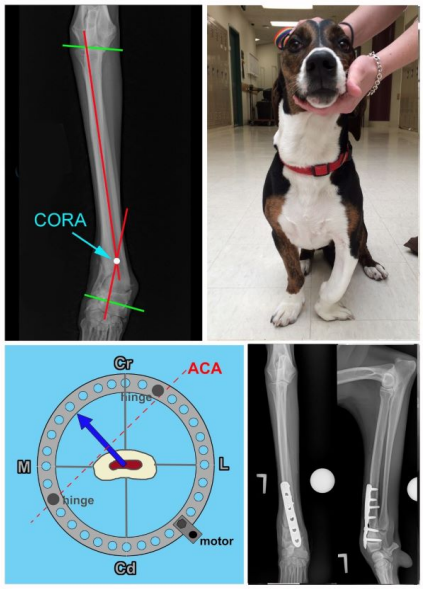
AO VET North America

AO VET NA Masters Course—Principles of Deformity Correction: Thoracic Limb

October 2, 2025 - October 4, 2025
Glendale, Arizona, USA

The purpose of this course is to provide the participant with the basic fundamentals of understanding how to assess the alignment of the forelimb of the dog. These principles will then be applied to a number of conditions that arise from pathologic malalignment of the forelimb, such as growth disturbances, angular limb deformation and joint incongruity. Participants will learn a variety of pre-operative assessments and operative techniques in a highly interactive environment involving lectures, workbook exercises, software-based planning sessions and hand-on laboratory experiences.

In preparation for this course, it is ***required*** you review the available online pre-course materials in order to help you better prepare for this educational event. You will have access to this material through the AO NA Learning Management System (LMS). Instructions will be sent to all registered course participants on how to access the learning materials closer to the time of the course by AO NA staff.



****REGISTERED PARTICIPANTS ARE REQUIRED TO BRING EITHER A LAPTOP OR IPAD TO THE COURSE IN ORDER TO ACCESS THE COMPUTER SOFTWARE TEMPLATING PROGRAM DURING THE COURSE**

Target Audience

Enrollment is open to Veterinary residents and practicing veterinarians.

Prerequisite

Completion of an ***AO VET Principles of Small Animal Fracture Management*** course is a prerequisite for this Masters level course since familiarity with instrumentation and techniques will be assumed.

Event Summary

Tuition:
Level Name: Participant - Veterinary
Pricing Tier: Attending
Tuition: $2,100.00

Level Name: Participant - Veterinary
Pricing Tier: Resident
Tuition: $1,890.00

Course Prerequisite(s):

- Principles of Small Animal Fracture Management

Venue:
Renaissance Phoenix Glendale Hotel
9495 W Entertainment Blvd
Glendale, Arizona, USA
Phone Number: (623) 937-3700
https://www.marriott.com/en-us/hotels/phxgr-renaissance-phoenix-glendale-hotel-and-spa/overview/

Language(s):
English
Directly Provided by:
AO North America
Professional Level Prerequisite(s):
No Prerequisites

CME

Continuing Education Credit: 17.50

- AO North America is a Registry of Approved Continuing Education (RACE) Provider (Number 50-26631).

Designation Statement
This program was reviewed and approved by the AAVSB RACE program for 17.50 hours of continuing education credit in jurisdictions which recognize AAVSB RACE approval. Please contact the AAVSB RACE program if you have any comments/concerns regarding this program's validity or relevancy to the veterinary profession.

The Continuing Medical Education (CME) mission of AO North America (AONA®) is to provide comprehensive multidisciplinary needs based education to surgeons, fellows, and residents in the specialties of orthopedic, hand, craniomaxillofacial, spine, neurosurgery, and veterinary surgery in the areas of trauma (i.e.), operative reduction and fixation), degenerative disorders, deformities, tumors, and reconstruction.

