

# **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



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 giclee), both for commercial photography and as a hobby.





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 February 21, 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: Tell us what your needs and desires for improvement are**

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.

### **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. (This section is updated after every major tradeshow before and during the run of the course to ensure that you receive the most recent information.)

#### **Comprehensive Glossary of Digital Photography Terms**

Although dozens of glossaries exist on the Internet, likely none are as comprehensive as this glossary from Dr. Hellmuth. 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.

## **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 camera with a CMOS chip.

## **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 deserves 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 the experiences of an actual photographer who used the Foveon triple-layer sensor in a Sigma SD9 camera on location for a full month. Experience a glimpse into, what many call, “the most innovative development of the digital millennium.”

## **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 a digital camera 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: 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 F717, Sony F828, 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 sensors used for television, to Sinar’s recent 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 and how they 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 produce high-quality results.

### **Portrait Photography with 35mm SLR Digital Cameras**

Based on interviews with professional photographers who use digital cameras, discover the techniques you can use to capitalize on the vast markets for photographing children, families, graduates, events and more.

### **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 Movies**

Frequently, you may want to photograph all sides of a three-dimensional object. Learn to build a cost-effective three dimensional turntable at home, and shoot your own rotating objects.

### **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.

## **Achieving Success & Recognition for your Photographic Abilities**

### **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. 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 Tradeshows 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. PMA 2005 photography trade show will take place during this course, so this is an opportunity to meet your instructor, Nicholas Hellmuth, in person, in front of all the cameras at the trade show.



### **Digital Cameras at the Photokina Tradeshow 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.

### **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 your 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](mailto:digitalphoto@flaar.org). Either Dr. Hellmuth, or his teaching assistant, Sebastien Dion will promptly respond.

## **DP 201 :**

**April-May 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 PMA trade show in Orlando, and take a tour of all the camera booths with him.

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 chapter 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 (Feb. 21-April 6, 2005). 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 (Lambda, LightJet, Chromira). Learn to optimize both the quality of the images you produce and the disk space required to work with digital images.

### **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 and Sinar.

### **Evaluation & Review of the Leaf Valeo 22 & Leaf Aptus**

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 Mamiya/Hasselblad system, find out whether or not the Leaf Valeo 22 lives up to its advertising specs.



## **Cameras to hold Medium Format Digital Backs**

Learn the pros and cons of Contax, Mamiya, Hasselblad (traditional), and Hasselblad H1.

## **The newest Generation of Medium Format Digital Cameras**

Will the new Mamiya ZD will blow away even the Canon EOS 1Ds Mark II in quality? and will it obliterate the price barrier to medium format 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.

## **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.

## **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.

## **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 if 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 Digital Cameras**

Panoramic photography can be quite a challenge. Learn techniques, such as color management, to take higher-quality panoramic photographs.

### **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 Jenoptic, compared with the large format BetterLight (their brand new portable model).

### **The History of Panoramic Photography, 1840-1940**

Based on the knowledge of panoramic photography you'll obtain in the previous chapter, 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.

## **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. Learn about the tilt-and-swing features of many large format cameras as well as medium format systems that offer traditional movements combined with a digital back.

### **Lighting for Product Photography**

Digital technology requires different lighting techniques and styles than traditional film lighting.



Learn about what kinds of lights work best with digital cameras. (Special emphasis is placed on new lighting technology specially made for digital cameras such as CD, HMI and HDI.)

### **Photography of Art: 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 (Mexico City, Archaeology), 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.

### **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.

## **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.

### **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 show you a style of "luminescent" photography that will make people beg you to sell them your giclee or fine art prints.

### **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.

### **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 Bowling 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 tools and software.

### **Bit Depth and Dynamic Range**

This chapter will help you understand the jargon of digital imaging of 16-bit vs 8-bit. Learn the terms and techniques that are the foundation of digital technology.

### **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.

### **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.

## **Course Summary: Realistic, Practical, Blunt Assessments**

### **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 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 prosumer, and desire to shoot 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.

### **Trade Shows for New Camera and Printing Technologies**

Attending annual tradeshow 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 tradeshow relative to wide format inkjet printers and digital cameras.

### **Comprehensive Glossary of Digital Photography Terms**

Although dozens of glossaries exist on the Internet, likely none are as comprehensive as this glossary from Dr. Hellmuth. Created and edited by technicians, students, and teachers, Dr. Hellmuth's glossary is only available to participants in this digital photography course. Learn the jargon that is essential to digital imaging.

