General Instructions:

Since you've completed the first Digital Project, you should be familiar with the elements you'll find in this second Project. There are Comprehension Tests as well as three Exercises for this Unit. In addition to asking you to make some photographs, two exercises are designed to help you become more familiar with your camera and your scanner.

Regardless of whether you did the Extra Credit Exercise in Unit One, we recommend that you take a look at the Extra Credit Exercises in this Unit. They will help you to learn even more about your equipment and its capabilities.

General Objectives:

In your Unit Two lessons you have started to explore the relationship between image input and image output. The Exercises in this Photo Project are designed to help you learn more about the capabilities of your equipment and how their features directly relate to your ability to create photo-quality output. You'll also put into practice some of the photographic emphasis techniques we've discussed.

If you have basic questions about how to complete your Photo Projects, we urge you to review your study guide which we sent you with Unit One.

Specific Objectives:

1.) Understanding Your Digital Equipment

In this Project, you are going to explore the ability to acquire images using either a traditional camera or a digital camera, as well as your scanner. In Lessons Four, Five, Six and Seven we discussed the different features cameras and scanners have. In this Project, we are going to ask you to identify these same features in your own equipment. Once you understand the capabilities of your own digital imaging system you can start to develop an understanding of the possibilities and limitations of your digital darkroom. Some of these questions have been asked of you in the Student Survey Forms in Unit One. Please jot down these answers again so we can see them in the context of this questionnaire.

2.) Using Your Scanner

In this Unit, we've explored the concept of resolution in detail. Understanding resolution is extremely important in order to produce images that are of sufficient quality for your needs. In this Project you'll not only be practicing the steps necessary to scan images into your computer as we've taught you, but you'll be expected to scan these images in a variety of resolutions and save them in a variety of file formats and, perhaps, output them as prints. When you are finished with these exercises, you'll have come full circle in digital imaging and be capable of both image acquisition and basic image output.

3.) Taking Better Photographs

Never forget the basic goal in photography—digital or traditional—is to start with a good image. The photo exercise in this Project will require you to use two of the emphasis techniques we discuss in Lesson Nine "Developing Your Eye."

Exercise One: Equipment Review

The best way to learn about digital photography is to first learn everything you can about your equipment. We're going to ask you to critically analyze your hardware and software. So we are requiring you to find these manuals and re-read them or visit the manufacturers' Web sites to gather this crucial information about your hardware.

For Exercise One you'll need to complete a minimum of two questionnaires.

1. Scanner questionnaire (required)
2. Either the digital or conventional camera questionnaire
   (Note: If you have a digital and a film camera please fill out both)

Exercise Two: Scanning

Scan the 4"x6" print we have provided you at the three different resolutions we've indicated and save each individual file in two different formats, for a total of six individual files. If, for some reason, your scanning software offers only one file format, simply explain to us what your particular configuration allows. Also, if scanning to a format that utilizes compression (such as a JPEG) choose the highest quality setting.

2A. Scan to produce a file 4x6-inches at 300 ppi. Name the file "DPC_(your student #) _46_300.jpg" and "DPC_(your student #) _46_300.tif"*

2B. Scan to produce a file 2x3-inches at 300 ppi. Name the file and "DPC_(your student #) _23_300.tif"*

2C. Scan to produce a file at 4x6-inches at 75 ppi. Name the file "DPC_(your student #) _46_75.jpg" and "DPC_(your student #) _46_75.tif"*

If you know how to change the file format of your scan in an image-editing program you can do so. If not, you can also scan the print twice for each exercise above, changing the file format for the second scan. Either way, save the six digital files on a disk or CD, label the disk with your name and Student Number and send it to the school as part of this project.

**We've used the JPEG and TIFF formats as examples here. You can use any two formats that are available to you.*

Exercise Three: Photo Project

In Lesson Nine, we presented eight techniques that professional photographers use to give emphasis to their images. For the picture-taking portion of Project Two, we want you to submit two photographs, each of which demonstrates at least one of the following four emphasis techniques:

Emphasis through framing *Emphasis through selective lighting*

Emphasis through repetition *Emphasis through color*

Review the discussion of each of these four techniques in Lesson Nine. Before you pick up your camera, give some serious thought to the subject matter that would benefit from the emphasis technique that you decide to use. Remember that you may find a situation where you can use more than one technique in a single photograph. That's fine. Submit two photographs to the school along with the information we request on the Photo Data Sheet, and indicate which emphasis technique you used.