Expected results of AONA's CME activities for surgeons, fellows, and residents are to:
• Increase their knowledge base and surgical skill level
• Improve competence by applying advances of knowledge in patient care in the areas of trauma, degenerative disorders, deformities, tumors, and reconstructive surgical techniques
• Address practice performance gaps by improving management of aspects of traumatic injuries and musculoskeletal disorders (i.e., pre-operative planning to post-operative care)

Learning Objectives

Upon completion, participants should be able to:

- Assess the limb alignment of the thoracic limb (both normal and abnormal) in the dog
- Utilize the determined limb alignment to document and define any malalignment or deformity present
- Use the map of documented malalignments to develop a pre-surgical plan for correction

Faculty

Fox, Derek - Chairperson

DVM, PhD, DACVS
Professor, Small Animal Orthopedic Surgery
Veterinary Health Center
University of Missouri
Columbia, Missouri

Dr. Fox is a Professor of Small Animal Orthopedic Surgery and Chief of the Small Animal Surgery Service at the University of Missouri's Veterinary Health Center. He graduated from veterinary school at Michigan State University in 1998, after which he completed an internship, surgical residency and PhD at the University of Missouri, becoming faculty in 2004. He teaches courses and lectures on a variety of topics regarding small animal orthopedic surgery both nationally and internationally. Dr. Fox's special research interest is in limb alignment and deformity correction. He has authored or co-authored over 60 peer reviewed papers, 8 text book chapters and numerous abstracts. He adapted the use of the Center of Rotation of Angulation methodology for the quantification and pre-surgical planning of angular limb deformities in dogs. He is a member of the American College of Veterinary Surgeons, Veterinary Orthopedic Society and AO.

Jaeger, Gayle - Co-Chairperson

DVM, MSpVM, DACVS
Pet Emergency Treatment and Specialties
Lancaster, Pennsylvania

Gayle Jaeger, a native of Long Island New York, received her Bachelor's of Science from Syracuse University, and then earned her Doctorate of Veterinary Medicine from North Carolina State University. She completed an academic internship at Oklahoma State University and a Specialized Orthopedic Surgical Internship in Orlando, Florida at Affiliated Veterinary Specialists. Dr. Jaeger then returned to North Carolina State University for her Surgical Residency training while earning a Masters Degree in Specialized Veterinary Medicine. Dr. Jaeger, was inducted into the American College Of Veterinary Surgeons In 2004 and has been faculty with AONA since 2008. She currently practices in Lancaster Pennsylvania. In her free time she enjoys snowmobiling in Maine and boating on the Chesapeake.

Marcellin-Little, Denis - Evaluator

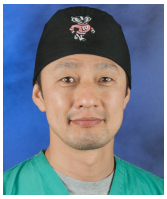
DEDV, DACVS, DACVSMR, DECVS
Professor and Chair, Orthopedic Surgery
Department of Surgical and Radiological Sciences
School of Veterinary Medicine
University of California, Davis
Davis, California

Dr. Denis Marcellin-Little is a Diplomate of the American College of Veterinary Surgeons and a charter Diplomate of the American College of Veterinary Sports Medicine and Rehabilitation. Dr. Marcellin-Little specializes in orthopedic surgery. He is professor and service chief of small animal orthopedic surgery at the University of California, Davis. Dr. Marcellin-Little graduated from the French veterinary school of Toulouse, France in 1988. He did an internship at Hollywood Animal Hospital in Hollywood, Florida, followed by a small animal surgery residency at North Carolina State University, where he was on the faculty from 1994 to 2017. He joined UC Davis in 2017. Dr. Marcellin-Little's surgical interests include total joint replacement and the management of limb deformities. His research interests include the medical and surgical management of severe joint disease and limb deformities. Dr. Marcellin-Little has completed all three phases of the faculty development program, Faculty education, Chair education and Leadership education programs. Dr. Marcellin-Little represented veterinary medicine on the Board of Directors of AO North America from 2020 to 2024.

