



# Pima Community College

## Course Syllabus

Campus/Center: Pueblo High School, Tucson High School

Room Number: TBA

Course Number: DAR 128

Course Title: Digital Photography I

CRN:

**Course Description:** Introduction to digital photography emphasizing the technical and aesthetic issues and how these qualities form content. Includes Adobe Photoshop basics, history of still photography, applications of digital cameras, aspects of the digital medium, camera and computer equipment requirements, digital still camera, memory and file formats, digital still camera lenses, and proper exposure. Also includes light, color, and temperature; depth of field, shutter speed effects, proper use of digital photography, lighting digital stills, elements of composition, photographic rendering and reality, outputting and publishing, portfolio preparation, and career options in digital photography.

**Course Prerequisites:**

**Course Co-requisites:** None

**Required Textbook(s):**

**Other Course Materials:**

It is recommended students have access to a digital camera with manual exposure control and a computer with image processing software. Professional photographic equipment, including cameras, are available for check out on a rotating basis. Professional quality computers, software, printers, lighting equipment, and studio will be provided for specific assignments.

Adobe Photoshop experience is highly recommended before this course.

[MyPima.pima.edu](http://MyPima.pima.edu) – MyPima is a course tool used as means of communication and/or for accepting course work. Your instructor will guide you in how it may be used in your course. Through MyPima you can also register and pay for classes, check your financial aid, access your student email, view your schedule, and read college-wide announcements.

**Instructor:**

**Office Location:**

**Office Hours: Monday – Friday 8:00am-4:00pm**

**Instructor Phone:**

**Instructor Email:**

**Start Date:**

**End Date:**

**Website: Pima.edu**

**Class Meeting Days: Monday - Friday**

**Class Meeting Time: Monday 9:05-10:50am**

**Wednesday – 8:00am-8:49am Thursday/Friday –**

**8:00-9:00am**

**Final Exam or Final Activity Date: This will be posted in Synergy student view.**

## **Course Learning Outcomes:**

**Upon successful completion of this course, the student will be able to:**

1. Demonstrate competencies in darkroom using Adobe Photoshop.
2. Identify historical development of various photographic still mediums.
3. Discuss the application of digital cameras in commercial, fine art, and other areas of photography.
4. Explain the theoretical and mechanical aspects of digital photography.
5. Analyze digital photography needs and determine what camera and computer equipment would be appropriate to meet those requirements.
6. Identify the various digital still cameras and specifications.
7. Identify various file formats and memory requirements in digital cameras.
8. Discuss various digital still camera lenses and lens specifications.
9. Demonstrate competencies with manually operated amateur and professional digital cameras, including proper use of basic functions such as aperture, shutter speeds, and light meter.
10. Describe the principles behind the use of the elements of light, color, and temperature.
11. Apply the use of depth of field as a compositional element that supports image content.
12. Apply the use of shutter speed effects as a compositional element that supports image content.
13. Identify the proper use of digital photography.
14. Demonstrate technical and artistic competencies of employing available light on location and studio lighting using a professional quality lighting studio.
15. Demonstrate the use of optical perspective as a compositional element that supports image content.
16. Develop visual literacy and critical analysis of photography as a commercial art and as a fine art.
17. Demonstrate proficiency in rendering form into a two-dimensional image.
18. Demonstrate proficiency in manipulating the illusion of three-dimensional space in a photographic work.
19. Output and publish final media to appropriate formats including prints, Compact Disk (CD), Digital Versatile Disk (DVD), and web pages.
20. Demonstrate skill development in portfolio building including visual demonstrations of technical and artistic competencies.
21. Research career options in digital photography.

