

# **Beginning Digital Photography**

## **COURSE OUTLINE**

**Presented by Paul Erdman  
for Chemeketa Community College**



# SESSION 1

## OBJECTIVES

### By the end of class tonight, you will:

- understand the basic principles of traditional photography
- understand the basic concepts of digital photography
- be acquainted with your camera's basic operation, take pictures, and transfer them onto your computer.
- be familiar with a few basic features of Adobe PhotoShop Elements

## General Photography Basics

*Exposure = Aperture + Shutter speed*

### How it works:

fundamental principles

### Key Concepts:

- Exposure
- Shutter Speed
- Aperture (fstops, depth of field) *\*the bigger the aperture, the narrower the depth of field*
- Zoom
- Flash (range and effectiveness)

## Digital Photography Basics

*Analog and digital cameras are very much alike;  
the only significant difference is the storage media.*

### How it works:

fundamental principles

### Key Concepts:

- MegaPixels and Image Size (*width in pixels x height in pixels = 1,000,000 pixels*)
- Image quality & file types (JPG, TIF, RAW)
- Optical vs. digital zoom

## Digital Cameras: Basic Usage

- Installing batteries and memory card(s)
- Using the menus (the user guide is your friend!)
- Taking pictures (and making movie clips, if applicable)
- Downloading pictures to your computer

## Introduction to PhotoShop Elements

Looking at Elements for the first time: a basic overview of the software

- Quick Fix
- Printing
- Making slide shows, bound photo books, calendars, etc.

## ASSIGNMENT

### Before next class:

- Set your camera up to take the biggest, highest quality (not RAW) images it can.
- Take some pictures, download them to your computer, put them on a CD or USB storage device.
- BRING YOUR CAMERAS AND PICTURES TO CLASS!

*\*Consider purchasing Adobe PhotoShop Elements for home use.*



## SESSION 2

### OBJECTIVES

#### By the end of class tonight, you will:

- be familiar with your camera's modes, features, and settings
- understand the fundamental principles of digital imaging
- be familiar with common digital image editing features available in most applications (crop, resize, rotate, color and contrast adjustments) and know how to use them in PSE
- Be able to save your work in an appropriate format

### Fundamental Principles of Digital Imaging

#### *1. The resolution of an image is an indication of how its pixels are distributed.*

- Resolution = Pixels (Dots) per Inch
- Resolution = Pixels ÷ Size (in inches)
- Pixels ÷ Resolution = Size (in inches)
- Size (in inches) x Resolution = Pixels
- Size (in inches) ÷ Pixels = Resolution

#### *2. Pixels are sacred — never throw them away, and never invent them from scratch, without first carefully considering the consequences.*

#### Applying the principle:

- Images for **Screen (72 ppi)** vs. **Print (300 dpi)**: just because it looks huge on screen doesn't mean you need to make it smaller — especially if you will be printing it at large sizes!
- You can make it smaller, but you can't make it bigger — at least, not without inventing pixels.

### Digital Camera Lab

*Every camera is different, but they're all the same!*

#### Camera Setup:

- Properly setting the image size
- Properly setting the image quality (intro to JPG compression)
- Different automatic shooting modes (those little icons!)
- Introduction to automatic modes and other settings
- Using the display versus using the viewfinder - save the batteries!
- Movies (if applicable)

### Editing Your Pictures: part 1

- Cropping and Resizing (remember the principles)
- Basic color correction

#### Saving in an appropriate format

*Beware the lossy JPG!*

*\*Always save your work in a format that will NOT throw away data*

- Advantages of PSD
- TIFs as a non-PhotoShop alternative

### ASSIGNMENT

#### Before next week:

- Take some pictures using the various modes your camera has to offer.
- Practice cropping, resizing, and adjustment procedures on some of your photos.
- Bring the original and retouched photos with you to class next week.

*\*Next week we will begin learning tools only available in Adobe PhotoShop and PhotoShop Elements.*



## SESSION 3

### OBJECTIVES:

#### By the end of class tonight, you will:

- be able to organize your photos on your hard-drive, and back them up.
- have a basic understanding of layers and selections
- be able to use brushes, eraser, clone stamp, heal brush, and paint bucket tools
- Add text to your photo

*\*Tonight's material relies on tools that can only be found in Adobe PhotoShop or PhotoShop Elements*

### Organizing Your Images

#### Using software-based vs. system-based organization

- Pro's and Con's of each basic approach

#### Different Approaches:

- Folders by date taken
- Folders by topic (client, subject matter, etc.)

#### Backing up Your Data

### PSE: Layer Basics

#### Introduction to Layers

- Stacking Order
- Layers affect layers beneath them

#### Types & Features of layers

- Background Layer
- Standard content layer
- Text Layers
- *Application: what could you accomplish with layers?*

### Selection Basics

- Selecting pixels using marquee and magic wand tools
- Changing tool settings
- What to do with it once it's selected (Edit the pixels in the selection, copy/paste, move, flip, rotate, etc)

*The key to organizing your images is putting them where you can find them again!*

### Painting, Erasing, Cloning, & Healing

#### Paintbrush Basics:

- Style, Shape, Hardness
- Choosing foreground & background color
- Specialty brushes: Eraser, Clone Stamp, Heal Tools
- Paint Bucket
- *Application: painting within a selection or on a new layer*

### Adding Text

*Each new block of text will always be on its own Layer.*

#### Using the Type tool to add text

#### Changing the appearance of your text

- Changing Character Attributes: Font, Size, scaling, tracking, etc.
- Changing Paragraph Attributes: Justification, space before/after, indents, etc.

### ASSIGNMENT

#### Before next week:

- Decide how you want to organize your images on your hard-drive, and prepare to back up your personal data.
- Edit some of your images using the skills you gained in class.
- Bring the results of your work (on disc and printed) to class next week.



## SESSION 4

### OBJECTIVES:

#### By the end of class tonight, you will:

- be able to re-purpose your images for print, e-mail, and web
- have a deeper understanding of what you can accomplish with your digital images
- have a taste of what's coming up in the Intermediate Class!
- review principles and tools you have learned throughout this class and evaluate your progress

### Repurposing Images

- Keep your original, with all layers intact, in case you need to edit it in the future.
- Use "Save for Web" to make smaller JPG versions to send people.
- Making full-resolution flattened JPGs for printing

*Always keep your original at the largest size you will ever need it to be.*

*\*Typically, only people with Adobe PhotoShop or PSE will be able to open your PSD files. Usually you will want to send people JPGs.*

### Introduction to Intermediate Image Editing

*This is where the fun really begins!*

#### Destructive vs. Non-Destructive Image Editing

- Making the most of layers
- Advanced selection techniques

#### Image Compositing

##### Removing Backgrounds

- Inverting selections and deleting or masking
- Background Eraser tool

##### Combining Images

- Select, copy, paste!
- Cloning from one image to another
- Layer adjustments, merging layers, and flattening

##### Effects and Filters

### REVIEW

- Camera operation
- Organizing your files and backing up data
- Relationship between pixels, resolution, and image size
- Image editing procedures
- Open Q&A