Bleedorn, Jason - Lecturer

DVM, MS, DACVS
Associate Professor
Small Animal Orthopedics
Colorado State University
Department of Clinical Sciences
Fort Collins, Colorado

Dr. Bleedorn is an associate professor of orthopedics at Colorado State University. His clinical and research interests include bone deformity correction, 3D imaging/modeling/printing, implant design/biomechanics, fracture innovation, and arthroscopic surgery. He has published manuscripts and book chapters in these areas and is concurrently an instructor for AO VET, Arthrex, and IMEX. He is passionate about innovation, improving orthopedic care for pets, and teaching of veterinarians, residents and students. Dr. Bleedorn's academic training includes a veterinary degree (University of Illinois, 2005), internships (Purdue University, 2006 and Dallas Surgical Center, 2007), and residency (2010) and MS degree (University of Wisconsin, 2015). He was on faculty at the University of Wisconsin for 10 years prior to moving to Colorado in 2022.



Hayashi, Kei - Lecturer

DVM, PhD, DACVS
Professor Emeritus
College of Veterinary Medicine
Cornell University
Ithaca, New York

Dr. Kei Hayashi graduated from the University of Tokyo with BVMS/DVM/PhD degrees (1986-1997), and then obtained MS and PhD degrees at the University of Wisconsin (1997). He completed a small animal surgery residency at the University of Wisconsin (2003) and became a Diplomate of the American College of Veterinary Surgeons (ACVS). He served as an assistant professor of small animal orthopedic surgery at the Michigan State University (2003-2005) then moved to UC Davis and was tenured with accelerated promotion in 2012. He began his appointment at Cornell University in 2013. His research focus is in pathology of ligament/tendon injury and wound healing, evaluation of total joint replacement systems, molecular profiling of osteoarthritis, and comparative orthopedics and sports medicine. His clinical interests are in arthroscopy, total joint arthroplasty, biological approach to joint surgery, minimally invasive fracture treatment, and application of novel research discoveries to clinical patients.

Karlin, William - Lecturer

DVM, MS, DACVS
Assistant Professor
Orthopedic Surgery
Department of Clinical Sciences
Cummings School of Veterinary Medicine
Tufts University
North Grafton, Massachusetts

Dr. Karlin is currently an Assistant Professor in Small Animal Orthopedic Surgery at the Cummings School of Veterinary Medicine at Tufts University. He earned his DVM degree at Kansas State University College of Veterinary Medicine in 2006. He went on to complete a three-year residency program and Masters Degree at the University of Illinois in Equine Surgery in 2010. He then worked in private practice at two equine surgical referral centers for several years before completing the requirements for dual certification in Small Animal Surgery, at Lauderdale Veterinary Specialists. Dr. Karlin was the first surgeon to pass the requirements for dual certification through ACVS becoming a diplomate of the American College of Veterinary Surgeons (ACVS) in both small animal and large animal. His areas of clinical and research interest include arthroscopy, fracture healing, fracture repair, and orthopedic implants including minimally invasive methods, total joint replacement, osteoarthritis, and assessment and correction of limb deformity.

Agenda

Day 1

Thursday, October 02, 2025 - 07:00 - 17:00 - (includes breaks, travel-time and meals)

Activity	*Area*
AO Office	Solana G
Breakfast	Hospitality Suites 1-2-3
Coffee Break	Solana Ballroom Foyer
FRC	Solana G
Lab	Solana E
Lecture	Solana F
Lunch	Hospitality Suites 1-2-3
Reception	Outside Courtyard
Registration	Conference Registration Desk