## **Outline:**

- I. Adobe Photoshop Basics
- II. History of Still Photography
  - A. Modern digital
  - B. Pinhole cameras
  - C. Lenses
  - D. Viewfinders
- III. Applications of Digital Cameras
  - A. Use in commercial photography
  - B. Use in photojournalism
  - C. Use in editorial illustration
  - D. Artistic applications
- IV. Aspects of the Digital Medium

- A.Charged Couple Device (CCD), emerging technologies
- B.Color filters and balance
- C.Final picture elements
- D.Film vs. digital
- E.Pixels
- F.Resolution
- G.Universal Serial Bus (USB) vs. firewire
- V.Camera and Computer Equipment Requirements
- A.Types and sizes
- B.Key camera features
- C.How to compare features
- D.Determining use for the camera
- E.Sources for purchase
- F.Choosing an operating system
- G.Software requirements
- H.Support equipment
- VI.Digital Still Camera
- A.Camera manual and specifications
- B.Camera body functions
- C.Liquid Crystal Display (LCD)
- D.Optical viewfinders and the Single Lens Reflex (SLR)
- EAutomatic vs. manual
- F.Battery power
- G.Accessories
- H.Simple process for use
- VII.Memory and File Formats in Digital Still Cameras
- A.File formats
- B.Removable memory
- C.Hard drives
- D.Smart media
- E.Transfer rate
- VIII.Digital Still Camera Lenses
- A.Zoom lens
- B.Prime lens
- C.Focal length
- D.Lens speed
- E.Lens angle of view
- F.Perspective – relative scale of compositional elements
- G.Perspective – distortion and correction
- H.Specialized lenses
- IX.Proper Exposure
- A.CCD sensitivity - ISO
- B.Middle or 18% grey
- C.Exposure compensation for tonal value
- D.Scene contrast ratios
- E.Light contrast ratios
- F.Recordable contrast range
- G.Reflected light meters
- H.Incident light meters
- I.Reciprocity of aperture and shutter speeds
- JAutomatic exposure systems
- KAutomatic vs. manual
- L.Zone system vs 256 level grayscale
- X.Light, Color, and Temperature
  - A. International Standards Organization (ISO)

- B. White balance
- C. Kelvin temperature
- D. Filters
- E. Use of meters
- F. Daylight vs. tungsten
- G. Digital filters
- H. Adjusting highlight and shadow
- XI. Using Depth of Field
  - A. Plane of focus
  - B. Range of focus
  - C. Aperture and f-stops
  - D. Lens factors
  - E. Pictorial effects – creating unity and separation
  - F. Reciprocity with shutter speed
  - G. Overriding auto exposure
- XII. Using Shutter Speed Effects
  - A. Shutter speeds
  - B. Pictorial effects of stop action, panning, and object blur
  - C. Reciprocity with aperture
  - D. Overriding auto exposure
- XIII. Proper Use of Digital Photography
  - A. Comparing different media
  - B. Light volume/light quality
  - C. Using the digital format
  - D. Support equipment
  - E. Digital vs. analog
  - F. Working in extreme conditions
  - G. Color channels
  - H. Bit depth: 8 bit vs 16 bit color
- XIV. Lighting for Digital Stills
  - A. Source / direction of light
  - B. Quality of light
  - C. Lighting contrast
  - D. Scene contrast
  - E. Look and feel
  - F. Analyzing with light meters
  - G. Table top photography
  - H. Lighting people
  - I. High key vs. low key
  - J. Natural light
  - K. Lighting effects
  - L. Gels, filters, and modifiers
  - M. Use of color temp meters
  - N. Use of built in meters
- XV. Elements of Composition
  - A. Line
  - B. Shape
  - C. Form
- XVI. How Composition Informs Content
  - A. Visual language of aesthetics
  - B. Expressing intentions visually
  - C. Images in context
- XVII. Photographic Rendering
  - A. Three dimensions become two
  - B. Optical perspective

- C. Decisive moment
- D. Selected view
- E. Color rendered as black and white
- XVIII. Photographic Reality
  - A. Reality edited
  - B. Reality created
  - C. Reality altered
  - D. Tradition of veracity
  - E. Digital and silver images
- XIX. Outputting and Publishing
  - A. Capturing your images
  - B. Outputting your images
  - C. Concepts of digital pre-press printing
  - D. Color matching
  - E. Matching samples
  - F. Color correction
  - G. Resolution
  - H. Laser vs. inkjet printers
  - I. Web output
  - J. Color artifacts
  - K. Software applications
  - L. Scanners
  - M. Service bureau operations
  - N. Portfolio preparation
  - O. Calibration devices and software
- XX. Portfolio Preparation
  - A. Defining the audience
  - B. Format
  - C. Size and scale
  - D. Editing
  - E. Variation versus unity
- XXI. Career Options in Digital Photography
  - A. Commercial photography
  - B. Industrial photography
  - C. Wedding and portrait photography
  - D. Photojournalism
  - E. New media applications
  - F. Fine art
  - G. Decorative arts
  - H. Landscape, nature, and panorama photography
  - I. Scientific research
  - J. Services bureaus and labs
  - K. Photo editor
  - L. Studio manager and assistant

