

## Introductory Echocardiography October 14-15, 2005

This course is designed to give the veterinary practitioner a basic understanding of small animal echocardiography. Major topics include ultrasound principles, normal cardiac anatomy and physiology, techniques for achieving quality results, videotape presentations of important diseases and hands-on scanning of normal dogs. Six hours of interactive sessions and 4 hours of scanning lab are included. Course enrollment limited to 9.

**Prerequisite:** none

**Course instructors:** Drs. Pyle, Abbott & Christopher Paige

**Tuition:** \$850

**Contact hours:** 10

## Advanced Echocardiography October 21-23, 2005

This course is designed for veterinary practitioners with experience in general cardiac scanning in small animals who would like to expand their skills to include pulse wave Doppler, continuous wave Doppler, color flow Doppler, special measurements and calculations and applying the Bernoulli equation to clinical cases. From the total of 21 contact hours, 7 are

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*If you are a person with a disability and require any auxiliary aids, services, or other accommodations for these courses, please discuss your accommodation needs with Jane Todd at (540) 231-2014 or TDD 1 (800) 828-1120 at your earliest convenience.*

VT/170/0805/3.6M/260382

devoted to advanced scanning including dogs and cats with spontaneous disease. Videotape presentations of clinical cases using advanced echocardiographic features are a prominent aspect of the course. The course is limited to 5 veterinarians. A video tape on congenital and acquired problems is given to each participant.

**Prerequisite:** Introductory echocardiography course and sufficient clinical experience to perform a thorough two-dimensional and M-mode echocardiogram.

**Course instructor:** Dr. Pyle

**Tuition:** \$1495

**Contact hours:** 21

## Applied Ultrasonography Laboratory October 28-29, 2005

This is a 100% scanning laboratory course designed to improve the technical and diagnostic skills of veterinary practitioners presently doing cardiac and abdominal ultrasound in small animals. Instructors perform appropriate live animal demonstrations and guide the registrants so that they can achieve comparable results. Dogs and cats will be scanned. Each registrant spends 5 hours doing echocardiography and 5 hours in abdominal ultrasonography. The course is limited to 8 registrants.

**Prerequisite:** An introductory course in cardiac and abdominal ultrasonography.

**Course instructors:** Drs. Pyle & Carrig

**Tuition:** \$975

**Contact hours:** 10

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Continuing and Professional Education  
Virginia Polytechnic Institute and State University  
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Introductory Echocardiography

October 14-15, 2005

Advanced Echocardiography

October 21-23, 2005

Applied Ultrasonography Laboratory

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VIRGINIA TECH presents  
Three Practical Short Courses  
for Veterinarians



## Introductory Echocardiography

October 14-15, 2005

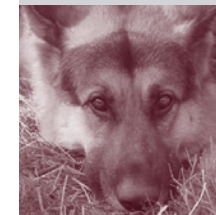
[www.conted.vt.edu/intecho/](http://www.conted.vt.edu/intecho/)



## Advanced Echocardiography

October 21-23, 2005

[www.conted.vt.edu/adecho/](http://www.conted.vt.edu/adecho/)



## Applied Ultrasonography Laboratory

October 28-29, 2005

[www.conted.vt.edu/ultra/](http://www.conted.vt.edu/ultra/)



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Virginia – Maryland Regional College of Veterinary Medicine  
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VIRGINIA POLYTECHNIC INSTITUTE  
AND STATE UNIVERSITY

## Introductory Echocardiography

October 14-15, 2005

Virginia-Maryland Regional College of Veterinary Medicine

### Friday Afternoon

- 12:00-12:30 Registration at VMRCVM
- 12:30-1:30 What is echocardiography and what are the essential principles veterinarians need to know to function in this area?
- 1:30-2:15 Echocardiographic characteristics of the normal cardiovascular system
- 2:15-2:45 The Equipment: What is needed and how does it function? What is 2-dimensional echo? What is M-mode echocardiography? What is pulse and continuous wave Doppler? What is color flow Doppler?
- 2:45-3:00 Coffee/Tea/Soda Break
- 3:00-5:00 Echocardiographic scanning laboratory using normal dogs
- 6:30-7:00 Reception at the Holiday Inn-University
- 7:00 Dinner at the Holiday Inn-University

### Saturday Morning

- 7:30-8:00 Breakfast in the Commons of VMRCVM
- 8:00-9:30 Case discussions illustrating how echocardiography is used to recognize and treat heart disease
- 9:30-9:45 Coffee/Tea/Soda Break
- 9:45-10:30 Case oriented echocardiography continued
- 10:30-12:30 Exit Echocardiographic scanning laboratory
- 12:30-1:00 Lunch in the commons of VMRCVM

## Advanced Echocardiography

October 21-23, 2005

Virginia-Maryland Regional College of Veterinary Medicine

### Friday Afternoon

- 11:30-12:00 Registration at VMRCVM
- 12:00-1:00 Lunch/introduction to the course with Dr. Pyle and registrants at the VMRCVM
- 1:00-2:05 Normal cardiac anatomy and gross pathology of specific cardiac diseases; Correlation with echocardiographic findings
- 2:05-2:15 Web sites for cardiology – Heart Station
- 2:15-3:15 Physiologic dissection of the heart using pulse wave, continuous wave and color flow Doppler
- 3:15-3:45 Break & topic discussion

