Eastern Illinois University
New Course Proposal
AET 2123, Digital Photography and Imaging

1. Catalog Description

(a) Course number: AET 2123
(b) Title: Digital Photography and Imaging
(c) Meeting times and Credit: 2-2-3
(d) Term(s) to be offered: F, S
(e) Short title: Digital Photo
(f) Course description: This course will cover digital photography and professional lighting techniques needed to produce commercial print and web images for promotional, retail signage, advertising and marketing themes, and business applications.
(g) Prerequisite: None
(h) Initial term of course offering: Spring 2007

2. Student Learning Objectives and Evaluation

(a) Learning Objectives:
   Undergraduate: Upon completion of this course students will be able to:
   1. apply the fundamental application of a 35mm digital camera using aperture and shutter speed to control the image capture, depth of field and composition,
   2. operate professional lighting equipment and techniques for lighting three dimensional (3-D) objects and portrait for commercial photography, advertising themes, and other business applications,
   3. demonstrate basic operation of a bellows attachment for close-up and macro digital photography,
   4. evaluate and modify for accurate color balance, hue, saturation, and contrast as applied to web images, print, publishing, packaging, exterior and interior signage (advertising themes),
   5. demonstrate adjustment of layers, create masks, levels and curves, and flatten files for printing devices and compression for web images,
   6. produce color prints that replicate the original item for print and web images,
7. present finished projects in a professional format to be critiqued by peers and professionals.

(b) Student evaluation: Undergraduate achievement of the stated objectives will be assessed and grades will be earned, based on activities such as individual and team projects, examinations and final project evaluations.

- **Objective 1:** (apply the fundamental application of a 35mm digital camera using aperture and shutter speed to control the image capture, depth of field and composition) will be assessed by exams and individual projects.
- **Objective 2:** (operate professional lighting equipment and techniques for lighting three dimensional (3-D) objects and portrait for commercial photography, advertising themes, and other business applications) will be assessed by exams, individual projects, and team projects.
- **Objective 3:** (demonstrate basic operation of a bellows attachment for close-up and macro digital photography) will be assessed by exams, individual projects.
- **Objective 4:** (evaluate and modify for accurate color balance, hue, saturation, and contrast as applied to web images, print, publishing, packaging, exterior and interior signage (advertising themes) will be assessed by exams, individual projects, and team projects.
- **Objective 5:** (demonstrate adjustment of layers, create masks, levels and curves, and flatten files for printing devices and compression for web images) will be assessed by exams, individual projects, and team projects.
- **Objective 6:** (produce color prints that replicate the original item for print and web images) will be assessed by team projects and final project evaluations.
- **Objective 7:** (present finished projects in a professional format to be critiqued by peers and professionals) will be assessed by team projects and final project evaluations.

Students will be evaluated using the below categories as assigned above for each course objective.

- Exams 20%
- Individual Lab Projects 45%
- Team Projects 20%
- Final Project Evaluations 15%
(c) This course will be delivered traditionally with computer support, and web pages.
(d) Course number is AET 2123 for undergraduates
(e) This course will be writing active with essay exam questions, analysis of final team project evaluations will have writing components.

3. Outline of the Course
   (a) Specify units of time: The course will be offered in 2-2-3 format.
   (b) Two (50 minute) lectures and two 50 lab minutes per week for 15 weeks. Additional open lab hours are available to complete individual lab projects and team projects.

Course Outline is as follows:

I. Introduction of digital photography & imaging
   1. pictures and pixels
   2. types of digital cameras and digital printing devices
   3. color model space and how software/computers work with color
   4. digital imaging, changing ethics, and the law: Is it possible? vs. Is it right?

II. Digital cameras
   1. how a digital cameras works
   2. establish the settings of a digital camera
   3. various exposure techniques of digital cameras
      1. f/stops and control of depth of field
      2. shutter speed
      3. ISO settings
      4. shutter vs. aperture preferred exposures
      5. resolution of captured images (ppi, dpi)

III. Digital camera storage devices and transfer
   1. transferring digital captured images to computer
   2. file formats for print and web

IV. Digital image editing and color correction
   1. importing of images to software imaging program
   2. selection of color space, image size, resolution
   3. color correction of images
   4. national and international standards for color quality output
   5. how color is created: additive and subtractive
   6. calibrating your monitor for consistent color
   7. adjusting color: color Balance, hue and saturation

V. Digital printing devices
   1. inkjet, thermal, and color laser printing
   2. transfer curve function and color channels
   3. raster image processors for digital output
   4. pigments vs. dyes
   5. various substrates for digital printing applications

VI. Studio lighting equipment and techniques
a. lighting for 3-D objects and portrait for commercial photography, advertising themes, and other business applications
b. exposure controls for studio lighting with digital cameras 2 weeks

VII. Product presentation and evaluation
   a. individual student project evaluations
   b. team project evaluations

4. Rationale

   (a) Purpose and Need:
   This course will help prepare students for career paths in the digital photography and related digital printing technology. Students will analyze customer requirements and produce commercial print and web images for promotional, retail signage, advertising, and marketing themes, and business applications.

   (b) Justification of the level of the course prerequisites: AET 2123 Digital photography and Imaging will teach basic concepts of digital photography, digital image manipulation, and introduction to the Apple Macintosh operating system. With the current Applied Engineering & Technology concentration in Digital Printing, Imaging, and Web Technology, Graphic Design option, and the Interdisciplinary Advertising minor is appropriate in the scope and sequence and responsibility to students in other disciplines.

   This course is designed to provide opportunities for students to investigate print, advertising, and related careers. This course is part of revisions to the Digital Printing, Imaging, and Web Technology concentration.

   (c) Similarity to existing courses:
   This course is not similar to any existing course in any academic units on this campus.

   (d) Impact on Program:
   (1) This new course remains an elective in the undergraduate Applied Engineering & Technology program and a required course in the concentration of Digital Printing, Imaging, and Web Technology in the School of Technology and replaces AET 3123 Foundations of Photography effective spring 2007.
   (2) This new course remains an elective of the interdisciplinary Advertising minor
   (3) This new course will strengthen the following areas of study Digital Printing, Imaging, and Web Technology, Advertising Minor, and Graphic Design option and reflects the current professional job requirements in photography and imaging.

5. Implementation

   (a) Implementation: Dr. Philip Age, Dr. Bob Wiseman, Dr. Woodley, School of Technology
   (b) Additional Costs to Students $45 lab/consumables material fee
   (c) Texts: Ben Long, Complete Digital Photography (3rd ed); Charles River Media, 2005.
6. Community College Transfer
   This course may be deemed equivalent to a digital photography course at some community colleges.

7. Date approved by the School of Technology Curriculum Committee: 1/24/06

8. Date approved by the Lumpkin College of Business & Applied Sciences Curriculum Committee 3/6/06

9. Date approved by CAA 3/30/06