com/tech/filmdig.htm

Reading Recommended:

Richard Ross (Photographer), *Architecture of Authority* (2007, Aperture).
ISBN: 1597110523
Gerry Kopelow, *Architectural Photography: The Digital Way* (2007*,* Princeton Architectural Press).
ISBN: 1568986971.
Michael Harris, *Professional Architectural Photography, Third Edition* (2002, Focal Press).
ISBN: 0240516729
William Flusser*, Towards a Philosophy of Photography* (2007, Reaktion Books), ISBN 1-861890-76-1

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Items of Importance and Requirements

- You need a 35mm Single Lens Reflex digital camera.
- You must have Adobe Lightroom 6/ Creative Cloud.
- **Mandatory Text: *D-65's Lightroom Workbook, Workflow, Not Workslow in Lightroom 4* (2012) by Seth Resnick and Jamie Spritzer and Lightroom 5 & 6 supplement "What's New in LR5".** Order on Amazon (the 5supplement is also on itunes).
- You need access to Adobe Photoshop CS6 (comes with Creative Cloud)
- Compact flash card (min. 8 gigs max 32.) and a laptop computer. Mac OSX 10.11, Windows 7,8 or 8.1. And must be 64 bit.
- You need to purchase Photomatix Pro 5, student pricing is 75% off. Available to university/college students currently enrolled in photography. This could be a scan, photograph or screen shot of your class schedule, unofficial transcripts, a receipt for the course or some other similar document.

  When replying with your documentation please try to limit the size of attachments to 1MB and use a standard email attachment format like JPEG or PDF.

  Note that it may take several business days before we reply to email requests for an academic discount. We prioritize requests for support over those for discounts, so we ask for and appreciate your patience.
- Assignments are to be turned in on the due date. **If you are a week late your grade will drop one letter.**
- It will be **extremely wise**/necessary to purchase a tripod (from $60 - $150.) Current deals will be presented during the first class.
- **Film & Equipment Supplies**: SAMY'S 431 S. Fairfax Ave. 323-938-2420
- **THE TWO "ALWAYS"**
  1. **Always** bring your cameras to class
  2. **Always** bring your flash drive and computer.

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CALENDAR

WEEK	DATE	TOPIC
1	8/25	**INTRODUCTION** Light and Architecture, Basic Digital Camera Functions Settings, file types and sizes - Resolution
2	9/1	**Architectural Light/Advanced Digital Camera Functions** Lighting concepts pertaining to structures Color balance, histograms, white balance, workflow and Bridge.
3	9/8	**Creative Shooting/Interior Lighting /Processing Raw Files** **Class shoot ?**
4	9/15	**Free Transform Tools/Architecture and Parallax** **Lightroom Introduction:** Computer preferences and basic set up.
5	9/22	Monitor settings, calibration, professional printing output techniques
6	9/29	**Lightroom**
7	10/6	**Digital Printing, Lightroom Continued/Free Transform Continued – Parallax.**
8	10/13	**Advanced Lightroom/Advanced Printing**
9	10/20	**Advanced Develop Module, Present HDR – Digital Tool for Architecture**
10	10/27	**FINAL PROJECT/ REVIEW** **Photo Exhibition Written paper Due**
11	11/3	**FINAL PROJECT/ REVIEW**
12	11/10	**FINAL PROJECT/ REVIEW** **QUIZ and 5+5 assignment due**
13	11/17	**FINAL PROJECT/ REVIEW**
14	11/24	**THANKSGIVING HOLIDAY**
15	12/1	**LAST CLASS FINAL PROJECT/ REVIEW**
16	12/8 **6:30**	**Final Thursday 7-9 pm**
	12/13 **3:30**	**Final Tuesday 2-4pm**

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STUDENT RESPONSIBILTIES & GRADING

100	Active participation/attendance	
50	Assignment 1. Camera functions	DUE 9/1
50	Assignment 2: Open 5 camera RAW files in CS6	DUE 9/8
50	Assignment 3: Opposites: **GRADED**	DUE 9/22
50	Assignment 4: Prints	DUE 9/29
50	Assignment 5: LRFT & CSFT: **GRADED**	DUE 10/6
50	Assignment 6: Old & New 5&5	DUE 10/13
50	Assignment 7: HDR: **GRADED**	DUE 10/27
50	Assignment 8: Façade 5&5 **GRADED**	DUE 11/3
100	Assignment 9: Exhibition Paper **GRADED**	DUE 11/10
100	Assignment10: Quiz **GRADED**	DUE 11/17
300	Final Project **GRADED**	DUE 12/1

Active Participation – 10%

This is a small class and your presence is necessary. Attendance will be marked at the beginning of class. If you do miss class, it is your responsibility to obtain any information (from another student.) If for some reason you find that you *must* be absent or late it is essential that you notify me in advance by email. **Active participation includes weekly-prepared questions.**

Assignments 50%

Assignments must be turned in on time. These assignments can be redone for a higher point value (within 1 week). Some assignments will be pass/no pass. These are not graded on quality. These assignments are for your learning and practice of basic principles. Other assignment will be graded (see chart). However, all assignments will be down graded if they are not turned in on time or they are missing. You are expected to backup all your files and deliver me your assignments to our photo lab computer prior to class time.

