Art Institute of Atlanta
Photographic Imaging

**Large Format Photography**
P103

**Winter Quarter 2006**
Section A:  Friday 10:00-11:50 AM  Room 324A  
           Friday 12:00 PM (Noon) - 3:40 PM  Room 446A (Photo Studio)

**Instructor: Stephen Grote**
AiA Work Phone: (770) 689-5010  
Home Phone: (678) 587-0409  
e-mail: grotes@jkboat.com or grotes@comcast.net or Stephen@stephengrote.com  
Web Site: https://www.stephengrote.com

**Course Description** (4 Credits, 6 Hours)  Co-requisite or Pre-requisite: P101

This course examines the practical and creative aspects of photographic technique as they apply to the large format camera. Emphasis is placed on terminology, theory and practical problems. The course introduces advanced black & white techniques as well as the Zone System.

**Course Objectives**

- Employ large format film, film holders and sheet film processing techniques
- Employ the basic operational controls of the view camera shutter
- Apply the linear controls of the view camera for compositional management
- Apply the front standard swing/tilt controls of the view camera for focus management
- Apply the rear standard swing/tilt controls of the view camera for perspective management
- Employ the large format camera in a close-up (macro) situation
- Relate Zone System principals regarding the basics of film exposure and development
- Employ photographic filters to control tonal values
- Understand reciprocity (and be able to control reciprocity failure)
- Apply exposure compensation when using filters, magnification and long exposure times
- Choose lenses, lighting and camera controls that are appropriate to the task
- Examine the styles of various contemporary and historical photographers
- Examine the view camera techniques in current imaging trends

**Course Textbooks**


*Photography, 7th Edition* by Barbara London, John Upton, Ken Kobre and Betsy Brill
Recommended Supplemental Texts

Tillman, Urs.  Creative Large Format Photography: Basics & Applications (And the rest of the Sinar Professional Series).


Strobel, Leslie. View Camera Technique.


Large Format Photography by Kodak

View Camera Magazine – (AiA Library)  LensWork Quarterly – (AiA Library)

Architectural Digest – Magazine (AiA Library)  Klik – (AiA Library)

Communication Arts – (AiA Library)  Graphis – various publications – (AiA Library)

Photo District News – (AiA Library)  Single Image Annual – (AiA Library)

Archive – (AiA Library)

Classroom Policies

• No food or drink are allowed in the Classroom, Darkroom or Studio
• Please turn off Cellular Phones and Pagers before entering the classroom
• Please do not wear hats in the Building
• Behave in a Professional Manner at all times
• Respect the Dignity and Opinions of others
• Students are expected to Take Notes and Discuss the Work of Others (esp. During Class Critique)
• Students are expected to clean up after themselves in the classroom and the darkroom

Attendance

• Students are required to attend all class sessions. There are no excused absences.
• Students should be on time. Late Arrivals will be marked absent after 20 minutes.
• Students who accumulate four absences will be automatically dropped from the class with a final grade of “F.” This is a school wide policy referred to as a Failure due to Class Suspension (or lack of Attendance).
• Students arriving late may join the class after the first break.
• Students should advise the Instructor when an absence is unavoidable.
• Tests will be administered on time, according to the syllabus, and may not be made-up.
• Students must deliver assignments (or have them delivered) when absent or make arrangements with the instructor to deliver assignments prior to missing the class.
• Please be certain your travel arrangements do not conflict with the final class, exam or project turn-in.

Grading and Assignment Evaluation

• No grades will be dropped – this includes assignments, tests, quizzes and projects.
• All assignments must be delivered on time unless approved by the instructor. Failure to turn in an assignment on time will result in a grade of “F” or zero.
• Assignments may be resubmitted only if approved by instructor.
• Undelivered assignments will result in the grade of zero.
• Delivery of an assignment does not guarantee a passing grade.
• Scores and letter grades will conform to those in the AiA Student Handbook
• A final grade of C- or better is necessary for academic progress in photographic imaging classes
Technical Information and References

If you are having problems finding technical information on any photographic products I highly recommend looking in the Morgan & Morgan reference book (the cave and/or library) or looking it up via the manufacturer on the Internet. We have the ability to use the Library computers for Internet access at any time. Most of the major manufacturers have posted Adobe Acrobat PDF files of their products on the Internet for free download, perusal and printing. The Acrobat PDF files print exactly like book pages and are very easy to read. I keep many Data Sheets on file for specific cameras, films, chemicals and papers. If you cannot find the information ask me and I’ll be glad to either help you find the information or supply you with a copy of my Data Sheet.