Scanner Specifications Questionnaire (Required)

NOTE: If you own more than one scanner that you intend to use for this Course, print out additional copies of this form from the Study Hall, or copy this one.

What make and model scanner do you own? _____

Scanner type: ☐ *Flatbed* ☐ *Film* ☐ *Flatbed w/Transparency Adapter*

What type of software came with your scanner? Scanning software? Image editing software? Other?

_____

What is the D-Max of your scanner?_____

What formats does your scanner allow you to save images in? *List all available to you. TIFF, JPEG etc.*

What is the maximum bit depth image your scanner can produce?

Input: _____Output: _____

What is the maximum optical resolution your scanner can produce?_____

What is the maximum interpolated resolution your scanner can produce? *(if applicable)* _____

What is the largest size output you can produce scanning a 4 x 6 print at a resolution of 300 pixels-per-inch and 75 pixels-per-inch using the maximum optical resolution?

_____

List all the controls your scanner software provides:
(Tonal adjustments, such as Levels or Curves; Brightness/Contrast, Unsharp Masking tools; etc. Don't worry if you're not exactly sure how all the controls work, just list them and to the best of your ability and describe their functions.)

_____

_____

_____

_____

What type of output do you want to be able to create from your scans? *(Inkjet prints, film, Web, etc.)*

_____

_____

Film Camera Specifications Questionnaire

NOTE: If you own more than one film camera that you intend to use for this Course, print out additional copies of this form from the Study Hall, or copy this one.

What make and model camera do you own? _____

Camera type? ☐ *Point and Shoot* ☐ *SLR* ☐ *Other:* _____

What film format? ☐ *APS* ☐ *35mm* ☐ *6x6* ☐ *6x7* ☐ *4x5*

List all the controls your camera provides:
(Auto–focus, Multiple Auto-Exposure modes, exposure compensation, etc. Don't worry if you're not exactly sure how all the controls work, just list them and to the best of your ability and describe their functions.)

_____

_____

_____

_____

List the range of shutter speeds your camera provides: _____

Lenses:

	Size (mm)	Minimum Aperture	Maximum Aperture
Lens #1	_____	_____	_____
Lens #2	_____	_____	_____
Lens #3	_____	_____	_____
Lens #4	_____	_____	_____

Which is your fastest lens? _____Which is your slowest lens?_____

Favorite film?_____

Favorite filters?_____

Do you own a Flash Unit? _____

Other photo equipment?_____

Digital Camera Specifications Questionnaire

NOTE: If you own more than one digital camera that you intend to use for this Course, print out additional copies of this form from the Study Hall, or copy this one.

What make and model digital camera do you own? _____

Digital camera type? ☐ *Digicam* ☐ *Prosumer* ☐ *SLR* ☐ *Other:* _____

What type of software came with your digital camera? Camera utility software? Image-editing software? Other?

_____

_____

What formats does your digital camera allow you to save images in? *List all available to you. TIFF, JPEG etc.*

_____

What is the maximum/minumum aperture of your lens? _____

What is the maximum optical resolution your digital camera can produce? _____

What is the optical zoom range? _____

What is the digital zoom range? _____

What is the largest size output you can produce *(using the maximum optical resolution)* from your camera at a resolution of 300 pixels-per-inch?

_____

What is the largest size output you can produce *(using the maximum optical resolution)* from your camera at 75 pixels-per-inch.

_____

List all the controls your digital camera provides:
Don't worry if you're not exactly sure how all the controls work, just list them and to the best of your ability and describe their functions.

_____

_____

_____

_____

What type of output do you want from your digital images? *Be as thorough as possible*.

_____

_____

General Instructions:

For those of you who feel the need to be challenged further, we offer three Extra Credit projects. These projects are strictly optional but even if you decide not to do them, it will be helpful to read them and consider these photographic possibilities.