Quiz – 10%

Final Project – 30%

You will select a building or structure of your choice and present 20 of your best images capturing your subject in the morning, afternoon and evening light as well as dusk and interior images. You should anticipate having to visit your selected location three to four times. Here you will be graded on the quality of your images and specific use of the many digital enhancement techniques learned such as Free Transform, High Dynamic Range, color channels, layer mask, gradation filters and more. You will present the before and after images.

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USC GENERAL POLICIES

Statement on Academic Conduct and Support Systems

Academic Conduct
Plagiarism – presenting someone else's ideas as your own, either verbatim or recast in your own words – is a serious academic offense with serious consequences. Please familiarize yourself with the discussion of plagiarism in *SCampus* in Section 11, *Behavior Violating University Standards*https://scampus.usc.edu/1100-behavior-violating-university-standards-and-appropriate-sanctions/. Other forms of academic dishonesty are equally unacceptable. See additional information in *SCampus* and university policies on scientific misconduct, http://policy.usc.edu/scientific-misconduct/.

Discrimination, sexual assault, and harassment are not tolerated by the university. You are encouraged to report any incidents to the *Office of Equity and Diversity* http://equity.usc.edu/ or to the *Department of Public Safety* http://capsnet.usc.edu/department/department-public-safety/online-forms/contact-us. This is important for the safety whole USC community. Another member of the university community – such as a friend, classmate, advisor, or faculty member – can help initiate the report, or can initiate the report on behalf of another person. *The Center for Women and Men* http://www.usc.edu/student-affairs/cwm/ provides 24/7 confidential support, and the sexual assault resource center webpage sarc@usc.edu describes reporting options and other resources.

Support Systems
A number of USC's schools provide support for students who need help with scholarly writing. Check with your advisor or program staff to find out more. Students whose primary language is not English should check with the *American Language Institute* http://dornsife.usc.edu/ali, which sponsors courses and workshops specifically for international graduate students. *The Office of Disability Services and Programs* http://sait.usc.edu/academicsupport/centerprograms/dsp/home_index.htmlprovides certification for students with disabilities and helps arrange the relevant accommodations. If an officially declared emergency makes travel to campus infeasible, *USC Emergency Information http://emergency.usc.edu/*will provide safety and other updates, including ways in which instruction will be continued by means of blackboard, teleconferencing, and other technology.

School of Architecture Attendance Policy

The School of Architecture's general attendance policy is to allow a student to miss the equivalent of one week of class sessions (three classes if the course meets three times/week, etc) without directly affecting the student's grade and ability to complete the course (this is for excused absences for any confirmed personal illness/family emergency/religious observance or for any unexcused absences). For each absence over that allowed number, the student's letter grade can be lowered up to one full letter grade. **This course will lower a letter grade by ½ for any absences over the allowed amount (for this class that is 1 class missed**).

It is your responsibility to read all class policies. Any concerns or clarification will be gladly discussed.

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LECTURE 1

Light and Architecture

- What is light in relation to architecture
-Seeing what most people cannot see
-Time of day and year, dusk or dawn
-Color temperatures

Pixels

A pixel is a contraction of the term **PI**cture **EL**ement
Each pixel in the image has a numerical value between 0 and 255 and is made up of three different color channels; red, blue and green for a total of 16.7 million different colors (256x256x256).

Mega Pixel is = 1,000,000 pixels
My older Canon 5D is 12.9 mega pixels and the image size for most of my images is 4372x2906=12.7. My Canon 5D II is 23mp
Total pixels count every pixel on the sensor surface. Usually the very edge pixels aren't used in the final image. Effective pixels are the number of pixels actually used in the image after the edge pixels have been dropped.

Sensor size chart:
Point and shoot 1/1.8 ratio
Most SLR 15x22mm (2:3)
Professional SLR 24x35 (2:3)

Sensor size affect: Image Quality
Depth of Field
Focal Length

Resolution/Compression:

Lets look at resolution in terms of image quality and capture.
Camera RAW has no compression and is the largest file with the most information. There is also Large; Fine and low, Medium; Fine and Low, Small; Fine and low (some cameras offer more options and some less). If we use Raw, we are capturing the greatest amount of Pixels and have the biggest file to work with. All other files sizes use "**Lossy**" compression, which compresses the file size. There is an inherent loss of information and thus a loss of overall quality.
JPEG's are **"lossy**" type compression and can very in quality.
In Photoshop we can compress images in a "lossless" compression mode. Here we can make a smaller file size for storage but when we reopen the file every pixel has the exact same value as it did before.

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Homework Assignment 1 (Due 9/1)

Read and peruse all images in *A Constructed View: The Architectural Photography of Julius Shulman* (you can purchase this book or peruse in the library or lab).
Always bring your flash drive to class. Always Bring your CAMERAS to class.
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1. First read your camera's manual and familiarize yourself with your camera's settings.
2. Fill out a log sheet for all images.
3. Shoot a gray card or grey object (sweatshirt) in full sun at 2 stops open, 1 stop open, normal, 1 stop closed, 2 stops closed (in this order). This should come back as a gray image from light gray to dark gray. This will test our understanding of manual camera operations, exposure knowledge and if you have your settings off versus "auto". *Open means more light, more exposure time (shutter speed) or larger aperture opening. Closed is less light a shorter exposure time (shutter speed) or smaller aperture opening.*
4. Select a location for 5-9 where you can shoot the same image many times during full sunlight. This image should be an interesting piece of architecture or a detail.
5. Resolution: shoot your image with the maximum resolution, medium and minimum. **This means one image will be in Camera Raw format**.
6. Compression: Shoot your image again in high, medium and low.
7. ISO: Experiment with at least 4 different ISO settings of the same image from low to high (100-3200 or some cameras go as high as 128,000). Remember to adjust your exposure each time you change your ISO setting. Images should all look properly exposed.
8. Color temperature: experiment with all the color balance modes.
    a. (Tungsten, daylight, fluorescence, flash, cloudy, etc.)
9. Exposure: Bracket (different exposures) one stop over, normal and one stop under (in this order). Use a gray card and Macbeth color chart & white balance if you have one.
10. Do not use Photoshop.
11. Upload to Photo Lab computer and place in 421 folders under assignment one and label with your name.
12. **Bring in 3 written questions and 3 interesting images from magazines.**
13. **Purchase Lightroom 6/Creative Cloud, D65 workbook and LR 5&6 supplement**
14. **Purchase Photomatix pro (By Mid-September)**

