

The Warnell Continuing Education Program

Daniel B. Warnell School of Forestry and Natural Resources

Aerial Photogrammetry Refresher

November 11, 2011

Instructors: Pete Bettinger

Warnell School of Forestry and Natural Resources,

Room 4-516

University of Georgia, Athens, Georgia



WARNELL
SCHOOL OF FORESTRY AND NATURAL RESOURCES
THE UNIVERSITY OF GEORGIA

About the Program

Aerial photographs and digital orthophotographs are commonly used in natural resource management for reconnaissance and mapping processes. Foresters frequently use aerial photographs to assess forest characteristics, identify critical habitat and sensitive areas, assess legal and environmental issues, and monitor silvicultural practices. While the technology is evolving from film to digital formats, the basic underlying methodology is very similar.

This short, five-hour course will:

- Briefly introduce aerial photography technology
- Review photo interpretation principles
- Discuss and review how photos can be viewed in stereo, and why one would do so
- Discuss spatial and spectral resolution of aerial photographs
- Discuss the issues of scale and horizontal and vertical measurements from aerial photos
- Discuss how digital orthophotographs are created and used
- Discuss small format aerial photography options

Upon completion of this course, you should be able to:

- Understand the basic principles of aerial photogrammetry
- Understand the advantages and limitations of using aerial photographs in natural resource management
- Understand how aerial photographs can be used effectively in natural resource management

Who Should Attend?

Natural resource management professionals who have the opportunity to use aerial photographs or digital orthophotographs in their current positions, but could use a short refresher on the technology. People who want to learn more about aerial photogrammetry in order to advance their careers or to meet the needs of a professional certification organization.

Registration Fees

The fee for this course is \$150, which includes instructional materials, one luncheon.

Format

The course involves lecture presentations that provide an overview of aerial photogrammetry principles as they pertain to forestry and natural resource management in the United States. The material will be presented in a logical manner, from an introduction to the technology to interpretation principles, stereoscopy, resolution, measurements, and finally to the wide array of systems and products associated with the field. These lectures all occur within a five-hour period of time on the day of the course. Handouts will be provided to summarize the material presented.

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Instructor

Dr. Pete Bettinger is a professor in the Warnell School of Forestry and Natural Resources. He has more than 25 years of operating, teaching, and research experience in forestry and natural resources, including roles with the U.S. Forest Service, several forest products companies, and Oregon State University. Dr. Bettinger has taught courses on forest measurements, forest planning, and harvest scheduling, as well as GIS applications in natural resource management. In 2009, Academic Press published his book *Forest Management and Planning*, and in 2008 Oxford University Press published his book *Geographic Information Systems: Applications in Natural Resource Management*. Dr. Bettinger earned BS and MS degrees from Virginia Tech; and a PhD from Oregon State University.

Course Itinerary

November 11, 2011

Time	Event
9:20 AM	Registration
9:30	Brief introduction to aerial photography technology
10:00	Review of photo interpretation principles
11:00	Stereoscopy, spatial and spectral resolution of aerial photographs
12:00	Scale, horizontal measurements, and vertical measurements
12:30 PM	Lunch
1:00	Scale, horizontal measurements, and vertical measurements
1:30	Creation and use of digital orthophotographs
2:00	Small format aerial photography options
2:45	Natural resource applications and summary
3:00	Adjourn

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Continuing Education Credits

- 5.0 Continuing Forestry Education credit hours - Category 1 (approved)
- 5.0 Continuing Logger Education credit hours - Environment (approved)

Full Attendance is Mandatory to Receive Credit.

You may register using the form below, or register online at <http://conted.warnell.uga.edu> or by phone by calling Ingvar Elle at 706-583-0566.

Registration Form

Name - please print _____

Preferred name for badge _____

Business mailing address or Home address (please check one)

City _____ State _____ Zip _____ County, if Georgia _____

Home phone _____ Work phone _____ Fax _____

Email address _____ Please send me e-mails about other Warnell Continuing Education programs.

Position _____ Organization/employer _____

By registering for this event I agree to comply with all event and lodging cancellation policies.

Aerial Photogrammetry Refresher
Registration by November 10, 2011.....\$150.00
Total: \$ _____

Enclosed is a check # _____
(payable to Warnell School of Forestry and Natural Resources)
Your registration will not be processed until payment is received.

Cancellations:
If you wish to request a refund, please do so by October 28, 2011 by calling Ingvar Elle (706-583-0566).

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Mail payment to: Attn: Ingvar Elle
Warnell School of Forestry & Natural Resources
The University of Georgia
Athens, Georgia 30602

Parking and Directions

A visitor parking deck is located just north of the Georgia Center. Parking is \$10.00 per day.

For a map and directions go to:

http://www.warnell.uga.edu/h/aboutWSFR/directions/index_html

Special Services

If you require special services or dietary considerations, please contact Ingvar Elle at 706-583-0566 or e-mail him at ielle@warnell.uga.edu prior to November 10, 2011.