

SPRINGFIELD TECHNICAL COMMUNITY COLLEGE

**ACADEMIC AFFAIRS**

Course Number: GRPH 180 Department: Graphic Arts Technology  
Course Title: Professional Digital Photography (Title chg 10/05) Semester: Spring Year: 2001

**Objectives/Competencies**

<b>Course Objective</b>	<b>Competencies</b>
1. Introduction to the components of a camera.	1. The student will be instructed as to the relationship between shutter speed, lens aperture, focal length, depth-of-field and film speed. 2. Cameras ranging from highly sophisticated professional models to the simple point and shoot types will be demonstrated in class. 3. Students are encouraged to use their cameras with the techniques discussed in class and submit photos for critique.
2. Overview of the state-of-the-art of traditional photography.	1. A history of traditional photography is presented to the students emphasizing the fact that the silver based imaging process has not significantly changed since its inception. 2. The students will be shown that the color photographic processes, thought relatively new in the time line of conventional photography, is essentially the same science

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<p>3. Conventional photographic materials and processes compared to electronic digital imaging.</p>	<p>as monochrome images.</p> <ol style="list-style-type: none"> <li>1. Many of the terms and nomenclature of traditional photography are now part of the vocabulary of electronic digital imaging.</li> <li>2. It is desirable that the students have a working knowledge of computer image manipulation, specifically, Adobe Photoshop software.</li> <li>3. A comparison between conventional photography and digital imaging will be given pointing out the positive and the negative aspects of each.</li> </ol>
<p>4. Color vision, color blindness and principle of color imaging.</p>	<ol style="list-style-type: none"> <li>1. Whether the student is interested in conventional photography or digital imaging, it is essential that they possess a knowledge of color as perceived.</li> <li>2. Color blindness will be discussed as to its relevance in the field of color image reproduction.</li> </ol>
<p>5. Light sources, color temperature, visual color constancy and the concept of “Gray Balance.”</p>	<ol style="list-style-type: none"> <li>1. Students will be shown that making a high quality digital image requires an understanding of how the type of light source, color, temperature and gray-balance affects the captured image.</li> <li>2. Digital images will be made in class demonstrating the effect of each of these variables.</li> </ol>
<p>6. Camera digital captures, Flat-Bed (reflective-transmission), film scanners (color transparencies – color negatives).</p>	<ol style="list-style-type: none"> <li>1. It will be shown that the technique and procedures employed in flat-bed and film scanning devices are similar</li> </ol>

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<p>7. Digital imaging media, (flash cards, image sticks, etc). Compression and file interpolation techniques.</p>	<p>to how a digital image is produced.</p> <ol style="list-style-type: none"> <li>2. Many of the techniques employed by the digital camera can be taught by the use of the more common and readily available flat-bed scanners.</li> </ol> <ol style="list-style-type: none"> <li>1. A new term has been added to our photographic vocabulary and it is “Digital Film.”</li> <li>2. Students will be instructed in the use of various types of portable image storage devices such as “Flash Cards,” “Image Sticks,” “Micro Drives” and others.</li> <li>3. It will be shown that all of these devices that are termed “Digital Film” use some form of image file data compression.</li> <li>4. Various types of data compression via the interpolation of the file will be demonstrated illustrating the affect on image quality.</li> </ol>
<p>8. Image resolution, file size and out-put criteria.</p>	<ol style="list-style-type: none"> <li>1. A student in digital imaging will become aware of the enormous amount of data that is required to capture a digital image.</li> <li>2. An appreciation for conventional photographic films resolution and its efficient ability to record and archive images is yet to be achieved by digital imaging processes.</li> <li>3. Students will be instructed as to industry accepted criteria for minimum file size for digital images.</li> </ol>
<p>9. Subjective and objective criteria for reproducing images.</p>	<ol style="list-style-type: none"> <li>1. The subject of creating and reproducing digital images</li> </ol>

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<p>Tone reproduction in the digital environment.</p>	<p>will be discussed emphasizing the difference between generating and reproducing an image to a set of imposed standards and that of aesthetic choices made by the creator of the image.</p>
<p>10.Introduction to Color Management Systems (CMS).</p>	<ol style="list-style-type: none"> <li>1. A review of the ever changing concept and “science” of Color Management Systems will be the topic of this lecture and classroom demonstration.</li> <li>2. The goal of CMS procedures is to insure that every computer work station will have the same imaging characteristics and out-put specifications regardless of hardware configurations.</li> <li>3. Students will be instructed on the current “CMS” systems proposed by various companies as to their cost and ability to achieve the stated goals of a color management system.</li> </ol>
<p>11.An attempt at a technological forecast for the science of digital imaging.</p>	<ol style="list-style-type: none"> <li>1. In an attempt to educate the student in future trends in the art and science of digital imaging, it will be shown that the one constant is change itself.</li> <li>2. Non one could have predicted just a few years ago the effect hardware and software associated with digital imaging today would have on conventional photographic processes and procedures.</li> <li>3. The term, “It’s as good as a conventional photograph,” when describing a digital reproduction will be “It’s better than a conventional photograph” by instructors, students, consumers, and working professional photographers in the</li> </ol>

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	not too distant future.