Please fill out the provided log sheet by hand for the first few assignments so you can make certain you know what you did for each frame. This is part of your assignment. To assist you, consider leaving a blank frame in between each part of this assignment.
If you do not have your owner's manual check on line. Most are available to download from your camera's manufacture.

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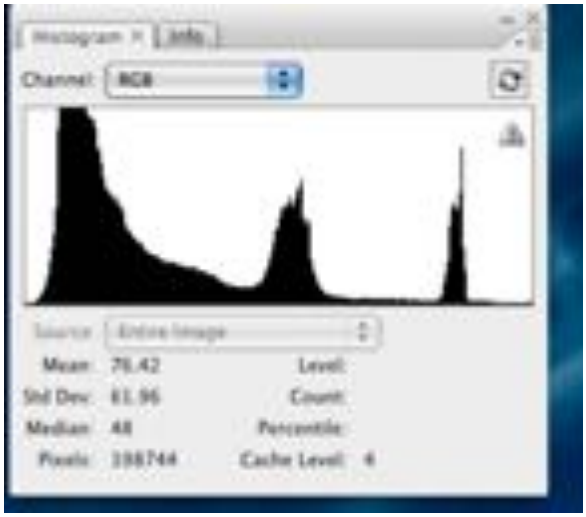
LECTURE 2

Lighting Concepts

- How light and architecture influence each other
- Illumination reveals essential charter of architecture
- Exposure alters architectural forms
- Creating movement with light

Histograms: This is the graph that is available to view when you shoot an image. It identifies both contrast and dynamic range of an image. The scale of a histogram is from 0 to 255 and together they hold all the values of all the pixels. The graph reads from left (0) to right (255).
We are looking for the distribution of pixels. There is no right or wrong histogram. However if heavy on the left then the blacks might be clogged up or underexposed. If heavy on the right the whites might have no detail and overexposure. The vertical axis determines the number of pixels at each value of brightness.



White Balance: 18% gray cards. A grey card is a card that determines the average values for any scene. If you shoot a white wall our camera will try to make is gray. If you shoot a black wall your camera will try to make it gray. By using a gray card we can help our camera determine the most accurate white balance or the truest white. In auto mode our cameras do an excellent job but may not be as perfect as we can get by using a gray card. Put yourself in the drivers seat. An advantage to digital is that we can easily adjust white balance in Photoshop.

Color Balance: Macbeth color checker. This is a color chart to help us match our image to a test strip and then our monitors and then our printers. Much more will be discussed later.

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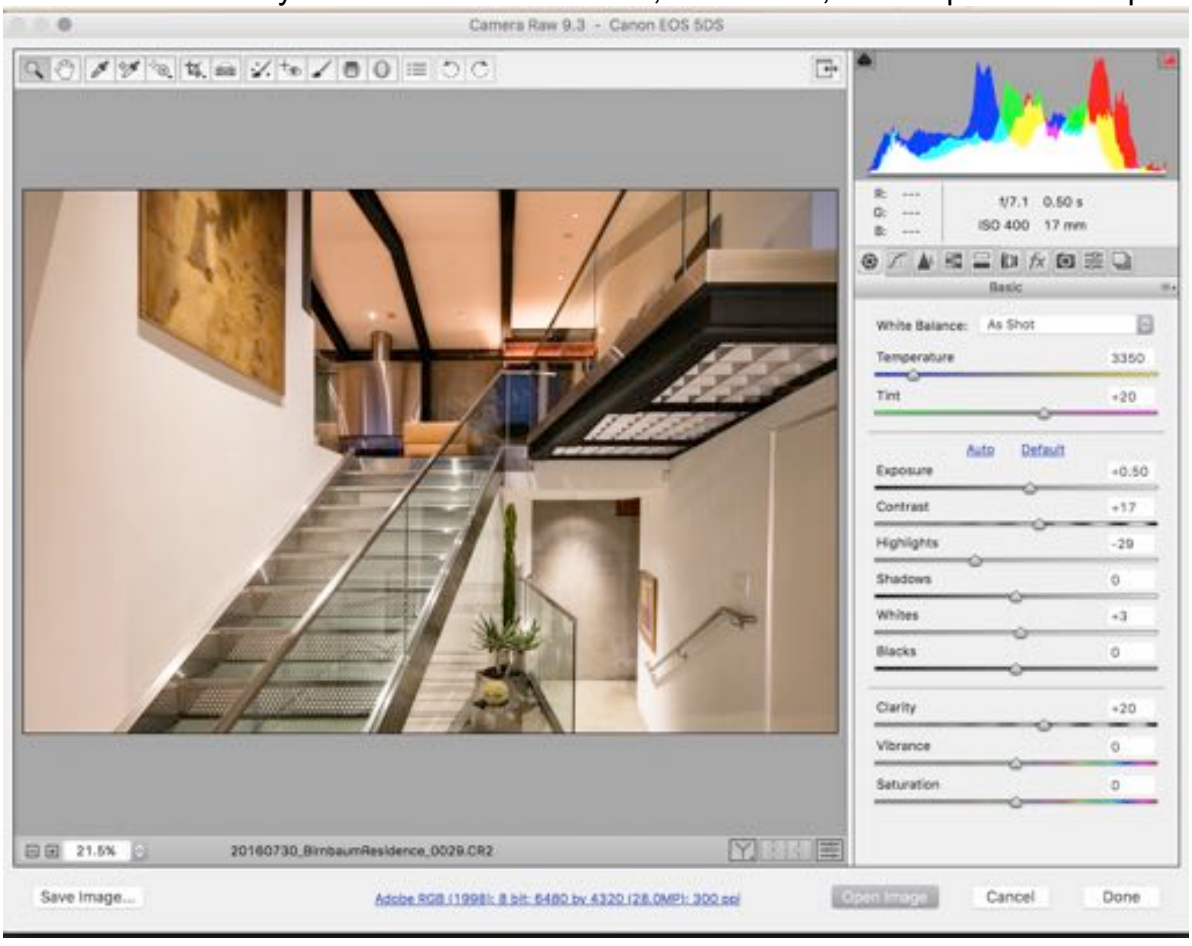
Creative Image Capture