Kodak, Ilford, Fuji, Agfa and Polaroid have good Internet sites. There are many others out there that I hope you will explore before the end of the quarter.

Supplies

- An exposure meter suitable for use with ambient light and electronic flash – a Sekonic L-558 or L-608 is recommended
- Minimum of six 4”x5” sheet film holders, eight to ten film holders are recommended unless you have a Film Changing Bag for field use
- At least one long, heavy-duty cable release (preferably black in color)
- One Calumet Bellows Extension Calculator
- A Focusing Cloth – preferably black on one side to absorb excess or stray light
- 4”x5” Negative/Transparency Sleeves and Binder/Box as needed
- Loupe (Preferably a glass loupe – Mamiya, Schneider, Rodenstock, Toyo, NPC or Calumet 4x loupe) for precise focusing on the ground glass
- One Inclinometer style level (angle finder) – can be bought at Home Depot or Lowe’s
- Tool Box – Large enough to carry all your large format supplies and accessories – may be bought at Home Depot, Lowe’s or any other fix-it place
- 4”x5” Instant film as necessary – Polaroid Type 54 (Polapan Pro 100), Polaroid Type 55 (Positive and Negative film) for checking precise focus via negative sharpness, Fuji fp100b 4x5 (B&W) or Fuji fp100c 4x5 (color, daylight balanced).
- 4”x5” film as necessary (two 50 sheet boxes are recommended for the class) – Color Transparency Recommendations include: Kodak E100G, Kodak E100GX, Kodak E100 VS, Kodak Ectachrome 100, Fuji Provia 100 F, Fuji Astia 100 F, Fuji Velvia 100 and Agfa RSX 100. B&W Recommendations include: Ilford Delta 400, Koday T-Max 100, Kodak T-Max 400, Ilford HP5 Plus, Ilford, FP4 Plus, Kodak Tri-X, Agfa AgfaPan and Fuji Neopan films.
- Transparency films need to be developed at a professional lab.
- An extra (empty) 4”x5” film box for downloading and storing shot film
- 11”x14” Fiber Based B&W printing paper as necessary
- Mat board and mounting materials as necessary – Black 11x14 mat board for 4x5 transparencies and White 16x20 mat board for 11x14 prints.
- Four Inch Filters for Large Format Cameras with a holder: #25 Red Filter, #11 Yellow-Green Filter, Polarizer Filter (optional), Neutral Density filter .30 (optional), Neutral Density filter .90 (optional) – HiTech filters may be bought with student discounts through PPR downtown on 11th street (approximately $30-$38 per filter)
- Bowens Multi-Clip
- Film Changing Bag (Optional)
- Two Tripod/Camera Bushings ¼” to 3/8” – can be bought at ShowCase or PPR
- A Bullet Level for leveling the camera
- Angle Finder for leveling the camera and finding angles of subjects to transfer to the camera.
Week 1

The Camera – Front Standard, Rear Standard, Monorail, Tripod (how to set up a tripod), etc.
Zero Everything Out First Before Using the Camera, Leveling the Camera
Always Focus Using the Rear Standard, Rough Focus first -- (Rough Focus vs. Fine Focus)
Front Standard Movements (Swing/Tilt) Change Focus          Front = Focus
Rear Standard Movements (Swing/Tilt) Change Perspective    Rear = Perspective

The Lens – Leaf Shutter (Shutter in lens and Syncs with Flash at all shutter speeds) vs. Focal Plane Shutter (built into camera body and has set sync speeds)

How to Pack and Unpack the Camera (without breaking or dropping anything)

How to Properly Set Up a Tripod for stability and ease of use.

Sheet Film Loading and Unloading – clean them for dust first, label the holders in #2 pencil, use the tabs to designate exposed and unexposed film, think about a film changing bag/tent for loading and unloading film in the field, use the white side of the dark slide to represent unexposed film and the black side of the dark slide to represent shot film

Polaroid 545i Back – Shooting and Developing Polaroid (handout), Demo Polaroid Back

Large Format Shutter Speed Scale and Large Format Aperture Scale – The understanding of math in photography (the number 2, the square root of 2, and the exponents of 2)
Depth-of-Field appears shallower with larger formats, so you may need to use smaller apertures (larger f-stop numbers) and slower shutter speeds to achieve a higher degree of sharpness. Steady as she goes… The downfall of using slower shutter speeds is the potential for motion (subject motion and/or camera shake). The need for a tripod, cable release and a willing subject should be apparent.