### **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.

---

If you have questions about DP 201: Achieving Quality in Digital Photography, send an e-mail to [digitalphoto@flaar.org](mailto: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



## Aperture and Shutter Speed



## Nikon D100 Digital Camera



## Evaluation & Review of the Canon Digital Rebel



## Sigma SD9 Foveon



## Lens Reduction Factors: Chart



## Hybrid Digital Cameras to hold Medium Format Digital Backs



## 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



## Composition The Key to Prizewinning Photography



## Nature Photography



## Portrait Photography with 35mm SLR Digital Cameras



## Architectural Photography with digital cameras



## Lighting Digital Photography



## Quicktime Virtual Object Movies



## 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 Photographers



## Additional Software for Digital Imaging



## File Formats for Digital Images



## Worthwhile Tradeshows for Digital Photographers



## Digital Cameras at the Photokina Tradeshows in Germany, 2004



## New Photography Equipment at the PhotoPlus Tradeshows in New York, 2004



## FLAAR Reviews: Photo & Camera Magazines





# 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



## Cameras to hold Medium Format Digital Backs



## Recommended Equipment for Creating a Digital Studio



## Lighting Modifiers for Portrait Photography



## Lighting for Profitable Portrait Photography



## Nature Photography with Medium and Large Format Cameras



## Landscape Photography with Medium and Large Format Cameras



## Panoramic Photography for Digital Cameras



## Digital Panoramic Cameras



## Architectural Photography with Medium and Large Format Cameras



## Product Photography with Professional Digital Cameras



## Computer Workstations for Digital Photography



## Color Management for Digital Photography



## Bit Depth and Dynamic Range



## Workflow Summary for Medium and Large Format Digital Photography



## Glossary of Digital Photography Terms



## History of Panorama Photography: Circa 1840-1980



## Photography of Art: Sculptures, Artifacts & other 3-Dimensional Works of Art



## Taking Photographs with a Reprographic Copy Stand



## History of Rollout Photography



## Lighting for Product Photography



## Gray Balance for Professional Digital Photography



## Shooting On-location with Medium and Large Format Cameras



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



## Professional Software for Working with RAW File Formats



## FLAAR Book Reviews: Adobe Photoshop



## FLAAR Book Reviews: Medium and Large Format Cameras



## Trade Shows for New Camera and Printing Technologies



# Learn Digital Photography Online

Registration now being accepted for Dr. Nicholas Hellmuth's next online digital photography course, 2005.

Take either of the following courses without ever setting foot inside a classroom.

- **DP 101 - Achieving Quality in Digital Photography**

This course will develop your creativity and show you how to use digital imaging to produce astonishing images.

- **DP 201 - Taking Digital Photography to the Next Level**

This is a production-oriented course that will teach you to produce digital images that will help you win exhibits, earn a living as a professional, and in general, create images that make an impact.

Name: \_\_\_\_\_

Soc Sec No. \_\_\_\_\_ Date of birth \_\_\_\_\_  
(or passport number if outside USA\*)

Home Address \_\_\_\_\_ City \_\_\_\_\_

State \_\_\_\_\_ Zip \_\_\_\_\_ Country \_\_\_\_\_

Organization \_\_\_\_\_

Business Address \_\_\_\_\_ City \_\_\_\_\_

State \_\_\_\_\_ Zip \_\_\_\_\_ Country \_\_\_\_\_

Business phone \_\_\_\_\_ Fax \_\_\_\_\_

Home phone \_\_\_\_\_ Email \_\_\_\_\_

## Registration:

- ☐ **DP 101 Achieving Quality in Digital Photography** **\$695.00**  
Session 1: Begins: February 21, 2005 Ends: April 6, 2005
- ☐ **DP 201 Taking Digital Photography to the Next Level** **\$795.00**  
Session 2: Begins: April 13, 2005 Ends: May 20, 2005
- ☐ Both Courses (Save \$295 when you enroll now!) **\$1195.00**
- ☐ Send me information on future classes

## Method of Payment:

- ☐ Check (payable to BGSU)
- ☐ Purchase Order # \_\_\_\_\_
- ☐ Credit Card



Card No. \_\_\_\_\_ Exp. Date \_\_\_\_\_

Refunds are subject to BGSU cancellation policies.

**For Additional Information**  
E-mail: [digitalphoto@flaar.org](mailto:digitalphoto@flaar.org)

**To Register for the Course**

Call: 419-372-8181 or  
877-650-8165 (toll free)



Fax: 419-372-8667



Mail: Continuing Education,  
International & Summer Programs  
40 College Park  
Bowling Green State University  
Bowling Green, OH 43403 USA

• To comply with the Hope Scholarship and Lifelong Learning Tax Credit legislation, BGSU now requires all credit and noncredit students from the USA to supply their Social Security number when registering for classes. A Social Security number is not required for students residing outside the USA. These students should substitute a passport or equivalent number.

Bowling Green State University is on EO/AA employer and educator.