-Determining your architectural subject
-Supporting forms/characters in your scene
-Positioning and movement
-Vertical and horizontal lines

Camera RAW Processing: Below is the first window you will see when opening a RAW image in Photoshop. The menu on the right has multiple menus: Basic, Tone Curves, Detail, Split Toning, Lens Corrections, Calibrations and Presets. At the bottom in the middle is an important processing procedure. Click on this highlighted blue bar and make your selection for File Size, Resolution, Color Space and Depth.



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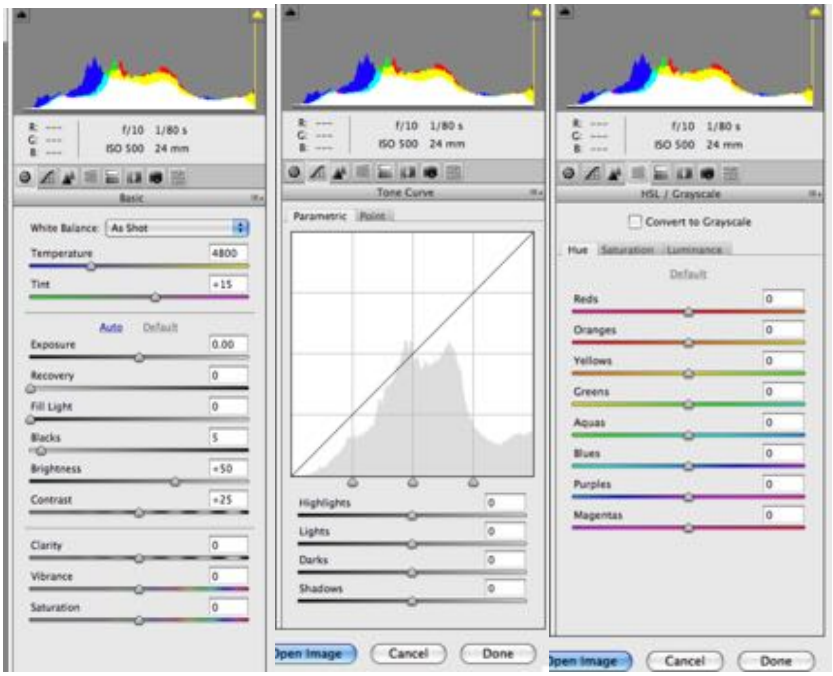

File Size: How many pixels are in your processed file. Your camera raw may shoot say 12 MP max. If you upsize you create a larger number of pixels in your file and some believe this improves printing. The quality is not affected for viewing on your computer. It may help in printing for we need a certain number of pixels to print a successful 11x14 print versus an 8x10 print.

Resolution: Changing the PPI (Pixels Per Inch) changes the size of your pixels. This does not increase or decrease the number of pixels. You can always change this at any point in Photoshop. I use 300 as my default.

Color Space: Adobe RGB had been the standard. ProPhoto is my new standard. This has more colors accessible.

Depth: This refers to the tonal range in your pixels. The more bits in each pixel the greater the color range. 8 bit provides 256 shades of color and 16 bit provides 65,536 shades. 16 bit will slow your computer down. We now have 32 and 64 bit. Lightroom 5 is 64 bit.
* Currently only a few printers are capable of printing these extra colors and monitors also have their limitations. Everyday the quality of these products increases and soon 16 bit will be a norm.

Click “Open” once you have finished processing your Raw image from the opening screen.

