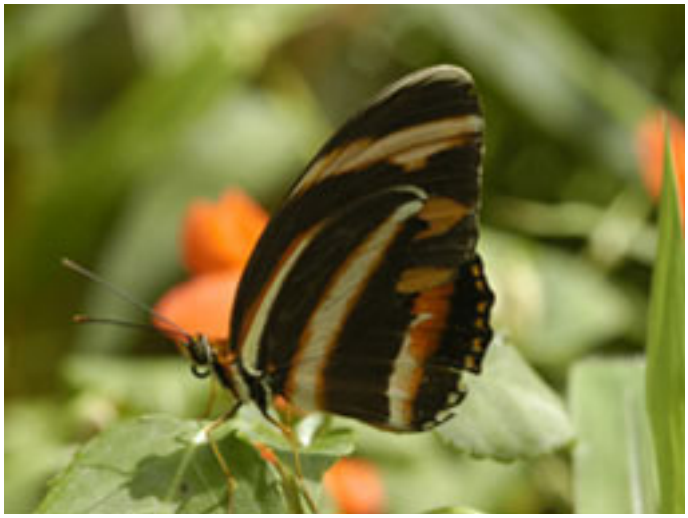
Short Preview of Nicholas Hellmuth's

Course Units on Digital Photography

DP 101: Achieving Quality in Digital Photography
DP 201: Taking Digital Photography to the Next Level




FLAAR

Digital Imaging Resource Center

Introduction

It is not required that you have any camera whatsoever. You can learn from our experience to suggest which next camera you might wish to consider. Since FLAAR does not sell cameras, we can be neutral, and honest, in recommending one camera over another.

As you can see, FLAAR has experience with all sizes and shapes of digital cameras. Here Nicholas has an 8-megapixel Sony CyberShot F828, Nikon D100 (a Nikon D70 is in one of the shots too), medium format 22-megapixel Leaf Valeo wireless on a Mamiya 645 AFD, and a large format 48-megapixel Betterlight on Cambo 4x5.

Half of the people who take this course have a 3, 4, 6, or 8 megapixel entry-level digital camera. We can teach you how to get exhibit-quality results from these cameras. Remember, we too started out with zoom-lens point-and-shoot cameras. You do not have to own a fancy expensive camera.

The other half of the people who take this course have a 35mm SLR or medium format camera. Many are getting ready to buy a medium format back or a high-quality 35mm SLR with 11, 13, or 17 megapixels.

Everyone, of all levels, are welcome to sign up for this course.

If you aspire to do prize-winning nature photography with a digital camera, you can look forward to learning how to produce exhibit-quality results with any make or model of digital camera.






Photos by Nicholas Hellmuth, FLAAR, copyright 2004.

You will learn

- how to improve your portrait photography,
- how to accomplish nature photography,

and in general how to expand into more kinds of photography (including fine art giclee), both for commercial photography and as a hobby.

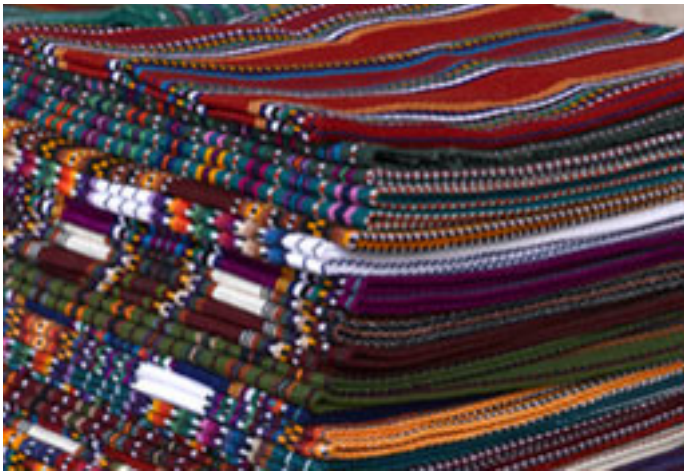
But the course covers much more, such as product photography (commercial photography).

The nice thing about the FLAAR course is that you can pick and chose which aspects you wish to concentrate on. You get everything, but there are no exams.

You can jump into new areas of photography that you have not tried before.

You can send your snapshots or your formal photos to the course staff so they can respond with suggestions.

If you aspire to enter the world of fine art photography for giclee printing, then DP 101 is an ideal entry level course for you.



DP 101: Achieving Quality in Digital Photography

Presented by Dr. Nicholas Hellmuth

Achieving Quality in Digital Photography is an innovative online course taught by Dr. Nicholas Hellmuth, a leading expert on digital as well as traditional 35mm, medium format, and large format photography. It is the first of two courses in Dr. Hellmuth's online digital photography learning series.

Professor Nicholas Hellmuth has developed a customized textbook for the course with comprehensive chapters covering the most important topics in digital photography. To help you become better acquainted with the topics that you will learn, the following document provides a brief summary of each chapter of the course textbook.