Equivalent Exposures – If is goes up on one side, it has to go down on the other

The Meter – Incident (Averaged) vs. Reflected (Spot Meter)
Using the meter to achieve proper exposure. Incident Metering…

Composition – Be careful how you place things in the frame – use the rules of composition and do not place everything in the center of the frame. You will work slower with a large format camera and it should make you think about what you are doing technically, aesthetically and creatively.

Final Project – A project of no less than five images on a single theme. The prints must be properly exposed, developed, contacted, printed, spotted, mounted and matted. Color transparencies must be properly matted in 11x14 black mat board using black archival tape.

Hands on Demo of All Camera Movements in the Studio or Outside

Assignment: Shoot a minimum of four 4x5 Polaroids with data sheets and a minimum of six sheets of 4x5 transparency film. The subject can be a landscape or a low rise (less than three story building), an interesting doorway, a portrait, etc. All six sheets of film must have different scenes/views.
Week 2

In order to be admitted to class today you must show the instructor your light meter or the receipt for the light meter you have ordered.

Critique: Polaroids

Lecture: Sheet Film Processing and Parallel Perspective Correction

**Back Tilt Correcting Vertical Perspective** – always LEVEL the camera (using a bullet level), use at least three lines on the ground glass to assure the parallel lines are straight, use a focusing loupe for critical focus, use a longer exposure time and smaller aperture (larger f-stop #) for depth of field.

Difference between Shifts on the Front Standard (perspective) and Back Standard (composition).

Questions and Clarification on camera setup, the use of the camera, metering the scene, Polaroid Back, tripod, film holders, film developing, etc.

**Assignment:** Next week bring in two 4x5 color transparencies properly mounted in 11x14 black mat boards, one of a Low Rise Building (three stories or less) and one of an interesting doorway. Everything must be corrected for proper perspective.

Week 3

Critique: Parallel Perspective Correction Prints

**Lecture: The Scheimpflug Principal – Correcting Focus**

Front Swing to Correct Focus and Front Tilt to Correct Focus

Use of the Sinar Scheimpflug Focusing Scale

Use of the Sinar Depth of Field Scale

**Demo of Scheimpflug Principal focusing** – You may not leave class until you have focused the camera properly.

**Assignment:** Two 4x5 color transparencies properly mounted in 11x14 black mat boards

One landscape with everything in focus (foreground and background)

One road (vertical) where there are discerning marks (graffiti, manhole, center lines, etc.)

Both Scheimpflug photographs must be shot using an aperture no larger than f/8 – this lets me know that you know how to properly apply the focusing techniques

Everything must be in focus in all prints.

**Hint:** Feel free to draw on a road (using chalk or pastels), it will wash off with rain or a hose and makes the image more interesting.
**Week 4**

**Critique:** Vertical Scheimpflug Prints

**Lecture:** Questions and Clarification on Scheimpflug movements for focus.

**Mid-Term Test Questions Outlined**
- Reciprocity and Reciprocity Failure
- Slow Shutter Speeds and Movement
- How to shoot water (movement) with different effects using faster and slower shutter speeds – the use of neutral density filters to extend exposure times (watch out for reciprocity failure!)

**Assignment:** Two 4x5 color transparencies properly mounted in 11x14 black mat boards

Horizontal Scheimpflug: Photograph a wall or fence from the corner showing the wall going in the distance from one corner of the frame to the other, make sure both pictures are different. Everything must be in focus on both prints.

---

**Week 5**

**Mid-Term Comprehensive Written Exam**

**Critique:** Horizontal Scheimpflug Prints

**Lecture:** Back Swing Correcting Horizontal Perspective

**Final Projects Review** – Five Photographs on a single theme

**Assignment:** Contact print (four contacts will fit on an 8x10 sheet of paper), negatives and one 11”x14” fiber based print, one 4x5 color transparency properly mounted in 11x14 black mat board

Photograph a building from the corner so you can see both sides of the building. Everything must be in proper perspective and in focus.
Week 6

Critique: Horizontal Perspective Print

Lecture: Portraiture – Effect of Camera on Photographer and Subject
Reverse Scheimpflug, best known as Selective Focus
The Zone System Intro – use Zone VI for skin tones (B&W only)
The Basics of MACRO

HP Combi Plan Tank – Building the tank, Loading and Using the film developing tank (Use Large Film Tank Developing Times) Note: Do not use Stop Bath with Large Format film

The Enlargers – Always use a 135mm or 150mm lens when printing large format negatives. The basic use of the enlargers.