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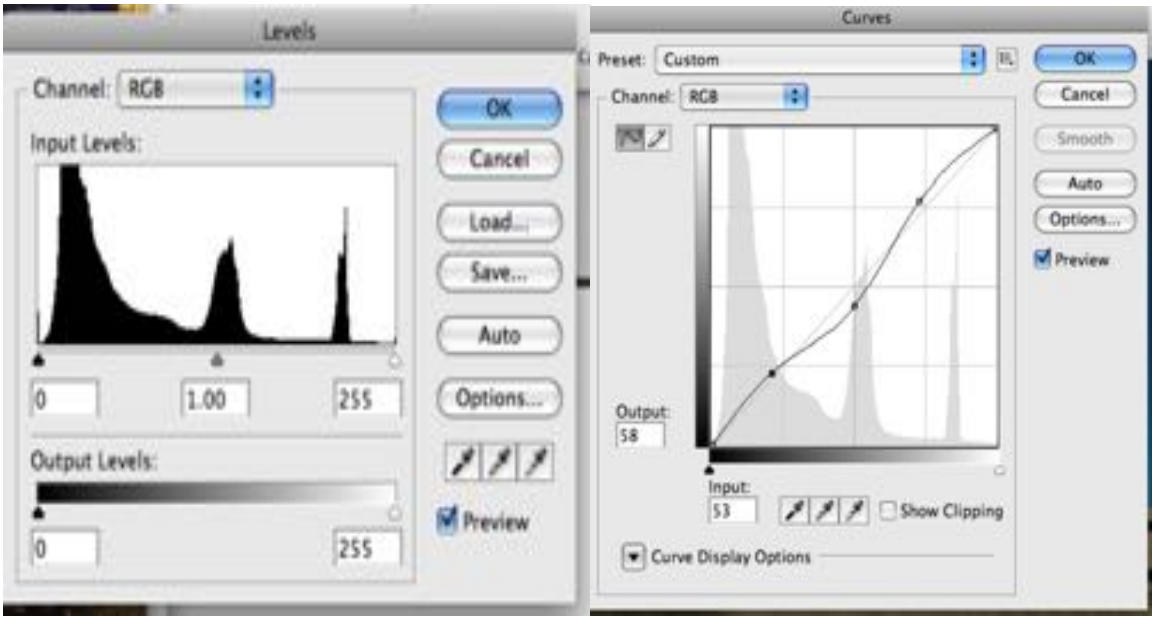
Now you can create layers, background copies and adjustment layers to your image and make over a million different types of changes. For this week we are concerned with color corrections. The two most common are Curves and Levels.

Using Levels:
To lighten or darken an image, slide the midpoint slider to the left or right. To darken shadows, use the black point slider and move it to the right. This will actually change the value of your black point. If you moved this to a value of 25 you will be resetting your black point at 25. Any shadow detail below this will be lost. The same will apply for the white point.
In the channel bar you can select from **RGB** for overall exposure, **Red** for the reds and cyan, **Blue** for the blues and yellows and **Green** for the green and magenta. Use the sliders in the same way as above.
Output can be used to decrease contrast and **Input** to increase contrast.
Using Curves:
The advantage of curves is the ability to adjust any value from 0-255. In levels you can adjust the mid-tones, shadows and highlights. The menu is similar to levels except you can click any points on and off the line and alter the shape of the line to have curves. The curve represents many different values. To change a point, you you need to click and hold on the point and drag it off the curve menu.



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Homework Assignment 2: Due 9/8

You will need to determine the best system for your own type of workflow. A photographer who shoots architecture, portraits, and landscapes may have many different systems or just one. You may choose to only shoot RAW or shoot both Jpegs and RAW. Here is a system that works for me. That said we will be working with Lightroom in two weeks and it will most likely convert you to a new system. Until then it is wise to use one of the standards for organizing.

This system uses Photoshop's Bridge. You will first import your images from your compact flash card, SD card or directly from your camera (disable iphoto auto import)

Part 1: Shoot 36 images of a subject you wish to document. All Images need to be shot as RAW. Shoot at least 12 images at Dusk/Night.

1. Create a job folder – usually by date such as **01222015_name of project**.
2. In this folder create 3 subfolders named: **Best, Good** and **Other**
3. Download your shoot from your flash cards to your desktop and into the "Good" folder.
4. Open Bridge (file Browser/Bridge)
5. Rename your raw files: In Bridge go to **Tools/Batch Rename**.
6. Organize your images into **Best, Good** and **Other** files.

Part 2: Open a minimum of 3 raw files in Photoshop. When you open a raw file the window on the Lecture 2 page from our syllabus will appear. Spend a fare amount of time looking at all the options on this page and test a few of these menu items. Then save your open/processed Raw file as a Tiff file
and add these to your assignment 2 upload.
Process 1 images and make color corrections using levels and curves. Please experiment with making a selection of a certain area of your image and making separate adjustments to this specific area. Save these as a PSD file showing all the layers

Part 3: I will provide 1 image for you to color correct (on Blackboard). Use curves and levels to correct the fluorescent green light balance. Again save as PSD.

Part 4: Read and complete the following.

Start 9/1 finish by 9/29

Read pages 1-43 (chapter 1-3) in *D-65's Lightroom Workbook*
Read pages 43-99 (chapter 4-6) in *D-65's Lightroom Workbook.*
Read pages 101-196 (Chapter 7)* in *D-65's Lightroom Workbook.
Download Adobe Lightroom 6cc and peruse this program by 9/1

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LECTURE 3

Photography means *light writing* in ancient Greek. Photographers learn to interpret light and express light through their created image while others might describe the same scene with words.