Schedule	Title	Moderator	Faculty	Room
07:00 - 08:00	Registration and Breakfast			Conference Registration Desk
08:00 - 08:10	Welcome and Course Overview		Fox, D	Solana F
08:10 - 12:00	GEOMETRIC CONCEPTS AND PRINCIPLES OF THE CORA METHODOLOGY	Fox, D		Solana F
08:10 - 08:30	Introduction to the CORA Methodology - Geometric Concepts		Fox, D	Solana F
08:30 - 09:00	Determining the Location and Magnitude of a Deformity - The Anatomy of A 'CORA'		Jaeger, G	Solana F
09:00 - 09:10	Workbook Exercise 1: Using the CORA method to assess the location and magnitude of a deformity			Solana F
09:10 - 09:45	The Graphical Method of Determining the Plane of the Deformity		Fox, D	Solana F
09:45 - 10:00	Workbook Exercise 2: Using the graphic method to determine the plane of the deformity			Solana F
10:00 - 10:20	Coffee Break			Solana Ballroom Foyer
10:20 - 10:50	Concepts of Osteotomies and Paley's Three Rules		Bleedorn, J	Solana F
10:50 - 11:10	Workbook Exercise 3: Practicing virtual corrections of deformities with different osteotomy types			Solana F
11:10 - 11:30	Deformity Plane as it Relates to Hinged CESF Frame Correction		Jaeger, G	Solana F
11:30 - 12:00	CESF Frame Design and Construction to Correct a Uniapical Antebrachial Deformity		Marcellin-Little, D	Solana F
12:00 - 13:00	Lunch			Hospitality Suites 1-2-3
13:00 - 17:00	GEOMETRIC CONCEPTS AND PRINCIPLES OF THE CORA METHODOLOGY (continued)			Solana F
13:00 - 13:15	Lab A Planning: Determining the Magnitude and Location of a Frontal Plane Deformity - PVC		Jaeger, G	Solana F
13:15 - 13:30	Lab B Planning: Determining the Magnitude and Location of an Oblique Plane Deformity - PVC		Jaeger, G	Solana F
13:30 - 13:40	Travel to Lab			
13:40 - 14:10	Lab A: Correcting a Frontal Plane Deformity with a Hinged CESF Frame - PVC			Solana E
14:10 - 14:40	Lab B: Correcting an Oblique Plane Deformity with a Hinged CESF Frame - PVC			Solana E
14:40 - 15:00	Travel to Lecture Hall / Coffee Break			
15:00 - 15:20	Physical Examination of the Canine Forelimb Focusing on Alignment and Deformity Assessment		Fox, D	Solana F

15:20 - 15:40	Radiographing the Malaligned Forelimb - Techniques, Interpretation and Artifacts / Pitfalls	Bleedorn, J	Solana F
15:40 - 16:00	Workbook Exercise 4: Determining the Location, Magnitude and Plane of an Antebrachial Deformity using Radiographs		Solana F
16:00 - 16:20	Computed Tomography of the Malaligned Forelimb - Techniques, Interpretation and Artifacts / Pitfalls	Karlin, W	Solana F
16:20 - 17:00	Lab C and D Planning: Determining the Location, Magnitude and Plane of an Oblique Uniapical Radioulnar Deformity	Fox, D	Solana F
17:00 - 17:00	Homework Assignment	Jaeger, G	Solana F
17:00 - 17:00	Adjourn for the Day		
17:00 - 18:00	Welcome Reception		

Day 2

Friday, October 03, 2025 - 08:00 - 17:00 - (includes breaks, travel-time and meals)

Activity	*Area*
AO Office	Solana G
Breakfast	Hospitality Suites 1-2-3
Coffee Break	Solana Ballroom Foyer
FRC	Solana G
Lab	Solana E
Lecture	Solana F
Lunch	Hospitality Suites 1-2-3
Reception	Outside Courtyard
Registration	Conference Registration Desk

Schedule	Title	Moderator	Faculty	Room
08:00 - 08:20	Homework Review		Jaeger, G	Solana F
08:20 - 13:00	CLINICAL APPLICATIONS TO THE CANINE FORELIMB	Fox, D		Solana F
08:20 - 08:40	Lab C and D Explanation and Overview		Fox, D	Solana F
08:40 - 08:50	Travel to Lab			
08:50 - 09:20	Lab C: Correcting an Oblique Uniapical Radioulnar Deformity Model with a CESF and Opening Wedge Osteotomy			Solana E
09:20 - 09:50	Lab D: Correcting an Oblique Uniapical Radioulnar Deformity Model with ORIF and Closing Wedge Ostectomy			Solana E
09:50 - 10:00	Travel to Lecture Hall / Coffee Break			
10:00 - 10:20	Torsion-Angulation Deformities of the Radius / Ulna: Gross Assessment and Radiographic Interpretation		Fox, D	Solana F
10:20 - 10:30	Workbook Exercise 5: Planning a Correction of a Radius / Ulna Torsion-Angulation Deformity with Radiographs			Solana F
10:30 - 10:50	Torsion-Angulation Deformities of the Radius / Ulna: Assessment with Computed Tomography (CT)		Jaeger, G	Solana F
10:50 - 11:15	Workbook Exercise 6: Planning a Correction of a Radius / Ulna Torsion-Angulation Deformity with CT			Solana F
11:15 - 11:45	Lab E Planning: Determining the Location, Magnitude and Plane of an Oblique Uniapical Torsion-Angulation Deformity		Jaeger, G	Solana F
11:45 - 13:00	Lunch			Hospitality Suites 1-2-3
13:00 - 17:00	CLINICAL APPLICATIONS TO THE CANINE FORELIMB (continued)			Solana F
13:00 - 13:20	Lab E Explanation and Overview		Jaeger, G	Solana F
13:20 - 13:30	Travel to Lab			