DP 101 will start in September, 2005. You can sign up at any time. This course is open to anyone, from any country, all ages and backgrounds; you do not have to be a "student" to take this course. You can take it in the comfort of your home or office, at any hour you select, anywhere in the world.

Participants who have taken this course in previous years comment that it is unique. This FLAAR course covers cameras, lenses, lighting, equipment, practice, and reality. This is not just a course on Adobe Photoshop; this is a learning experience in the entire realm of digital imaging with digital cameras.

And it is one of the only courses on digital photography that is geared to understanding what is needed to produce digital prints on inkjet or laser printers, whether fine art, giclee, or eye-catching commercial photos, exhibits to win you a prize, or exhibits for your home or office to wow you family, friends, and co-workers.

Introduction:

Let us know what you seek to achieve as a result of signing up to study with Nicholas Hellmuth and the FLAAR team. Tell us what you need. Explain what you are looking for, and indicate how we can best assist you during the weeks that you have Dr Hellmuth and his staff available as your instructor.

The introductory section will explain the ease of taking a course on-line (you never "miss" a "lecture." Because each Learning Unit is available to you at any time of day or night or weekend.

35mm Digital Cameras

Introduction to SLR 35mm Digital Cameras

New digital cameras are produced so quickly, and all of them promise to be exceptional. Learn to distinguish the advertising hype from reality to Canon, Nikon, Fuji, Olympus, Pentax, and other brands.

Introductory Glossary of Digital Photography Terms

Nicholas's glossary is only available to participants in this digital photography course. Learn the jargon that is essential to understanding digital photography.

Megapixels: How many do you really need?

Megapixel has become a buzzword in digital photography. Learn how many megapixels you need to achieve professional results with your camera. You may be surprised to learn that it is not the megapixels in your camera that result in your photography being good. So during the entire rest of the course, we work with you to explain what gives you the image quality that you need. When people see your photos they should be impressed.

Evaluation & Review of the Nikon D70 and D100

Based on six months of extensive testing, this illustrated chapter compares the Nikon D70 and D100 with other major cameras in its class. Examine the pros and cons of each the Nikon and its competitors. We will include observations on the newer 12-megapixel Nikon D2X camera with a CMOS chip. We compare with the Nikon D70s and Nikon D50.

Evaluation & Review of the Canon Digital Rebel

The Digital Rebel is one of the most popular digital SLR cameras available because it appeals to both amateurs and professionals. Find out whether the Canon Digital Rebel and Rebel XT deserve to be among the best-selling cameras in the world. Our use of the Canon Digital Rebel turned up results that surprised us.

Foveon Technology in Sigma SD9 and SD10 Cameras

This chapter is based on our experiences with the Foveon triple-layer sensor in a Sigma SD9 camera on location in Malta and Arizona. Experience a glimpse into, what many call, "the most innovative development of the digital millennium." We discuss the Sigma SD10 and Sigma body used for the Kodak SLR/c (a Sigma camera for using with Canon lenses).

Comments on the New Olympus and Pentax 35mm SLR Digital Cameras

Many popular SLR digital cameras use identical lenses and have virtually the same body structure; however, Olympus and Pentax have recently started producing digital cameras with interchangeable lenses. Learn the differences between interchangeable and non-interchangeable models, and find out why major manufactures such as Minolta took so long to develop digital cameras with interchangeable lenses.

Full-Frame 35mm Digital Sensors

Learn what new developments are making full-frame technology usable, and how full-frame sensors are changing digital photography. Your instructor (Nicholas Hellmuth) won the Kodak-Germany digital printer sweepstakes, so was guest of Kodak at the Athens Olympics. He was able to use a Kodak SLR/c there; he now has the Kodak SLR/n (13-megapixels). This is what you get from this course that is missing elsewhere… an instructor who has personal experience with the key cameras so he can explain which ones to go for, and which ones to be wary of.

Lens Reduction Factors: Comparative Chart

This chart cuts through misleading advertising, or more often, total lack of warning the buyer about a digital bugaboo called lens reduction factor (cut-off of the field of view when the sensor is smaller than a full-frame 35mm negative). Once you have this chart you won't be cheated any more. We cover Canon, Fuji, Kodak, Minolta, Nikon, Olympus, and Pentax cameras and lens. One of these cameras is much worse than the others, and they don't warn you.

Hybrid Digital Cameras

Hybrid cameras, which allow you to use a 35mm lens with a medium format sensor, can achieve professional results. Find out whether your expensive 35mm lenses can still be useful to you.

Lenses and Filters

It is important for all digital photographers to understand the realities of "digital lenses" and to know whether or not using traditional lenses on digital cameras is acceptable. Learn how to use lenses and filters properly and effectively with digital cameras.