Many students study photography to experience light in whole new ways while out in the world. Others study photography to play with light in the darkroom. Still others study photography to create new technologies or play with existing ones to help the photographer get a desired outcome post image capture. This was the experience for most of the past 100 years.

The Digital Revolution
After the continuous use of film systems for 150 years, our world inventors came up with digital sensors and many new computer programs such as Photoshop. This basically took the essentials of photography and applied them to 0's and 1's for an infinite number of possibilities. Adobe CS5 has over one million commands. So many that I believe the single biggest issue today stopping the flow of exciting images is the vast amount of choices we have for post image capture. Solid creative photography principles will place you in command of your own potential in a way that is conducive to learning. If you believe you can make a great image in Photoshop, you are not wrong, merely missing out on discovering light in nature. Photoshop is essentially a graphic tool and a support system for the photographer. I believe in keeping it simple. It is important to know many of the procedures available in Photoshop. It is important to be able to organize and file your images. It is important to process images as with film. And it is important to output images with enhancements that can add to your vision.
Soon we will be checking out Adobe Lightroom. This is a program that is a Digital Darkroom. Lightroom was designed by photographers for photographers. Thus, I believe it is a very expansive program that has been simplified to suite the most important needs for the photographer. Many photographers will not need to use Photoshop any more. Those that continue to use Photoshop will find Lightroom fully supporting Photoshop with ease of use. I would not need to use Photoshop too often if it were not for the fact that architectural photography requires perspective control, which can be accessed through the Transforming menu in Photoshop.

Last week you learned one way of organizing your images and then processing them and played with Curves and Levels for enhanced contrast and color control. Here are a few more items to be able to access in Photoshop and Bridge: Batch rename, batch processing, actions for batch processing, sharpening and dust/scratch removal, and noise removal. For architecture specifically, we will be discussing how to use Free Transform in the Edit Menu of Photoshop.

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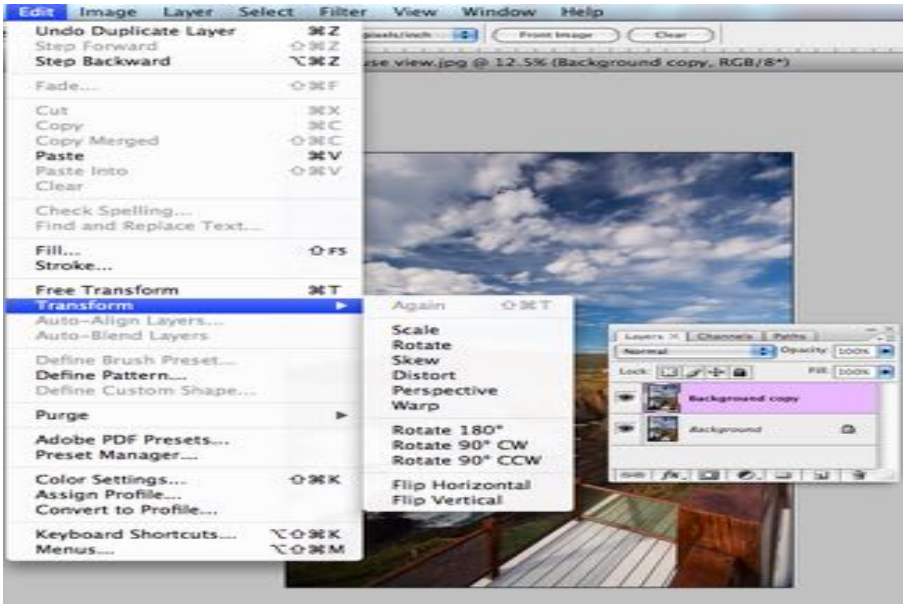

LECTURES 4-7

These lectures provide an introduction to Adobe Lightroom. Lightroom is a tool designed by photographers and computer experts. This revolutionary program allows photographers to continue to utilize their creative brain the way most photographers understand imagery. This is as close to film darkroom processing as we can get. The workflow, organization and processing tools are set up gracefully to match the tools photographers have developed over the past century of film imagery. Lightroom is a vast program, and may not be everyone's first choice. As you get more comfortable with it I believe you will be very impressed. Lightroom is relatively new. Although it may take a year or so to master this program, you will be able to successfully utilize many important features for daily shooting, within a short time.

Processing procedures and printing will be demonstrated. For printing your midterm (part two) and the final project will require a proper monitor calibration. This way your images will look similar on the lab monitor and thus to the printer profiles. We will use eye-one software. The disc to download for eye-one software is available in the photo lab. A few people have had trouble with Windows vs. Mac. If so, please try online downloads and trouble shooting. If you do have trouble, please share solutions with the class and me.

I will leave two monitor calibration devices in the lab to be checked out for your use during lab hours.

The profiles are stored in your libraries under color sync. On a Mac you will see your new monitor profile calibration listed under displays – color.

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Assignment 3 Opposites Due 9/22 (graded)
Assignment 4: Prints Due 9/29

Assignment 5: Due 10/6
Lightroom Free Transform and CS6 Free Transform (LRFT & CS6FT)

Reading Continued:
Read pages 196-315 in *D-65's Lightroom Workbook – 10/13*
Read pages 421-500 in *D-65's Lightroom Workbook 11/3*

Assignment 6 Due 10/13
Find a contemporary building and an historic building in downtown LA or by USC. Shoot at least 5 different images for each. Process all 5 to the best of your ability using all that you have learned in Lightroom/Photoshop. Then process 1 image from each of the 2 buildings and process it 5 different times (victual copies) with at least 15 items in your history and make at least one copy B&W (use color channels to enhance). Then one image for each of your buildings needs to be shot for HDR, meaning take three frames of the same image (best not to be dusk shots for this). One will be 2 stops underexposed, Normal, and 2 stops overexposed. You need to find your auto exposure bracketing or else bracket manually using shutter speed not aperture. Then color code your favorite image from each building. Have them on your laptops in class next Thursday. I will work individually and as a group. If you can come in 20 minuets early I will start working with whoever is here.