How to Make a Contact Sheet – Our Saunders Variable Contrast enlargers are set up with 4”x5” diffusers so it is necessary to make contacts sheets using a 135mm or 150mm lens to keep from having light fall off on the edges and minimize exposure times.

Enlarging Paper – RC or Resin Coated paper may only be used for contacts, all prints made for class must be made using a double weight, glossy, fiber based paper that is air dried and pressed properly before coming to class. All prints should have at least a 1” white border on all sides.

Review Film Developing times and procedures as well as B&W Printing

Assignment: Four Pictures (two 11x14 B&W prints properly printed with at least one inch white borders - pressed before coming to class - and two 4x5 color transparencies properly mounted in 11x14 black mat boards) – Contacts, negatives and two 11x14 fiber based prints – One B&W photograph and one color transparency in total focus, one B&W photograph and one color transparency using Reverse Scheimpflug (Selective Focus) with only the eyes in focus – preferably only one eye in focus.

Hint: First movement is Front Tilt (Lens) then focus using the back standard. Second movement is Front Swing (Lens) then focus again using the back standard.

Bring something small to shoot as a MACRO during next class and come prepared to shoot in the studio. **** Bring the Data Sheet(s) for Your Film(s) **** Download the datasheet from the manufacturer’s Internet site (PDF form) and bring it with you to class.

Please bring a calculator and the Calumet Bellows Extension Exposure Calculator to class so we can calculate MACRO by the numbers as well as the easy way with the Calumet Bellows Extension Exposure Calculator.
Week 7

Critique: Portraiture, Sharp Focus and Selective Focus
And how well we did developing and printing 4x5 B&W…

Lecture: MACRO – Bellows Extension Factor, Magnification
Bellows Factor Exposure Adjustments and Reciprocity Failure Exposure Adjustments
Use of the Zone System in the Studio for Color Transparency and B&W Negative

Demo: How to put extension rails and bellows extensions on Sinar Large Format cameras
We will shoot the MACRO assignment as a class exercise.

Assignment: One Polaroid from class MACRO shoot. One Polaroid, and either one negative and
11x14 print of product shot or one color transparency properly matted in 11x14 black mat board
of a MACRO. Everything must be in focus.

Week 8

Critique: MACRO Prints and Product shot

Lecture: Filter Factors and Exposure Adjustment(s)
Filters needed: #11 Yellow (Yellow-Green), #25 Red and a Polarizer.
Oh! what a difference a filter can make…

Assignment: Using the above filters on the camera lens take four separate (yet interesting)
photographs of a person in an environmental or landscape setting. Make sure the person in the
picture is holding a sign with the appropriate filter label on it so you can identify the filter
used when the negative is developed. Label the contact(s) appropriately according to which
filter was used.

One B&W negative and contact – no filter, straight photograph
One B&W negative and contact – #11 Yellow-Green filter
One B&W negative and contact – #25 Red filter
One B&W negative and contact – Polarizer Filter
One Color Transparency – no filter, straight photograph
One Color Transparency – Polarizer Filter
Week 9

**Final Written Exam and Practical Exam...** If you fail the practical you must retake the class.

The practical exam will be an assignment done during class that demonstrates the use of the large format camera. The assignment will consist of at least one scheimpflug movement (focus), one perspective movement (shape) and another camera movement. All images must be in focus and properly exposed.

**Critique:** Filter Contacts and Filter Transparencies

**Assignment:** Work on Final Project, Turn in any late assignments

---

Week 10

**Final Project Due** – Five pictures on the theme of your choice.

B&W prints will be exquisitely printed on 11x14 fiber based paper with nice wide white borders for ease of handling, properly spotted, archivally mounted using photo corners, window mounted in 16x20 white archival mat board using white archival linen tape to form a hinge between the two mat boards and making a professional presentation.

Color transparencies will be properly matted in 11x14 black mats using black (preferably black matt) archival photo tape.

**Critique:** Final Project