13:30 - 14:00	Lab E: Correcting an Oblique Uniapical Torsion-Angulation Deformity with ORIF and Osteotomy of Choice		Solana E
14:00 - 14:10	Travel to Lecture Hall		
14:10 - 14:30	Biapical Radius / Ulna Deformities of Chondrodystrophic Dogs: Assessment and Description of the Condition	Fox, D	Solana F
14:30 - 14:50	Biapical Radius / Ulna Deformities - Correction Strategies	Marcellin-Little, D	Solana F
14:50 - 15:10	Workbook Exercise 7: Determining the Location and Magnitudes of Biapical Deformities: Frontal Plane Only		Solana F
15:10 - 15:30	Coffee Break		Solana Ballroom Foyer
15:30 - 16:00	Software Advances for 3D Assessment and Printing Application for Deformity Planning and Correction	Karlin, W	Solana F
16:00 - 16:20	3D Printed Cut Guides for Deformity Correction - How to Outsource and What to Expect	Bleedorn, J	Solana F
16:20 - 17:00	Lab F Planning: Determining the Location, Magnitude and Plane of Deformities on a Biapical Radius / Ulna Deformity	Bleedorn, J	Solana F
17:00 - 17:00	Adjourn for the Day		

Day 3

Saturday, October 04, 2025 - 08:00 - 14:30 - (includes breaks, travel-time and meals)

Activity	*Area*
AO Office	Solana G
Breakfast	Hospitality Suites 1-2-3
Coffee Break	Solana Ballroom Foyer
FRC	Solana G
Lab	Solana E
Lecture	Solana F
Lunch	Hospitality Suites 1-2-3
Reception	Outside Courtyard
Registration	Conference Registration Desk

Schedule	Title	Moderator	Faculty	Room
08:00 - 08:20	Homework Review		Bleedorn, J	Solana F
08:20 - 12:30	ADVANCED CONCEPTS AND MANIFESTATIONS OF FORELIMB MALALIGNMENT			Solana F
08:20 - 08:40	Lab F Explanation and Overview		Bleedorn, J	Solana F
08:40 - 08:45	Travel to Lab			
08:45 - 10:15	Lab F: Correcting a Biapical Radioulnar Deformity both Freehand AND with Outsourced 3D Printed Guides			Solana E
10:15 - 10:30	Travel to Lecture Hall			
10:30 - 10:50	Premature Closure of the Distal Radial Physis		Bleedorn, J	Solana F
10:50 - 11:20	Malalignment Resulting in Congenital Elbow Luxation: Types, Treatment, Prognosis		Hayashi, K	Solana F
11:20 - 11:40	The Dysostoses Affecting the Radius and Ulna: Types, Treatment, Prognosis		Karlin, W	Solana F
11:40 - 12:30	Lunch			Hospitality Suites 1-2-3
12:30 - 14:30	ADVANCED CONCEPTS AND MANIFESTATIONS OF FORELIMB MALALIGNMENT (continued)			Solana F
12:30 - 12:50	Humeral Torsion in Dogs with Concurrent Antebrachial Deformities		Bleedorn, J	Solana F
12:50 - 13:20	Management Strategies for Elbow Incongruity: Shortened Radius and Shortened Ulna Syndromes		Hayashi, K	Solana F
13:20 - 13:50	Alterations in Limb Alignment as Related to Medial Compartment Disease of the Canine Elbow		Marcellin-Little, D	Solana F