- 3:45-5:15 M-mode, 2-dimensional and Doppler measurements and calculations; Aliasing
- 5:15-6:00 Applying the Bernoulli equation to clinical cardiac problems

### Saturday

- 8:00-10:30 Congenital/acquired heart disease; Videotapes of animals with congenital and acquired heart disease with emphasis on pulse wave, continuous wave and color flow Doppler
- 10:30-11:00 Break & topic discussion
- 11:00-1:00 Pulse wave, continuous wave and color flow Doppler imaging of normal dogs and cats
- 1:00-2:00 Lunch & topic discussion
- 2:00-5:00 Imaging animals with spontaneous heart disease
- 6:30-7:00 Reception at the Holiday Inn-University
- 7:00 Dinner at the Holiday Inn-University

### Sunday

- 8:30-9:00 Special cardiac calculations
- 9:00-10:00 Videotapes of heart disease
- 10:00-10:30 Break & topic discussion
- 10:30-12:30 A comprehensive echocardiographic study will be done by each registrant on a normal dog. This includes all M-mode, two dimensional and Doppler functions presented in the course.
- 12:30 -1:30 Lunch, case discussion and course evaluations

## Applied Ultrasonography Laboratory

October 28-29, 2005

Virginia-Maryland Regional College of Veterinary Medicine

### Friday Afternoon

- 12:00-12:30 Registration at VMRCVM
- 12:30-5:30 Scanning lab – Cardiac and Abdominal
- 6:30-7:00 Reception at the Holiday Inn-University
- 7:00 Dinner at the Holiday Inn-University

### Saturday Morning

- 7:30-8:00 Breakfast in the Commons of VMRCVM
- 8:00-1:00 Scanning lab – Cardiac and Abdominal
- 1:00 Lunch – and evaluations

## Location and Lodging

All courses are held at the Virginia–Maryland Regional College of Veterinary Medicine on the campus of Virginia Tech.

A limited number of lodging rooms are available for Introductory Echocardiography, Advanced Echocardiography, and Applied Ultrasonography Laboratory at the Holiday Inn-University. To reserve a room, please call the Holiday Inn toll free at 1-800-HOLIDAY or (540) 552-7001 by September 23, 2005.

## How to Register

The fees for these courses include registration for lectures and laboratories, course, reception and dinner, breakfast and lunch as noted, handouts and CE certificates. To register, complete and return the attached form by **2 weeks prior to the course**. Advanced registration and payment are required to confirm your enrollment. Registrations after this date should be confirmed with the Conference Registrar at (540) 231-5486 to verify space availability. Due to limited enrollment, be certain your registration has been confirmed prior to making airline reservations.

## Refund and Cancellation Policy

**Note:** Payment of registration fees is required prior to program attendance. Registration will be processed when payment is received. **Refund Policy:** Requests for refunds will be honored when received seven calendar days prior to the program. However, another person may be substituted at any time for this program. A \$25 administrative fee will be deducted for cancellations. In the unlikely event that this program is cancelled or postponed due to insufficient enrollments or unforeseen circumstances, the university will fully refund registration fees but cannot be held responsible for any other expenses, including cancellation or change charges assessed by airlines, hotels, travel agencies, or other organizations.

## For More Information

For further information about course content, please contact Ms. Anne Cinsavich, Virginia– Maryland Regional College of Veterinary Medicine, Virginia Tech, Blacksburg, VA 24061 at (540) 231-5261 or e-mail: [aclapsad@vt.edu](mailto:aclapsad@vt.edu).



## Registration

2005

Please print or type – complete separate form for each participant. Check the appropriate box below for course date(s). You may also register online at the appropriate web site.

- Intro Echo**, October 14-15, [www.conted.vt.edu/intecho/](http://www.conted.vt.edu/intecho/)
- Advanced**, October 21-23, [www.conted.vt.edu/adecho/](http://www.conted.vt.edu/adecho/)
- Applied Lab**, October 28-29, [www.conted.vt.edu/ultra/](http://www.conted.vt.edu/ultra/)

Name \_\_\_\_\_

Social Security Number \_\_\_\_\_

Position/Title \_\_\_\_\_

Employer \_\_\_\_\_

\*Employer's FID# \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_

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

Office Phone \_\_\_\_\_

Fax \_\_\_\_\_

E-mail \_\_\_\_\_

Signature \_\_\_\_\_

\*Necessary to process a refund payable to any company, agency or government

### AMOUNT ENCLOSED:

- \$850 for **Introductory Echocardiography**
- \$1495 for **Advanced Echocardiography**
- \$975 for **Applied Ultrasonography Lab**

### METHOD OF PAYMENT:

- Check enclosed.  
Make check payable to: Treasurer, Virginia Tech, CE
- Credit Card
- MasterCard       VISA       AmEx

Cardholder Name \_\_\_\_\_

Card No. \_\_\_\_\_

Exp. Date \_\_\_\_\_

**Return by two weeks prior to course to** (no staples, tape, or paper clips, please):  
Jane Todd, Continuing and Professional Education,  
702 University City Blvd., Mail Code 0364,  
Virginia Tech, Blacksburg, VA 24061, phone (540) 231-2014,  
fax (540) 231-9886 (for credit card registrations only)

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RECEIVED:	AMNT: _____
	CHK#: _____
	DPST: _____
	DATE: _____