Zoom-Lens Digital Cameras (high quality point-and-shoot Nikon, Canon, Fuji, Olympus, etc)

Professional Results from Budget-Priced Cameras

An expensive SLR camera is not a necessity for capturing images. Learn to develop your "photographic vision" so that you can achieve professional results from a simple 3-5 megapixel camera with a simple zoom lens. (Case studies will include the Sony and the Nikon CoolPix.)

8-Megapixel Point-and-Shoot Digital Cameras: Canon, Nikon, Fuji, etc.

Learn why a 6-megapixel camera is better in almost every respect than an 8-megapixel camera. "Reviews" on the Internet proclaim that the Sony F828 is great, but we used one for several months. We can tell the truth because we do not work for, nor receive commissions from, any camera manufacturer.

Practice & critique:

We will arrange a manner for you to send your photos electronically so that they can be critiqued by the course staff. The idea is to assist you to improve your photography, either in style, or by adding (or subtracting) items of equipment.

The Benefits and Drawbacks of Digital Photography

Pros and Cons of Digital and Film Photography

Understanding the pros and cons when of choosing digital or traditional photography is invaluable. Follow this straight-forward analysis of the positive and negative aspects of each.

CCD and CMOS Image Sensors: Differences, Pros and Cons
From the “Bayer pattern” of RGB filtration in many sensors, to the characteristics of CMOS sensors, increase your understanding of the purpose and importance of image sensors.

The History of Digital Photography
This concise history of digital photography includes a timeline that puts the development of digital into perspective. From humble beginnings with the birth of CCD sensor prototypes used for video cameras, to Sinar’s 22 megapixel accomplishment, discover the exciting history of digital photography.

Practical Aspects of Digital Photography

Aperture and Shutter Speed
Without question, the two most fundamental components of photography are aperture and shutter speed. Learn what they are, how they interact with changing the ISO number, and how knowing all this can be used to improve your photographs.

Composition: The Key to Prizewinning Photography
Composition with digital photography presents unique challenges. Learn how to develop visualization of your final image. Even if you are not already a natural talent we can teach you how to improve your photo imagery. We have examples of composition with every size and class of camera.

Nature Photography with Digital Cameras
Capturing exotic tropical plants and beautiful wildlife often produces stunning images, but shooting nature with digital cameras can be problematic if you’re not prepared. Learn practical tips to help you produces high-quality results.

Portrait Photography with 35mm SLR Digital Cameras
Portrait and wedding photography is the heart of profitable photography: photographing children, families, graduates, and events offers even more jobs. Indeed some cameras, such as the Kodak SLC/n and /c are made primarily for portrait and fashion photography. Due to interest in portrait photography, we have added more coverage to our course, both practical examples as well as a thorough reading list as a helpful guide to further knowledge.

Architectural Photography with Digital Cameras
Nicholas has been photographing architecture since he majored in architectural science at Harvard. Learn from his first-hand 40 years of experience about the lenses, cameras, and accessories that can be used to capture impressive architecture.

Digital Cameras for Sports and Action Photography
Fast paced action requires cameras that have lighting fast responses and quick shutter speeds. Find out which digital cameras are best for shooting sports and motion.

Lighting for Digital Photography
It is practically impossible to create powerful images without learning about lighting. Learn how to handle flash, and which kinds of flash equipment work better than others.

QuickTime Virtual Reality
QuickTime Virtual Reality (QTVR), and other software applications like it, can be used to create a 360 degree view of three-dimensional spaces. Learn how to shoot overlapping 35mm shots and digitally stitch the together to create QTVR images.

QuickTime Virtual Object 3-D Views
Learn that there are two kinds of 3-D virtual reality photography: panoramas or any space (a house you wish to show); or 3-D objects that you can rotate with a click of your computer mouse. We can teach you how to create a 3-dimensional photographic image of any work of art, that you can rotate on the computer monitor. If you every desire to design a website, this learning unit will help you.

Accessories: Shooting on Location with Digital Camera Equipment
Choosing and transporting the appropriate equipment to shoot on location can be challenging. Learn how to prepare a portable studio and maximize your efficiency. Take advantage of the immense experience of FLAAR to learn why a tripod head is one of the most important decisions. Nicholas has nine tripod heads to select from: one per camera. Yes, each size, shape, and technology of tripod head is optimized for a particular size, shape, and kind of tripod and camera. Everything about this FLAAR course is unique, because the nice people writing the popular books are not a digital imaging testing institute: they lack knowledge of the full range of available options. You will learn more in this course than is possible in books.

Mechanical Aspects, But you need to Understand and Learn

Batteries for your camera
A few cameras require two or three sizes and kinds of battery. The more practical cameras use AA (be sure to get rechargeables).

Cleaning your CCD
Sooner or later you will have to get your CCD or CMOS cleaned. If you send the camera off to the manufacturer it will take 3 to 6 weeks, which is absurd.

