

Advanced Techniques in Neurosurgery
August 18-20, 2025
The Viticus Center - Oquendo Campus | Las Vegas, NV

DAY 1 Monday, August 18, 2025		
Time	Topic	Presenter(s)
7:00-7:30 am	Registration <i>Faculty to pre-meet from 7-7:30</i>	
7:30-7:40 am	Welcome & Introductions	<i>Dr. Amanda Taylor, Dr. Talisha Moore</i>
7:40-8:30 am	VP Shunting <ul style="list-style-type: none"> • Get familiar with VP shunt systems • Learn tips for surgical technique to avoid shunt failure • Recognize the indications for shunt placement • Managing common complications • Ventricular fenestration and marsupialization 	<i>Dr. William Thomas</i>
8:30-8:45 am	Break	
8:45-10:15 am	Brain Surgeries: Transfrontal, Rostrotentorial, Alternative Methods <ul style="list-style-type: none"> • Assess the suitability of approaches for surgical access • Demonstrate appropriate patient positioning & surgical approach • Select/apply appropriate materials for closure • Describe anatomic landmarks for skin incision, muscle dissection and osteotomy • Determine whether zygomatic osteotomy may be necessary • Create an appropriate post-operative monitoring and treatment plan for veterinary patients undergoing these surgeries 	<i>Dr. Amanda Taylor</i>
10:15 am – 12 pm	Lab: Laboratory Overview, Review Instrumentation, VP Shunt, Transfrontal, Rostrotentorial <ul style="list-style-type: none"> • Perform VP shunt placement • Perform rostrotentorial and transfrontal approaches • Practice approach for zygomatic osteotomy • Demonstration of CUSA or similar equipment • Ventricular fenestration and marsupialization 	<i>Dr. Nick Jeffery, Dr. Sharon Kerwin, Dr. Talisha Moore, Dr. Amanda Taylor, Dr. William Thomas, Dr. Fred Wininger</i>

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DAY 1 (continued) Monday, August 18, 2025		
Time	Topic	Presenter(s)
12-1 pm	Lunch	
1-1:45 pm	Foramen Magnum Decompression with Titanium Mesh <ul style="list-style-type: none"> Review indications for foramen magnum decompression Review anatomy of region Learn technique for application of titanium mesh over craniectomy 	<i>Dr. William Thomas</i>
1:45-2 pm	Break	
2-4 pm	Lab: Laboratory Overview, Review Instrumentation, Foramen Magnum Decompression <ul style="list-style-type: none"> Perform Foramen Magnum Decompression 	<i>Dr. Nick Jeffery, Dr. Sharon Kerwin, Dr. Talisha Moore, Dr. Amanda Taylor, Dr. William Thomas, Dr. Fred Winger</i>
4-4:50 pm	AO Principles of Fracture Management <ul style="list-style-type: none"> Determination of presence of fracture Principles of stabilization Indications for different stabilization techniques in spine 	<i>Dr. Sharon Kerwin</i>
5-5:50 pm	Available Techniques for Fracture Stabilization <ul style="list-style-type: none"> Review use of selection of implant size and drilling Review screws and PMMA Review SOP use Review polyaxial screw use 	<i>Dr. Sharon Kerwin</i>
6 pm	Welcome Reception <i>Faculty to debrief first 15 minutes</i>	