The first Extra Credit assignment will help you to learn about the close-up capabilities of your camera. Close-up photography reveals an entirely new world. The ability to magnify and isolate a very small subject can often make a seemingly dull subject spring to life. The second assignment explores scanning 3-Dimensional items with your traditional flatbed scanner. While it won't replace your digital camera, for some items your scanner may be all you need. Whether it's for self-promotion or a press release, it's a good idea to have a portrait of yourself. Who better to take that picture than you? So the third assignment is to produce a self-portrait.

Extra Credit 1: Macro Photography

Investigate the macro capabilities of your camera—digital or traditional film—and send us a print showing your close-up efforts and detail for us how you got the shot and the capabilities of the equipment that you used.

Macro photography is any photography that allows you to get very close to a small subject and capture that subject as close to life-size (1:1 ratio) as possible.

What makes a good macro subject? Obviously small objects—bugs, flowers, jewelry, stamps, coins—are perfect subject matter for close-up photography. However, macro photography also means coming in very close to your subject, so taking pictures of portions of larger objects, things, or people is also an option provided that you are capturing them at life-size or larger.

We've discussed macro photography camera capabilities in Lesson 4, but here are some points you need to know.

If you are using a film-based SLR camera, then you have a number of options you can use to get a macro image. You may own a lens with a macro setting, a dedicated macro lens, or you can use close-up filters, or extension tubes to get very close to your subject. Some lenses may be true macro allowing you to take pictures as close as 1:1. In other words, your photograph will show the subject at exactly the size that it is.

If you are using a film-based point-and-shoot camera, then your ability to capture macro close-up photographs may be much more limited. Some point-and-shoot cameras have special close-up settings, usually indicated with a graphic of a flower on the LCD panel. With most traditional point-and-shoot cameras, the macro mode lets you get within a foot or two of your subject, but we urge you to read your camera's manual to find out.

If you are using a digital point-and-shoot camera or SLR, then you too may have special macro settings. However, unlike traditional point-and-shoot cameras, the macro mode on a digital camera may get you much closer to your subject—in some cases less than an inch—this is even better than some traditional macro lenses. The reason for this is due to the size of the CCD chip relative to the lens.

If you don't have macro capability with your camera don't worry. Just show us how close you can get to your subject with the equipment that you do have and let us know what the specifications of your equip-

ment is with regard to close-focusing distance.

You will also want to pay careful attention to depth-of-field on your macro photographs. Sometimes you'll want to throw the background out of focus to bring attention to your subject (Remember Guideline 2!) so you'll want to use a lower f-stop number like f/2.8. Sometimes, your subject will require a super-sharp depth-of-field and you'll need to use a higher f-stop.

You can learn more about close-up photography on the Unit Two WebCenter and we suggest you give that article a read before attempting this Extra Credit assignment.

Extra Credit 2: Scanning a 3-Dimensional Object

Attention! Before you read any further: This project is strictly optional. The exercise we describe here may or may not be sanctioned by your scanner manufacturer and as a result may void any warranties. Do this project "at your own risk."

Although scanners are designed to reproduce flat (2-Dimensional) objects, if you're very careful you can also scan 3-Dimensional objects and convert your scanner into a digital camera. This technique can come in handy, so we decided it make it one of the Unit Two Extra Credit projects. Here at NYI we've scanned books, leaves, small picture frames, as well as watches, tools and coins.

Using your scanner creatively, scan a 3-D item or group of items on your scanner. Remember that what you scan may simply be one element of a larger composite image. If this is the case, elaborate on your concept on a separate piece of paper.

For example:
1. Scan an arrangement of leaves to use as a ghosted pattern for a brochure or letterhead.
2. Scan some office supplies, paper clips, scissors, pencils for a stationery supply store ad.
3. Scan your coin collection for an online auction.

(These are only examples. We want you to use the right side of your brain and come up with something new.)

Keep a few things in mind before you start: Sharp edges and rough surfaces could damage the glass platen so exercise caution when positioning objects. No liquids please. If you're considering scanning wet or sharp objects, try composing your subject on a separate larger piece of glass that you can then place on top of your scanner's glass. That way you won't damage the expensive glass platen or delicate circuitry.