Mechanical Aspects, But you need to Understand and Learn

How to Organize an Exhibit of Your Own Photographs
Displaying your photographs in a professionally presented exhibit is a great feeling. Learn how to exhibit your photographs so others can see your artistic photographic eye.

How to Get Your Photos Published

An important step towards getting recognized as a professional (or advanced amateur) photographer is to have your work published. Find out who will publish your work, and how you can impress the editors.

How and Where to Enter Your Favorite Photos in Contests

There are hundreds of popular photography contests. Many of them offer prestige, and prizes. Find out which contests are worth entering, and how you can win.

Recommended Equipment for Digital Photography

Computer Equipment for Digital Imaging

Decisions about computer hardware can have a profound effect on quality production. Find out what kinds of hardware specifications you should look for, learn the pros and cons of Macs and PCs, and understand the difference between CRT and LCD monitors.

Camera and Computer Memory – Storing Digital Files

From CompactFlash to "memory sticks", hard drives to RAID systems, Zip disks to DVD+ compared with DVD- (DVD plus versus DVD minus), this portion of the course provides comprehensive information about storing your digital images in a portable and stationary environment. Learn to make educated choices to increase your purchasing power.

Adobe Photoshop for Photographers

Because Photoshop is the worldwide standard for digital imaging, it is imperative that photographers know how to use Photoshop to improve their digital images. Learn the seven most important attributes of Photoshop related to photography.

Additional Software for Digital Imaging

Many small, innovative companies have created software filters and add-ons that are more efficient than some Photoshop tools. Learn to identify the best of the non-Adobe products such as from JASC (Corel), Microsoft, Nik Multimedia, and other useful programs that cost much much less than Adobe Photoshop.

File Formats for Digital Images

From "RAW" files straight from the camera, to TIFF files for printing, learn the characteristics of common file formats used in digital imaging.

Reviews of Trade Shows and Publications

Worthwhile Tradeshows for Digital Photographers

There are dozens of trade shows each year that entice digital photographers. Find out which shows are worth attending. Indeed attending a trade show is a good way to meet Nicholas Hellmuth in person. But only if you are a member of the course will you know when, where, and how to find him.

Digital Cameras at the Photokina Trade Show in Germany, 2004
Photokina is one of the most prominent photography tradeshows in the world. Read about Dr. Hellmuth's encounters with the digital cameras that were on display in 2004. Since cameras are shown at a trade show long before they are available or sold to the public, Nicholas has prior knowledge of the cameras that are making news in 2005.

New Photography Equipment at the PhotoPlus Tradeshow in New York, 2004
At PhotoPlus, cameras, lenses, and lighting were on display. Learn what equipment caught the eye of Dr. Hellmuth, and may be worth purchasing.

FLAAR Book Reviews: Digital Photography
Few books discuss professional digital photography with amateurs and professionals in mind. Based on Dr. Hellmuth's research, find out what books are worth you while.

FLAAR Reviews: Photo & Camera Magazines
This chapter includes a comprehensive review of nearly every camera and photography magazine available for both traditional photography and for digital photography. Find out which magazines are essential for you to read and which are a waste of time (and why).

If you have questions about DP 101: Achieving Quality in Digital Photography, send an e-mail to *digitalphoto@flaar.org.* Either Dr. Hellmuth, or his teaching assistant, Sebastien Dion will promptly respond.

DP 201 :
September 2005, via the Internet to your home or office

Taking Digital Photography to the Next Level
Presented by Dr. Nicholas Hellmuth & the FLAAR Photographers

Taking Digital Photography to the Next Level is an innovative online course taught by Dr. Nicholas Hellmuth, a photographer who shares his 40-years of experience with people who sign up to take this course. DP 201 is the second of two courses in Dr. Hellmuth's online digital photography learning series.

Digital photography equipment is advancing rapidly. If you are a full-fare participant in the course, as an option you can meet and speak with Nicholas Hellmuth at any major photography trade show, and take a tour of all the camera booths with him to learn tips on each item of equipment and software.

Dr. Hellmuth has developed a customized textbook for the course with comprehensive chapters covering the most important topics in digital photography. To help you become better acquainted with everything that you will learn, the following document provides a brief summary of each learning unit of the course textbook.

Although the first course is not a required prerequisite for DP 201, we strongly urge you to take DP 101 first. There is a substantial discount for taking both courses in sequence; first 101 then 201.

Medium and Large Format Digital Photography

Digital Image Resolution
This chapter discusses the differences between dpi, ppi, and lpi in the context of how much resolution is necessary for various wide format inkjet printers (Epson, Canon, HP, Roland, etc) and RGB laser imagers (Durst Lambda, LightJet, Chromira). Learn to optimize both the quality of the images you produce.

Pros and Cons of Digital vs Film Photography (Medium and Large Format)
With medium and large format, the differences between digital and film photography change. Learn from the experiences of photographers who have worked with equipment of all sizes using both digital and film technologies.