13:50 - 14:10	Corrective Osteotomies Used for the Treatment of Medial Compartment Disease of the Canine Elbow	Hayashi, K	Solana F
14:10 - 14:30	Dealing with Antebrachial Deformities with Concurrent Radiocarpal Joint Laxity / Derangement	Bleedorn, J	Solana F
14:30 - 14:30	Course Wrap-up		Solana F

AO NA Disclaimer Information

Faculty Disclosure:
It is the policy of AO North America to abide by the Accreditation Council for Continuing Medical Education Standards for Commercial Support. Standard 2: "Disclosures Relevant to Potential Commercial Bias and Relevant Financial Relationships of Those with Control over CME Content," requires all planners, including course directors, chairs, and faculty, involved in the development of CME content to disclose their relevant financial relationships prior to participating in the activity. Relevant financial relationships will be disclosed to the activity audience. The intent of the disclosure is not to prevent a faculty with a relevant financial or other relationship from teaching, but to provide participants with information that might be of importance to their evaluation of content. All potential conflicts of interest have been resolved prior to the commencement of this activity.

Off-Label / Experimental Discussions:
Some medical devices used for teaching purposes and/or discussed in AO North America's educational activities may have been cleared by the FDA for specific uses only or may not yet be approved for any purpose. Faculty may discuss off-label, investigational, or experimental uses of products/devices in CME certified educational activities. Faculty have been advised that all recommendations involving clinical medicine in this CME activity are based on evidence that is accepted within the profession of medicine as adequate justification for their indications and contraindications in the care of patients.

All scientific research referred to, reported or used in this CME activity in support or justification of a patient care recommendation conforms to the generally accepted standards of experimental design, data collection and analysis.

Disclaimer:
AONA does not endorse nor promote the use of any product/device of commercial entities. Equipment used in this course is for teaching purposes only with the intent to enhance the learning experience.

USE THE BELOW TEXT FOR DIDACTIC COURSES ONLY!

The opinions or views expressed in this live continuing medical education activity are those of the faculty and do not necessarily reflect the opinions or recommendations of
AO North America or any commercial supporter. The certificate provided pertains only to the participants' completion of the course.

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When individuals in a position to control or influence the development of the content have reported financial relationships with one or more commercial interests, AO North America utilizes a process to identify and resolve potential conflicts to ensure that the content presented is free of commercial bias.

Liability Statement:
AO North America faculty and staff assume no personal liability for the techniques or the use of any equipment and accessories used for teaching purposes in the laboratory. The certificate provided pertains only to the participants' completion of the course and does not, in any way, attest to the proficiency of the participants' clinical experience.

Laboratory Waiver:
To participate in this surgical skills course, you will be required to sign a waiver of liability prior to the course. In order to participate, AONA's policy mandates that every individual must wear appropriate protective garments provided by AO NA during the lab sessions. Participants who do not sign the waiver and wear protective garments will not be allowed to participate in the laboratory sessions.

Human Anatomic Specimens:
This course will involve exposure to and contact with human anatomic specimens. These specimens are being utilized for purposes of teaching and learning and are to be treated with the utmost respect. Participants should be familiar with and understand the potential risks involved and will be required to observe all customary safety procedures.

Animal Anatomic Specimens:
This course will involve exposure to and contact with animal anatomic specimens. These specimens are being utilized for purposes of teaching and learning and are to be treated with the utmost respect. Participants should be familiar with and understand the potential risks involved and will be required to observe all customary safety procedures.

Acknowledgment

In-Kind Support
AO North America gratefully acknowledges in-kind support for equipment and technical staff from J&JMedTech, IMEX Veterinary, Inc and VPOP-PRO.

Educational Grant
AO North America gratefully acknowledges funding for its education activities from the AO Foundation. The AO Foundation receives funding for education from Synthes GmbH.