Because you won't be able to close the cover, it's a good idea to turn the lights out in the room during the scanning process. You can also drape a soft (opaque) cloth over the scanner to block out any remaining extraneous light. Try using different color fabrics for background separation, especially if you plan on silhouetting your subject later in the digital darkroom. By creating a contrast between your subject (foreground) and the cloth cover (background) you will be able to isolate either one very effectively in the digital darkroom.

Unless your scanner manufacturer condones using your scanner for this purpose, be aware that this activity is "at your own risk." While we encourage finding creative uses for your scanner, your scanner's manufacturer may not be as open minded.

Submit your scan as a JPEG file on a disk or CD. Remember to include your student number on the disk and label your file appropriately.

Extra Credit 3: Self-Portrait

We're all photographers for one reason or another. For many of us, the motivation is simple, by positioning ourselves behind the lens we never have to be in front of it. Occasionally, you don't have a choice. Sometimes you're required to submit a picture of yourself. It might be for a press release or a gallery opening, but whatever it, this is time to have a portrait taken. But why would you call (and pay) a photographer to do something that you can do yourself? The self-portrait is a natural exercise for most artists. You have a willing subject and the technical capabilities as well. Not only that, a self-portrait assignment gives you the chance to be creative. You can use a tripod and a self-timer or a long cable release.

A self-portrait should, in the end, represent who you are. If you're trying to promote yourself as a photographer, you may want to take a picture of yourself taking a picture. Be creative and make sure the portrait exemplifies who you are.

Submit a print or a digital file for this project.

Mail to the School:

Now you are ready to mail your work to the School. Here's what to do.

1. If you haven't already done so, fill in the Personal Data Survey on the back of the Photo Project Folder.

2. Enclose your Project Notes from this Photo Project in the Photo Folder. Submit your photo exercises in digital form. Remember we can only accept high-capacity disks and CDs. Be sure that the image files are named exactly as we ask in the assignment. Accuracy is essential. For Exercise Six, submit four images as digital files or prints and make sure your name and Student Number are written on a label on the back of each picture.

Do NOT e-mail your photos to the school.

We also recommend that you use the padded shipping envelope we have included when sending any disks. Put the padded envelope inside the large photo project envelope. We recommend shipping CDs and Zips in their jewel cases for further protection. No matter what format you use to submit your image, make sure that you save either the film or print, or a digital file of each image that you send to the School. The reason for this is that in the unlikely event there is a problem with the post office, or computer problem, you'll still have copies of the material you sent to the School. Don't forget to put your name and student number on every item you send to the School.

3. Enclose the Photo Data Sheet with as much information as you can supply inside the Folder.

4. If you did not take your Comprehension Tests online, then place the paper version in the folder.

5. Slip the entire Folder into the Project Kit envelope along with your photos and any disks.

6. To protect your pictures, insert the cardboard filler board that we have supplied.

7. Mail the package to the School. Fill out the return address information on the envelope and be sure to affix sufficient Postage.

We look forward to receiving your fourth Project Kit in the near future, and we'll do our best to get it back to you quickly. As soon as your Instructor has had a chance to review it, we'll rush it back to you with your Instructor's personal comments on cassette tape. Despite our good intentions, however, realize that postal service in each direction takes time, so please be patient.

Enjoy doing this Project, and...

Get Ready to go Digital!

Unit Two Photo Data Sheet

NAME: STUDENT NUMBER:

Photograph 1

The purpose of listing this information is to help us help you. Please complete the following form to the best of your ability where applicable.

Subject: _____

Time & Location: _____

Camera: _____ ☐ *Digital* ☐ *Film* _____ *ISO:* _____

Lens: _____ *f*-stop: _____ Shutter Speed: _____

Was the image scanned? ☐ *No* ☐ *Yes — Scanner Used:* _____

Output	☐ *Lab Print*	☐ *Computer Printout*
Platform	☐ *PC File*	☐ *Mac File*
Disk Type	☐ *Zip* ☐ *CD*	☐ *Floppy*

How was this photograph made? *(list all the steps used)*

_____

_____

_____

Questions? (*Do you have any questions for your Instructor in relation to this photo)*

_____

Photograph 2

The purpose of listing this information is to help us help you. Please complete the following form to the best of your ability where applicable.