Digital Backs for Medium Format Cameras
Considering all of the medium format cameras on the market, and considering their cost, it is important to understand how and why medium format cameras are so important. Learn the advantages of the quality that is only available with a medium format CCD sensor: Hasselblad-Imacon, Leaf, Jenoptik EyeLike, Phase One, MegaVision and Sinar.

Evaluation & Review of the Leaf Valeo 22 & Leaf Aptus 17 and 22
The Leaf Valeo is a 22-megapixel wireless camera that has received a considerable amount of attention. Based on FLAAR's 120-day review using this medium format system, find out whether or not the Leaf Valeo 22 lives up to its advertising specs. The Valeo works on a Mamiya, Hasselblad, and Contax.

Cameras to hold Medium Format Digital Backs
Learn the pros and cons of Contax, Mamiya, Hasselblad (traditional), Hasselblad H1 and Rollei.

Comprehensive Evaluation of the Hasselblad H1 Camera
Nicholas took the Hasselblad H1 out on an extensive trial run to test it with the Imacon Ixpress back.

The newest Generation of Medium Format Digital Cameras
Will the new Mamiya ZD blow away even the Canon EOS 1Ds Mark II in quality? And will the new Pentax 645 obliterate the price barrier to medium format digital cameras?

Hybrid Digital Cameras to Hold Medium Format Digital Backs
Hybrid cameras, which allow you to use a 35mm lens with a medium format sensor, can achieve professional results. Find out whether your expensive 35mm lenses can still be useful to you. Other hybrid cameras use large format lenses: but are dedicated for medium format digital backs from Imacon, Leaf, Jenoptik, Kodak, Phase One, or Sinar.

Lenses for Medium Digital Photography
Learn about the reality of lenses for professional medium format digital cameras: Zeiss, Fuji, Mamiya.

Comments on 4-Shot and 16-Shot Medium Format Options
Imacon, Jenoptik, and Sinar offer multi-shot medium format digital backs. These offer file sizes over 300 MB for a single photograph. We briefly tried out an Imacon Ixpress 528C, so can report back the pros and cons of this unique digital camera technology.

Large Format Cameras for Digital Photography
Based on original research, learn about the pros and cons of using large format cameras for common situations including architectural and studio photography.

Lenses for Large Format Digital Photography
Schneider and Rodenstock: here at FLAAR we have them all, so can help you learn about them, based on our familiarity with camera lenses.

Setting up a Photography Studio (at an office, or in your home)

Recommended Equipment for Creating a Digital Studio
Based on his experience developing studios for museums and universities, Dr. Hellmuth presents tips to help you create an effective digital studio. Learn about what equipment can still be used from traditional studios, and what equipment needs to be replaced to meet the needs of digital systems.

Lighting for Profitable Portrait Photography
Surveys the range of lights that are available and comments on practical aspects in doing portraits, especially out on location.

Lighting Modifiers for Portrait Photography
It takes more than lights to do successful portrait photography.

Lighting For Large Format Digital Photography in the Studio

A tri-linear scanning camera cannot use strobes or flash. So lighting manufacturers have had to scurry around and come up with new and improved kinds of lighting. We bring you Nicholas's experiences with digital lighting in two educational learning units. These same kinds of lights are also good for using with 35mm SLR digital cameras. Since FLAAR is a testing institute for digital lighting, you will obtain information from this course that is not published in books and not available in other courses.

Evaluating Digital Cameras for use in Museums

Whether you are a commercial photographer in your home or studio, or a museum photographer, or a botanist, geologist, zoologist, or archaeologist out working in the field, the basics of photography are the same.

Lighting Equipment and Techniques for Photography of Art & Artifacts

Commercial photography is essentially product photography; and the product is the same whether a chemical specimen, a rock specimen, a 4th century Mayan vase, an Aztec mask, or a bottle of perfume for today's fashion. Actually we frequently photograph 7th century cups for drinking cacao and 6th century flasks for holding perfume.

Portable Lighting Equipment & Techniques

Since we photograph all over the world we have learned, the hard way, what lighting equipment travels well, what carrying cases don't fall apart, and what lighting is essential to have when you reach your destination. This is a report on a field trip to Honduras, to photograph in a museum. You can apply the same tips to using lights anywhere in your home town, or across the world, to photograph any subject.

Lighting Techniques for Digital Photography of Plants & Flowers

Photographing flowers is big business for some commercial photographers. For others it is fun and artistic expression. A few basic tips, from our experience, can make your photos soooo much better.

Light Meters and Color (Temperature) Meters in the Digital Era

Do you still need a color (temperature) meter or even a light meter with digital cameras? What about Gossen, Minolta, and Sekonic meters?

Portrait Photography with Medium Format Digital Systems

Compare and contrast the pros and cons of using 35mm vs medium format to accomplish portraits, weddings, seniors, events, and other photography of people (and pets so you earn your extra cash in this profitable niche application).