Assignment 7 Due 10/27
HDR(High Dynamic Range) (**graded**)

Assignment 8, Due 11/3.(Graded)
Facades: Shoot 10 "highest quality images" describing "facades"
Use *Library module* for labeling; advanced use of *Develop module* with a minimum of 15 history items (aside from Sharpening/Noise)
For this week you need to have processed (using virtual copy) 5 different versions from each of two different original images. Use different Development tools to create different looks. At least one copy needs to be in B&W using grayscale. Use the color channels to enhance your B&W.
On the computer you need to have a subfolder "10 facades". In this folder place your 10 images as a RAW and a processed Tiff (this should already have been completed before break. To not be counted late make sure this is in the lab computer by 9:30pm on this Wednesday.

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Then create two subfolders under the 10 facades called “5&5” and “HDR”. In the 5&5 folder you need place all your virtual copies (total 10). In the HDR folder place your processed HDR Tiff images and the 3 original raw files used for the HDR.

Assignment 9(Graded): Photo Exhibition paper due 11/10.

Assignment 10 (Graded): Quiz on 11/17.

Weeks 11-15

Discussion and development of individual final projects, including documenting a specific architectural project, studying the natural and available light, and utilizing all the tools and ideas presented to create 20 excellent images that tell a story of the chosen structure.

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Important Projects-(Graded)/Dates

Opposites – Assignment 3 Due 9/22

Compile a list of opposite words representing something interesting to you or in the architectural realm. Sit with your list for a day and then reread your list and see which pair of opposites speaks to you. Then, go out and find your subjects, see the light in your scene and use any tools to assist you with image capture such as light temperature, time of day/night, ISO, long exposure, depth of field, etc. You may also use processing tools to assist you after you have strived for your best possible capture. (you will deliver two images; one is the opposite of the other)
Be ready to present your images in class. Please print these images as well. Print them on any ink jet printer using glossy photo paper.

Free Transform – Assignment 5 due 10/6

Shoot buildings at Dusk. Create 3 perfect dusk images and one will need to be an image you will transform to correct parallax.

HDR- Due 10/27

Facade – Due 11/3

Visiting a Photo Exhibition and Written Paper Due 11/10

Your paper on a photo exhibition is due on **11/6**. Please submit a two-page double spaced paper including what your saw and where. Information about the exhibition and what you felt in your own words. Then be sure to bring some of your learned photographic knowledge to your discussion of the body of work you perused. You may also include an insert of an image from this exhibition if possible (This can be on a third page).
Important: please submit your paper on paper to me and also download it on the lab computer as well in the desktop folder labeled **"Paper".**

Quiz 11/17

Final Project: Due - Final exam timeslot

Create a dynamic photographic documentation of an architectural setting, a commercial building, residence or complex. You will turn in a maximum of 20 images. These are to be of the highest quality. Print two images 13x19 of the highest quality; one as a Color print and one as a Black & White print.
-See Final Project Details on next page.

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FINAL PROJECT DETAILS

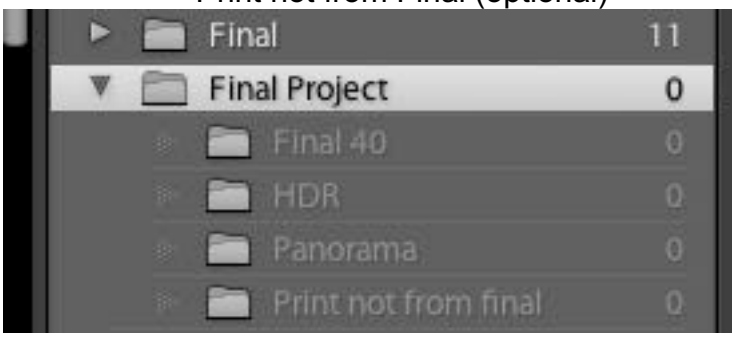
Document a specific architectural project, studying the natural and available light, and utilizing all the tools and ideas presented to create 20 excellent images that tell a story of the chosen structure.

These need to be in your collection under USC Fall2015 421 and your name.

Under your name in Lightroom create the following:

Folders: Final Project

Subfolders: HDR-processed and 3 (a min. of 2 images and up to 10)
Panorama- all 3 or more images and processed panorama
Final 40
Print not from Final (optional)



*Since some of your finals will be in the HDR and panorama you do not have to have the full 20 showing in “final 20-40” folder. Mark the ones you will be using in your HDR and Panorama by using a color label. Then make certain (or you will be downgraded) your final 20 are in the collections area in the USC 421 folder and in a subfolder that is labeled with your name.

This is what is needed as a minimum in your final project:

4 - Dusk Images
6 - Free Transform – at least 4 must be done in Photoshop.
4 - HDR (not more than 10 HDR)
1 - B&W (not more than 5 B&W)
1 - Tungsten
5 - Daylight
1 - Panorama w 3 or more images (not more than 2 panoramas)
4 - A maximum of 4 images over processed in HDR or in the LR Develop Module

Key wording on all images must include: architect/location/building name and date built.