Subject: _____

Time & Location: _____

Camera: _____ ☐ *Digital* ☐ *Film* _____ *ISO:* _____

Lens: _____ *f*-stop: _____ Shutter Speed: _____

Was the image scanned? ☐ *No* ☐ *Yes — Scanner Used:* _____

Output	☐ *Lab Print*	☐ *Computer Printout*
Platform	☐ *PC File*	☐ *Mac File*
Disk Type	☐ *Zip* ☐ *CD*	☐ *Floppy*

How was this photograph made? *(list all the steps used)*

_____

_____

_____

Questions? (*Do you have any questions for your Instructor in relation to this photo)*

Unit Two Photo Data Sheet

NAME: STUDENT NUMBER:

Photograph 3

The purpose of listing this information is to help us help you. Please complete the following form to the best of your ability where applicable.

Extra Credit

Subject: _____

Time & Location: _____

Camera: _____ ☐ *Digital* ☐ *Film* _____ *ISO:* _____

Lens: _____ *f*-stop: _____ Shutter Speed: _____

Was the image scanned? ☐ *No* ☐ *Yes — Scanner Used:* _____

Output	☐ *Lab Print*	☐ *Computer Printout*
Platform	☐ *PC File*	☐ *Mac File*
Disk Type	☐ *Zip* ☐ *CD*	☐ *Floppy*

How was this photograph made? *(list all the steps used)*

_____

_____

_____

Questions? (*Do you have any questions for your Instructor in relation to this photo)*

_____

Photograph 4

The purpose of listing this information is to help us help you. Please complete the following form to the best of your ability where applicable.

Extra Credit

Subject: _____

Time & Location: _____

Camera: _____ ☐ *Digital* ☐ *Film* _____ *ISO:* _____

Lens: _____ *f*-stop: _____ Shutter Speed: _____

Was the image scanned? ☐ *No* ☐ *Yes — Scanner Used:* _____

Output	☐ *Lab Print*	☐ *Computer Printout*
Platform	☐ *PC File*	☐ *Mac File*
Disk Type	☐ *Zip* ☐ *CD*	☐ *Floppy*

How was this photograph made? *(list all the steps used)*

_____

_____

_____

Questions? (*Do you have any questions for your Instructor in relation to this photo)*

Unit Two Comprehension Tests

New York Institute of Photography

DIRECTIONS

There are 5 tests for this Unit. There are tests for Lessons 4, 5, 6, 7 and 8. There is no test for Lesson Nine, *Developing Your Eye.* After reading each of the Lessons, complete the respective Comprehension Test for that Lesson. Read each question and then darken either the *"True"* or *"False"* to indicate your answer. Remember, you can take your Comprehension tests online and receive your grade immediately.

Remember, you can take your Comprehension tests online and receive your grade immediately.
In addition, our online version provides explanations to any questions you may answer incorrectly.
Visit the Unit 2 WebCenter and click on the Comprehension Test Link.

LESSON FOUR

1. Copyrights must be recognized whenever scanning another artist's work. ☐ True / ☐ False
2. With a digital camera, you must fill an entire memory card before you can view an image. ☐ True / ☐ False
3. Both digital and traditional photography share a common goal, making good pictures. ☐ True / ☐ False
4. The major difference between digital and conventional photography is how the image information is stored ☐ True / ☐ False
5. The "normal" lens for a digital camera is the same as a film camera. ☐ True / ☐ False
6. Digital zoom quality is better than optical zoom quality. ☐ True / ☐ False
7. Autofocus lenses perform equally well under all conditions. ☐ True / ☐ False
8. Once a memory card is full you have to purchase another card. ☐ True / ☐ False
9. A higher ISO indicates a higher sensitivity to light. ☐ True / ☐ False
10. The ability to preview images instantly is a significant advantage over traditional photography. ☐ True / ☐ False

LESSON FIVE

1. You should use your AC adapter when downloading images from your camera into your computer. ☐ True / ☐ False
2. Digital storage media such as Compact Flash and SmartMedia have a finite amount of storable space. ☐ True / ☐ False
3. A digital image captured in color has the potential to be a Black-and-White image as well. ☐ True / ☐ False
4. Recycling times can be troublesome for digital photographers recording action. ☐ True / ☐ False
5. When you're not shooting you should turn the camera off to save batteries. ☐ True / ☐ False
6. You can get more images on a memory card if you shoot at the highest quality. ☐ True / ☐ False
7. The two most common file formats used in digital cameras are TIFF and JPEG. ☐ True / ☐ False
8. Compression allows you to store a greater number of images on a memory card. ☐ True / ☐ False
9. The LCD screen is the only way to compose a digital image. ☐ True / ☐ False
10. Image transfer software is the same as digital darkroom software. ☐ True / ☐ False