Applications of Professional Digital Cameras

Architectural Photography with Medium and Large Format Cameras

Learn from a photographer who has tried, and compared, every size and shape of camera to learn which is best to accomplish successful architectural photography. Learn why the Nikon D70, D100, Canon Digital Rebel, and especially why the Olympus digital camera, is the most inappropriate for architecture. Understand why medium format digital cameras are ideal and what are the benefits of using large format digital scanning backs (as well as their downsides for interior spaces). You get years of experience delivered to you in this course from FLAAR.

Nature Photography with Medium Format Digital Cameras

Nature photography can be challenging with any digital camera. Learn to distinguish the difference between nature photography and landscape photography, and learn why using a large format camera for nature photography isn't practical, (yet is the best for panoramic views), and understand what cameras are better for shooting flowers, butterflies, and other subjects in nature.

Landscape Photography with Medium and Large Format Cameras

In order to print large format images of cityscapes and wilderness, you need to use medium and large format systems. Learn how to apply professional techniques to capture beautiful landscapes with top technology from BetterLight.

Panoramic Photography with Medium Format Digital Camera Systems

Panoramic photography with medium format cameras can be quite a challenge. But Nicholas is trying out new equipment every few months. We report our most recent findings.

Portability: Which Digital Camera is best for out on Location?

Since Nicholas photographs in Europe, Japan, Australia, across the US, and in many parts of Latin America, he has decades of experience in knowing which cameras are more portable than others. We evaluate the Leaf Valeo, Leaf Aptus, Phase One, Sinar, Imacon, and Jenoptik, compared with the large format BetterLight (including their brand new portable model).

QTVR Object Movies with Medium Format and Large Format Digital Cameras

Phase One used to make, and BetterLight still makes, automatic computerized turntables for creating rotatable 3-dimensional QTVR views of objects (which can be art, artifacts, products, or anything, including a person).

Studio and Table-Top photography ("Product photography")

Product Photography with Professional Digital Cameras

Photography for catalogues helped digital cameras break into the professional arena because product photography requires large quantities and high-quality. Food photography (for restaurant menus as well as food packaging) is big business: but some cameras are much better than others.

Lighting for Product Photography

Digital technology requires different lighting techniques than traditional film lighting. Learn about what kinds of lights work best with digital cameras. Special emphasis is placed on new lighting technology, such as CD, HMI and HDI, that is specially made for digital cameras.

Rollout Photography for Cylindrical Objects

This chapter features step by step instruction of how to accomplish circumferential photographs using a computerized turntable system resulting in an impressive rollout photograph. Learn how to create the turntable system and perform rollout photography in your home or studio.

History of Rollout Photography Cameras
Expanding upon the historical research of Andrew Davidhazy (Rochester Institute of Technology), learn about recent breakthroughs in rollout photography.

Taking Photographs with a Reprographic Copy Stand
This chapter focuses on using a tri-linear scanning back on a copy stand. Learn the pros and cons of working with a repro stand system in your studio or home. This is the best way to photograph paintings for subsequent giclee printing.

Comparing Large Format Photography with Medium Format Photography

Large Format Digital Architectural Photography
We bring you the results of using large format digital cameras for photographing prehistoric megalithic architecture on the Island of Malta, as well as interior photography of architecture (the National Palace and then the main cathedral of Malta. Learn how to eliminate perspective problems (without needing to distort the pixels in Adobe Photoshop).

Photography of Art with Large Format Cameras: Sculptures, Artifacts & other 3-Dimensional Works of Art
Photographing art for private collectors, or photographing art for museums, are both a challenge in the digital era. Nicholas Hellmuth has photographed in the British Museum, in the Museo Nacional de Antropologia (Mexico City), in Japan's National museum of Ethnology, in the National Gallery in Australia, and in museums throughout Switzerland, Belgium, the US, Canada, and Latin America. If you wish to photograph art at your corporate headquarters, at a friend's house, or to impress someone, here are the tips to get you started.

Experimenting with Large Format Digital Cameras for Artistic Portrait Photography
In theory you can't do portraits with a tri-linear scanning back, but that does not stop the FLAAR photography team from doing it anyway. The results vary from the artistic to the amusing. They are definitely worth seeing.

Would a Large Format Digital Camera be Recommended for Nature Photography?
Large format cameras have been popular for over a century, especially for fine art photography. But what is it like trying to photograph plants and animals with a large format digital camera?

Panoramic Photography with the BetterLight Automatic Pano/WideView System
Nicholas Hellmuth has been a beta tester of the BetterLight panoramic photography system since 1997. He is still using large format cameras combined with tri-linear scanning backs in distant locations to produce spectacular panoramic photos in sizes large enough to reproduce as murals.

The History of Panoramic Photography, 1840-1940
Based on the knowledge of panoramic photography you'll obtain in this same course, get a historic perspective of panoramic cameras long before computerized turntable technology became available.