In the **Caption** box area in metadata note each of the criteria your image has from the above list (Ex. HDR,LRHDR, LR FT, CS6 FT, Day, Tung, Dusk, Pano, B&W)

Prints: Make one B&W and one color print. Minimum size is 13x19.
One print may be from a location other than your final project. If you elect to do this make certain you are choosing an exceptional image and also place in an additional subfolder.

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Helpful Info

DPREVIEW.com for all camera comparisons

High Dynamic Range – Photomatix Pro: http://www.hdrsoft.com/

Tutorials on Photoshop:
http://russellbrown.com/tips_tech.html

Memory Cards,
Bigger is not better- would not shoot one continuous roll of film- stuff happens
8 Gigs is good if you have a 23mp camera maybe 16 gigs or for video 16 or 32. Change cards every so often… retire them or for back up. Just like a hard drive. It will break at some point Don't get to that point.
Never shoot near the end or erase at end to add more. Always format every time to ensure correct file structure. Speed is dependant on controllers in card and your camera matching.

ISO- higher the more noise (electronic error) you can fix it but much better to prevent it. Always set to no higher than is absolutely necessary. We shoot architecture on a tripod so the ISO can be low most of the time (ISO 100).

Histograms- correct exposure is vey important. Though digital is more like negative film better leeway and error toward overexposure.

No such thing as a perfect histogram. Need to interpret according to what you are shooting. If all black and white it would look like a goal post.

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Library Shortcuts

View Shortcuts

Esc	Return to previous view
Return	Enter Loupe or 1:1 view
G	Enter Grid Mode
E	Enter Loupe view
C	Enter Compare mode
N	Enter Survey mode
Command + Return	Enter Impromptu Slideshow mode
F	Cycle to next Screen Mode
Command + Option + F	Return to Normal Screen Mode
L	Cycle through Lights Out modes
Command + J	Grid View Options
J	Cycle Grid Views
\	Hide/Show the Filter Bar

Rating Shortcuts

1-5	Set ratings
Shift + 1-5	Set ratings and move to next photo
6-9	Set color labels
Shift + 6-9	Set color labels and move to next photo
0	Reset ratings to none
[	Decrease the rating
]	Increase the rating

Flagging Shortcuts

`	Toggle Flagged Status
Command + Up Arrow	Increase Flag Status
Command + Down Arrow	Decrease Flag Status

Target Collection Shortcuts

B	Add to Target Collection
Command + B	Show Target Collection
Command + Shift + B	Clear Quick Collection

Photo Shortcuts

Command + Shift + I	Import photos
Command + Shift + E	Export photos
Command + [	Rotate left
Command +]	Rotate right
Command + E	Edit in Photoshop
Command + S	Save Metadata to File
Command + -	Zoom out
Command + =	Zoom in
Z	Zoom to 100%
Command + G	Stack photos
Command + Shift + G	Unstack photos
Command + R	Reveal in Finder
Delete	Remove from Library
F2	Rename File
Command + Shift + C	Copy Develop Settings
Command + Shift + V	Paste Develop Settings
Command + Left Arrow	Previous selected photo
Command + Right Arrow	Next selected photo
Command + L	Enable/Disable Library Filters

Panel Shortcuts

Tab	Hide/Show the side panels
Shift + Tab	Hide/Show all the panels
T	Hide/Show the toolbar
Command + F	Activate the search field
Command + K	Activate the keyword entry field
Command + Option + Up Arrow	Return to the previous module

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Develop Shortcuts

Edit Shortcuts

Command + U	Auto Tone
V	Convert to Black and White
Command + Shift + U	Auto White Balance
Command + E	Edit in Photoshop
Command + N	New Snapshot
Command + '	Create Virtual Copy
Command + [	Rotate left
Command +]	Rotate right
1-5	Set Ratings
Shift + 1-5	Set ratings and move to next photo
6-9	Set color labels
Shift + 6-9	Set color labels and move to next photo
Command + Shift + C	Copy Develop Settings *A dialog will come up asking which settings to copy.*
Command + Shift + V	Paste Develop Settings

Output Shortcuts

Command + Return	Enter Impromptu Slideshow mode *Shows the current selected photos in a slideshow based on the current Slideshow module settings.*
Command + P	Print selected photos
Command + Shift + P	Page Setup

Navigation Shortcuts

Command + Left Arrow	Previous Photo
Command + Right Arrow	Next Photo

View Shortcuts

Tab	Hide side panels
Shift + Tab	Hide all panels
T	Hide/Show toolbar
F	Cycle screen modes
Command + Option + F	Go to normal screen mode
L	Cycle Lights Out modes
Command + Shift + L	Go to Lights Dim mode
Command + Option + Up Arrow	Go to previous module
Command + I	Show/Hide Info Overlay
I	Cycle Info Overlay
Command + J	Develop View Options

Mode Shortcuts

R	Enter Crop Mode
Q	Enter Spot Removal Mode
M	Enter Graduated Filter Mode
K	Enter Adjustment Brush Mode
D	Loupe View
Y	View Before and After left and right
Option + Y	View Before and After up and down

Target Collection Shortcuts

B	Add to Target Collection
Command + B	Show Target Collection
Command + Shift + B	Clear Quick Collection