LESSON SIX

1. When the highest quality scan is needed, the drum scan is the best choice. ☐ True / ☐ False
2. A tri-linear CCD array reads the color in three passes. ☐ True / ☐ False
3. The interpolated resolution produces the best quality scans. ☐ True / ☐ False
4. A full color photographic digital image is typically 24-bit color. ☐ True / ☐ False
5. Dynamic range refers to the range of tones from lightest to darkest that a scanner can distinguish. ☐ True / ☐ False
6. The RGB color model is used by most consumer model digital cameras and scanners. ☐ True / ☐ False
7. Once you scan an image in RGB mode you can't convert it to another mode like CMYK. ☐ True / ☐ False

8. Scanner speed is important, especially if you are scanning a large quantity of images. ☐ True / ☐ False
9. A scanner that allows you to make manual adjustments will help you to make better scans. ☐ True / ☐ False
10. The inherent generational loss of a photographic print means it possesses less information than the negative that produced it. ☐ True / ☐ False

LESSON SEVEN

1. The most common mistake people make when learning to scan is choosing the wrong resolution for the output method of choice. ☐ True / ☐ False
2. Scanning a print for same-size reproduction could also be expressed as scanning at 100% or 1:1. ☐ True / ☐ False
3. If you don't know how you are going to be using your scans, it's a good idea to scan at a low resolution. ☐ True / ☐ False
4. 300 pixels-per-inch is a good average image resolution that can be used with most inkjet printers for good photo-quality prints.. ☐ True / ☐ False
5. Your first consideration when making a scan should be its end use. ☐ True / ☐ False
6. When scanning images for the Web, scan at twice the resolution you'll need and then reduce the image resolution 50% later. ☐ True / ☐ False
7. If you are scanning a 4"x5" print with the intention of outputting it as an 8"x10" print, you should scan the original at 100%. ☐ True / ☐ False
8. The pixel dimensions of a 4"x5" image @ 300ppi is the same as an 8"x10" image @ 150 ppi. ☐ True / ☐ False
9. Reflective art is another name for flat art. ☐ True / ☐ False
10. Cropping your preview image in the scanner will not only keep your overall file size smaller, it will also help to capture the best exposure. ☐ True / ☐ False

LESSON EIGHT

1. You should save your image as a TIFF file when you want the highest possible quality. ☐ True / ☐ False
2. Images are best organized if grouped together in logically named folders. ☐ True / ☐ False
3. The three letter extension after a file name indicates the file format. ☐ True / ☐ False
4. It's a good idea to maintain a folder of all your digital files on your hard drive only. ☐ True / ☐ False
5. A good way to determine the cost effectiveness of any digital media is to break down the cost on a dollar value per megabyte. ☐ True / ☐ False
6. CDs are great for fast back-ups while the Zip disk is good for long term archiving. ☐ True / ☐ False
7. Any kind of paper will do when you are making photo-quality prints with your inkjet printer. ☐ True / ☐ False
8. Inkjet printers can produce 3-4 dots of ink for every pixel of a digital image. ☐ True / ☐ False
9. All inkjet printer inks are manufactured to last a very long time. ☐ True / ☐ False
10. If the resolution of an image is too low for a specific printer, the results will be pixels that are visible to the naked eye. ☐ True / ☐ False

DIRECTIONS

After you have completed all five tests, you may mail them to the School, fax them, or save them and mail them along with your Digital Photo Project Kit.

NEW YORK INSTITUTE OF PHOTOGRAPHY
211 EAST 43 STREET NEW YORK, NEW YORK 10017
TELEPHONE (212) 867–8260 FAX(212)867–8122

Please fill in so we can mail this test back to you:

Name: _____ Student Number: _____

Address: _____

City: _____ State: _____ Zip: _____

DPC_U2CompTests-1102