Survey of Panoramic Cameras
This chapter discusses ultra-wide angle cameras and reviews cameras of many sizes and shapes from the past several decades.

In addition, learn about digital and film panoramic cameras with motors such as the Seitz RoundShot, Dr. Clauss, and a top-of-the-line BetterLight Pano/Wide View system.

Achieving Top-Quality Results

Gray Balance for Professional Digital Photography
Point and shoot cameras perform an automatic white balance and 35mm SLR cameras allow you to perform a manual white balance for added precision; however, professional cameras offer automatic and manual gray balance options. Learn to take perfect photographs that require no touch-up in Photoshop.

Computer Workstations for Serious Digital Photography
Digital environments require powerful computers to manage the large file sizes that cameras and scanners produce. Learn about the best computer hardware available to direct your digital environment. (Both Mac and PCs are discussed from a neutral point of view because FLAAR and Bowing Green State University support both platforms.)

Color Management for Digital Photography
This chapter provides an introductory analysis on color management to guide you through the massive amounts of literature and web pages on the topic while introducing you to the jargon. Learn invaluable tips to help you make decisions about color management measuring instruments and ICC profiling software.

Increasing Depth of Field
Increasing the depth of field in architectural, industrial, and commercial photography can help you achieve better results. Find out how you can get the most depth of field out of your images.

Shooting On-location with Medium and Large Format Cameras
Shooting on location presents with medium and large format cameras can create some interesting challenges such as image storage and battery management. Learn how to be prepared to face the trials that on-location shooting will present.

Software Tips & Tricks

Achieving a Luminescent Lighting Style with Multiple Exposures
People who see Nicholas' photographs ask if he is using a 3-D camera to create the effect that is so awesome in his pictures. In this learning unit Nicholas explains his secrets and how you can do the same in your own photography.

Adobe Photoshop for Professional Digital Photography
Although one of the goals of this course is to help you utilize the software inside your camera, Photoshop continues to be an indispensable tool for professional digital photographers.

Learn the most critical aspects of Photoshop for photographers to help you improve your results. We will explain the new Photoshop Version CS(1) and CS2, and show you a style of "luminescent" photography that will make people beg you to sell them your giclee or fine art prints. We can also help you understand the differences between Photoshop version 5, 6, 7, 8 (CS), and 9 (CS2).

Professional Software for Working with RAW File Formats

Recently, several software packages were developed for working with RAW file formats including Capture One from Phase One. Kodak also has its own RAW file software. Learn about the pros and cons of each package compared with Adobe's new DNG format.

Learn FTP Software for sending your Photographs

Step by Step, Learn how easy it is to send and receive mural-sized photographs by FTP (File Transfer Protocol). The software is economical; there is no learning curve. You can learn in a few minutes. Don't decimate your best photos by reducing them to JPG and stuffing them onto an e-mail as an attachment. Instead you can send the entire TIF file in its full glory via FTP.

Software Tips & Tricks

Definition of Fine Art Photography

We identify, define, and describe fine art photography.

Fine Art Photography of Forms, Shapes & Compositions

Nicholas shows his portfolio of monochromatic fine art photography. The images are in color but the emphasis is on the composition of shaped objects.

Fine Art Photography of Textures

Whether photographing the ripples in sand dunes or the weathered wood of old abandoned barns there is an entire world out there for you to experiment with.

Fine Art Photography of Colors together with Shapes & Composition

Color can be subtle (as in rust) or bright as in facades of houses in tropical countries.

Black and White Fine Art Photography & Giclee Printing of B&W

We introduce B&W fine art digital photography and introduce the concept of giclee. FLAAR and BGSU both are leaders in all aspects of giclee, both oil-painting, watercolor painting, and fine art photographs as giclee (both in color and B&W).

Improving Your Knowledge of Photography

Trade Shows for New Camera and Printing Technologies

Attending annual tradeshows is one of the best ways to ensure that you keep up with rapidly-changing technology.

Learn about Graphics of the Americas, ISA, SGIA IPEX, DRUPA, and other tradeshows relative to wide format inkjet printers, giclee fine art, and digital cameras

Comprehensive Glossary of Digital Photography Terms

Learn the jargon that is essential to digital imaging, such as Bit Depth, tone curves, and Dynamic Range. This entry will help you understand the jargon of digital imaging such as 16-bit vs 8-bit. Learn the terms and techniques that are the foundation of digital technology.

FLAAR Book Reviews: Medium and Large Format Cameras

Although few books exist on medium and large format digital cameras, there are several excellent books on traditional medium and large format cameras and lenses. Read the reviews to help you find the books that are most suitable to your needs.

FLAAR Book Reviews: Adobe Photoshop

Dozens of books on Adobe Photoshop have been published. While most are excellent, some are poorly organized and edited. Learn about the titles that are most appropriate for photographers working with digital cameras who need to work with their images in Adobe Photoshop.