### **Course Grade Determination**

### **Grading and Learning Criteria:**

**Note: Above average grades, require an above average amount of time and effort!!!**

Each learning station has (4) parts that you are responsible for completing **in the following order:**

**1st-** Learning and Practicing the information and tasks taught at the learning station until all videos are completed and you mastered the content.

**2nd-**Complete Homework assignments with a minimum of 75% proficiency

**3rd-**Complete the Written Exam with a minimum of 75% proficiency

**4th-**Complete the Hands-On Test with a minimum of 100% proficiency

You may retake the 2<sup>nd</sup>, 3<sup>rd</sup>, or 4<sup>th</sup> requirement (listed above), one time only! **Failure after a second attempt to obtain the required proficiency constitutes failure of the learning station** and you will be moved on to a different learning station.

You **may only retest or redo** an assignment to be turned in for a grade, **(24) hours later** or your next scheduled lab! Do not retest or redo until you are absolutely sure you have mastered the content and tasks!

Note: The **above grading and learning criteria supersedes any previous written procedures** such as listed on existing work orders.

#### **Grade system:**

**A-Superior, (4)** learning stations mastered. **Including Homework and Written Passing**

**B-Above average, (3)** learning stations mastered. **Including Homework and Written Passing**

**C-Average, (2)** learning stations mastered. **Including Homework and Written Passing**

**D-Below average (1)** learning stations mastered. **Including Homework and Written Passing**

**F-Failure, No Stations Completed**

**I-Incomplete-**Requested by student, in writing to the Instructor of record 5-days before the last official day of the semester.

Requires a minimum of 60-hours lab time recorded on your timecard and 60% of the learning stations (all 4-parts) completed.

#### **Course Policies and Procedures**

**There are no excused absences!** If you miss time, it must be made up. Notify an instructor if you are going to be absent and schedule your make up time. Failure to notify an instructor of your absence could result in your card being removed from the rack and you will have to speak with an instructor before returning. Students, who **fail to show up for two weeks (minimum of 6 hours)** or more prior to the 45<sup>th</sup> day, and have not contacted the instructor listed on this syllabus, may **be withdrawn** from the class. Those who miss two weeks or more after the 45<sup>th</sup> day will **receive an “F”** (unless you grade is higher) for the course. If you are dropping the class it is your responsibility to go to registration and submit a drop form. You must **attend each course every week** for approximately (4) hours each (**minimum of 3 hours each**). If you are going to be more than a half hour late, or absent, you must call us and ask us to either hold your station available a little longer, or to document on your card that you will be absent. If you are absent, **you must make up the time** the same week or following week. AUT 122- is the only course that is an exception, since its schedule is different. Students **arriving more than one hour after** the class begins **will not be allowed** to attend class for that period!

Before being assigned to a learning station, the **student must complete the Automotive Technology program Orientation/Briefing**, which includes personal and environmental safety. Some courses require student assignment to specific learning stations-check with the lab personnel.

You are required to read the assigned chapter(s) and complete the homework for every learning station prior to completing the required tests, as outlined in the learning station descriptions listed below. You will answer all of the questions at the end of the chapter(s), in writing (A,B,C,D, answers are OK for the multiple choice questions) to be turned in for grading and documentation on your time card and work order, **after completing the learning portion** of the learning station.

#### **Course Schedule**

Monday	1 <sup>st</sup> period 9:05-10:50
Tuesday	no class
Wednesday	8:00-8:49
Thursday	8:00-9:00
Friday	8:00-9:00

