

PELLISSIPPI STATE COMMUNITY COLLEGE
MASTER SYLLABUS

**ADVANCED DIGITAL IMAGING TECHNIQUES
PHO 2060**

Class Hours: 3.0

Credit Hours: 3.0

Laboratory Hours: 0

Date Revised: Spring 2011

Catalog Course Description:

Students explore advanced topics in digital photography and imaging. Emphasis is placed upon gaining an understanding of the industry-standard tools available to manipulate a digital image and choosing the best methods and practices for creating an appropriate imaging workflow. Special attention is paid to technical details including exposure theory, optical systems, dynamic range, resolution, color models, compression types and file formats.

Entry Level Standards:

Proficiency with basic non-destructive imaging techniques in Adobe Photoshop

Prerequisites:

MDT 2100 or PHO 2010

Corequisites:

none

Textbook(s) and Other Course Materials:

- Single lens reflex digital camera with manual focus mode, adjustable aperture & shutter speeds.
 - Tripod
 - Flash memory cards with 8GB total storage.
 - 2 Portable flash drives with 8GB total storage .

I. Week/Unit/Topic Basis: *(Subject to change)*

Week	Topic
1	Introductions and expectations / materials / tools / Review of classic photographic concepts
2	Review of review-----Intro to Bits, bytes, pixels and file formats
3	Color spaces & calibration, Intro to Adobe Bridge
4	RAW formats. Dynamic range in 24-bit color, improving apparent dynamic range, Use of Adobe Cam. Raw
5	PShop review: Nondestr. Editing, Image modes; image size; image adjustments; layers; masks, sharpening

- 6 Lenses; perspective, depth of field; remapping & projection geometry, nodal points. Correction of optical aberrations in Photoshop
- 7 Quiz #1, HDR images in Photoshop, tone mapping
- 8 Panoramic photography overview: panoramic equipment & techniques
- 9 Creating stitched images with Photoshop
- 10 Discussion of Advanced workflow tools: Aperture; Lightroom
- 11 Lightroom- Hands on, workflow development
- 12 Automation in Photoshop, advanced workflow techniques
- 13 Photoshop advanced techniques, smart objects
- 14 Quiz #2, Final project development general Q/A
- 15 Final projects due

II. Course Goals*:

The course will

- A. Explain and demonstrate the tools used to manipulate light in the formation of a digital image. II. III.
- B. Outline advanced digital photographic techniques, including geometric transforms, High Dynamic Range Imaging, panoramic, and stereo 3D imaging. III. III. IV.
- C. Outline techniques in advanced image retouching and manipulation as they relate to improving image quality and communicating visually. I. II. III. IV.
- D. Explore industry standard tools for developing and maintaining a personal, color-calibrated workflow, with consideration given to effective image capture, editing, correction, archiving & delivery requirements. I. II. IV.

**Roman numerals after course objectives reference goals of the Photography program.*

III. Expected Student Learning Outcomes*:

Students will be able to:

- 1. Calibrate a monitor for a consistent & accurate working environment. A, C, D
- 2. Manage digital images efficiently from capture to delivery and archiving. A, B, C, D
- 3. Develop an understanding of file formats, their underlying data structure and their effective use. A, D
- 4. Digitally correct common optical aberrations and geometric distortions. B, C
- 5. Produce an 8-bit image from a tone mapped HDR. A, B, D
- 6. Produce a properly stitched image for increased field of view. B, C, D

7. Demonstrate proficiency as an advanced user of Adobe Photoshop®. D, C, D
8. Produce appropriate source images for digital manipulation techniques using a DSLR. A, B, D

** Capital letters after Expected Student Learning Outcomes reference the course goals listed above.*

IV. Evaluation:

A. Testing Procedures: 30% of grade

2 Quizzes– 15% each

B. Shooting Assignments 30%

Various photography assignments may require additional time in the studio, field and/or lab

C. Final Project: 20% of Grade

Portfolio of images- each with a descriptive paragraph explaining how the techniques taught in class are utilized

D. Other Evaluation Methods: 20% of Grade

Teamwork and Active Participation

E. Grading Scale:

4.00-3.75=A

3.25-3.74=B+

2.75-3.24=B

2.25-2.74=C+

1.50-2.24=C

0.50-1.49=D

0.00-0.49=F

V. Policies:

A. Attendance Policy:

Pellissippi State expects students to attend all scheduled instructional activities. As a minimum, students in all courses (excluding distance learning courses) must be present for at least 75 percent of their scheduled class and laboratory meetings in order to receive credit for the course. Individual departments/programs/disciplines, with the approval of the vice president of Academic Affairs, may have requirements that are more stringent. In very specific circumstances, an appeal of the policy may be addressed to the head of the department in which the course was taken. If further action is warranted, the appeal may be addressed to the vice president of Academic Affairs.

B. Academic Dishonesty:

Academic misconduct committed either directly or indirectly by an individual or group is subject to disciplinary action. Prohibited activities include but are not limited to the following practices:

- Cheating, including but not limited to unauthorized assistance from material, people, or devices when taking a test, quiz, or examination; writing papers or reports; solving problems; or completing academic assignments.

- Plagiarism, including but not limited to paraphrasing, summarizing, or directly quoting published or unpublished work of another person, including online or computerized services, without proper documentation of the original source.
- Purchasing or otherwise obtaining prewritten essays, research papers, or materials prepared by another person or agency that sells term papers or other academic materials to be presented as one's own work.
- Taking an exam for another student.
- Providing others with information and/or answers regarding exams, quizzes, homework or other classroom assignments unless explicitly authorized by the instructor.
- Any of the above occurring within the Web or distance learning environment.

C. Accommodations for disabilities:

Students who need accommodations because of a disability, have emergency medical information to share, or need special arrangements in case the building must be evacuated should inform the instructor immediately, privately after class or in her or his office. Students must present a current accommodation plan from a staff member in Services for Students with Disabilities (SSWD) in order to receive accommodations in this course. Services for Students with Disabilities may be contacted by going to Goins 127, 132, 134, 135, 131 or by phone: 539-7153 or TTY 694-6429. More information is available at <http://www.pstcc.edu/sswd/>.

D. Other Policies:

- Late assignments will be marked down two letter grades for each week that they are late.
- There is a big difference between getting inspiration from or being influenced by others and stealing their intellectual property. Look at the work of other artists or media professionals for inspiration & reference, but create your own.
- Use of cell phones, text messaging and unauthorized Internet use is prohibited during class. Phones should be turned off or silenced. Violation of this policy may result in ejection from the class and being marked absent. If special circumstances such as emergencies require access to these forms of electronic communication, student must seek prior authorization from the instructor.