Course Summary: Realistic, Practical, Blunt Assessments

Summary: Pros and Cons of Camera Formats in today's World – Year 2005

- What are the pros and cons of an 8-megapixel Zoom-lens Sony, Nikon, Canon vs a 35mm SLR Canon Digital Rebel XT or Nikon D70?
- Can a full-frame Kodak or Canon EOS 1Ds Mark II match or beat a Medium Format Digital Back?
- If you are moving to becoming a pro, what camera should you go for?
- Now that large-format digital cameras cost less than medium format, should you switch?
- If you are a pro-sumer, and desire to shot like a professional, what is the ideal camera to step up to in 2005?

Comparing a $999 Digital Camera to a $14,000 Tri-linear Scanning Back

This chapter will help you consider what you really need out of digital imaging technology. Learn the benefits and advantages of each price-level of digital technology.

Workflow Summary for Medium and Large Format Digital Photography

"Workflow" literally means, "the sequence of flow of your image file from the moment of capture, through digital imaging and color management, to the printer." Learn the most important steps in digital workflow and re-examine your existing workflow. We will take you right up to the point of sending your file on to color management, through RIP software, and into your inkjet printer, laser printer, or RGB laser imager (LightJet, Lambda, Chromira). RIPs, color management, and printers are covered in optional separate materials.

If you have questions about DP 201: Achieving Quality in Digital Photography, send an e-mail to *digitalphoto@flaar.org.* Either Dr. Hellmuth, or his teaching assistant, Sebastien Dion will promptly respond.

DP 101 : Achieving Quality in Digital Photography

SLR 35mm Digital Cameras

Glossary of Digital Photography

Evaluation & Review Nikon D70 and D100

Evaluation & Review of the Canon Digital Rebel

Sigma SD9 and SD10 Foveon Cameras

Lens Reduction Factors: Chart

Hybrid Digital Cameras

Lenses and Filters

Professional Results from Budget-Priced Cameras

Practice & Critique

Pros and Cons of Digital and Film Photography

CCD and CMOS Image Sensors

History and Timeline of Digital Photography

Aperture and Shutter Speed

Composition The Key to Prizewinning Photography

Nature Photography with Digital Cameras

Portrait Photography with 35mm SLR Digital Cameras

Architectural Photography with digital cameras

Lighting Digital Photography

QuickTime Virtual Reality

QuickTime Virtual Object 3-D Views

Shooting on Location with Digital Camera Equipment

How to Organize an Exhibit of Your Own Photographs

Computer Equipment for Digital Imaging

Camera and Computer Memory Storing Digital Files

Adobe Photoshop for Photographer

Additional Software for Digital Imaging

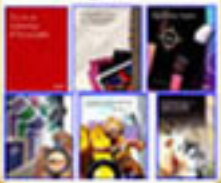
File Formats for Digital Images

Worthwhile Tradeshows for Digital Photographers

Digital Cameras at the Photokina Tradeshow in Germany, 2004

New Photography Equipment at the PhotoPlus Tradeshow in New York, 2004

FLAAR Reviews: Photo & Camera Magazines



FLAAR Book Review on: Digital Photography

DP 201 : Taking Digital Photography to the Next Level

Digital Image Resolution

Pros and Cons of Digital vs Film Photography Medium and Large Format)

Digital Backs for Medium Format Cameras

Evaluation & Review of the Leaf Valeo 22

Cameras to hold Medium Format Digital Backs

Evaluation of the Hasselblad H1

Recommended Equipment for Creating a Digital Studio

Lighting for Profitable Portrait Photography

Lighting Modifiers for Portrait Photography

Hybrid Digital Cameras to hold Medium Format Digital Backs

Evaluating Cameras for use in Museums

Lighting Techniques for Plants & Flowers

Portrait Photography with Medium Format Systems

Architectural Photography with Medium and Large Format Cameras

Nature Photography with Medium and Large Format Cameras

Landscape Photography with Medium and Large Format Cameras

Panoramic Photography for Digital Cameras

Portability: Which Digital Camera is best for Out on Location?

Product Photography with Professional Digital Cameras

Lighting for Product Photography

Taking Phptographs with a Repro Copy Stand

Large Format Digital Architectural Photography

Panoramic Photography with the Betterlight System

Gray Balance for Professional Digital Photography

Computer Workstations for Digital Photography

Color Management for Digital Photography

Increasing Depth of Field

Shooting On-location with Medium and Large Format Cameras

Professional Software for Working with RAW File Formats

Workflow Summary for Medium and Large Format Digital Photography

Trade Shows for New Camera and Printing Technologies

FLAAR Book Reviews: Adobe Photoshop

FLAAR Book Reviews: Medium and Large Format Cameras

Glossary of Digital Photography Terms

Workflow for Medium and Large Format