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DAY 2 Tuesday, August 19, 2025		
Time	Topic	Presenter(s)
7:00-7:30 am	<i>Faculty to pre-meet from 7-7:30</i>	
7:30-8:20 am	Indications for Thoracolumbar Stabilization, Screws and PMMA, and How to Plan a Stabilization Case <ul style="list-style-type: none"> Understand anatomical challenges of thoracolumbar stabilization Learn appropriate corridors for thoracolumbar stabilization 	<i>Dr. Talisha Moore</i>
8:20-8:35 am	Lateral Corpectomy and Durotomy <ul style="list-style-type: none"> Recognize when these approaches might be useful Recognize anatomical landmarks and practical approaches 	<i>Dr. Nick Jeffery</i>
8:35-11:35 am	Lab: Laboratory Overview, Review Instrumentation, Thoracolumbar Stabilization, Lateral Corpectomy, Durotomy <ul style="list-style-type: none"> Faculty Demonstration of Lateral Corpectomy on Cadaver Demonstrate and perform all approaches. Identify important bony landmarks. Perform stabilization with Pins and "PMMA" Incorporate use of goniometers in lab 	<i>Dr. Nick Jeffery, Dr. Sharon Kerwin, Dr. Talisha Moore, Dr. Amanda Taylor, Dr. William Thomas, Dr. Fred Wininger</i>
11:35 am – 12:35 pm	Lunch	
12:35-1:25 pm	Lumbosacral Decompression and Stabilization with Polyaxial Implant Systems <ul style="list-style-type: none"> Recognize indications for stabilization Recognize anatomical landmarks and practicalities Review operation of polyaxial systems Compare alternative procedures at the lumbosacral junction 	<i>Dr. Fred Wininger</i>
1:35-2:25 pm	L7 Foraminotomy <ul style="list-style-type: none"> Recognize indications for this procedure Learn challenges and advantages of procedure 	<i>Dr. Nick Jeffery</i>

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DAY 2 (continued) Tuesday, August 19, 2025		
Time	Topic	Presenter(s)
2:25-2:40 pm	Break	
2:40-5:20pm	Lab: Laboratory Overview, Review Instrumentation, LS Decompression and Stabilization; Foraminotomy; Demo <ul style="list-style-type: none"> • Perform approach for lumbosacral stabilization • Perform approach for lateral foraminotomy • Practice implantation on 3D model using 3D Printed Jigs • Learn how to operate a polyaxial system • Perform polyaxial implantation 	<i>Dr. Nick Jeffery, Dr. Sharon Kerwin, Dr. Talisha Moore, Dr. Amanda Taylor, Dr. William Thomas, Dr. Fred Wininger</i>
5:20-6:00 pm	Principles of Stabilization Planning with Advanced Imaging <ul style="list-style-type: none"> • Review CT Planning software • Learn how to plan stabilization angles and implant size based on CT planning • Review case provided to planning example 	<i>Dr. Amanda Taylor,</i>

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DAY 3 Wednesday, August 20, 2025		
Time	Topic	Presenter(s)
7-7:30 am	Faculty meet to prepare for Day 3	
7:30-7:45 am	Questions So Far	<i>Dr. Amanda Taylor, Dr. Talisha Moore</i>
7:45-8:35 am	Craniocervical junction: Stabilization of atlantoaxial subluxation, review of concurrent abnormalities <ul style="list-style-type: none"> • Demonstrate patient positioning and surgical approach to ventral aspect of the atlantoaxial joint • Select and apply appropriate implants for screw and PMMA stabilization • Review use of 3D printed models for surgical planning 	<i>Dr. Fred Wininger</i>
8:35-9:35 am	Cervical Stabilization, Utilization of SOP, Caudal Cervical Spondylomyelopathy (CCSM) <ul style="list-style-type: none"> • Review the approach to ventral cervical spine for implant fixation • Recognize advantages and disadvantages of SOP system • Discuss the use of distraction with intervertebral spacers • Discuss indications for stabilization v. decompression for CCSM 	<i>Dr. Amanda Taylor, Dr. Sharon Kerwin</i>
9:35-9:45 am	Break	
9:45 am – 12:15 pm	Lab: Laboratory Overview, Review Instrumentation, Cervical Stabilization, Atlantoaxial Stabilization, CCSM <ul style="list-style-type: none"> • Practice implant placement on 3D AA models • Identify and utilize anatomical landmarks to guide implant placement • Select and place screws for ventral atlanto-axial fixation with screws and PMMA within cadaver • Demonstrate ventral surgical approach to the cervical region • Utilize SOP system to stabilize caudal cervical vertebrae 	<i>Dr. Nick Jeffery, Dr. Sharon Kerwin, Dr. Talisha Moore, Dr. Amanda Taylor, Dr. William Thomas, Dr. Fred Wininger</i>

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DAY 3 (continued) Wednesday, August 20, 2025		
Time	Topic	Presenter(s)
12:15-1:00 pm	Lunch	
1:00-1:50 pm	Dorsal Cervical Decompression and Cervical Hemilaminectomy <ul style="list-style-type: none"> Review approaches for both surgeries, Review tips for cervical hemilaminectomy previously unpublished Visualize landmarks for cervical hemilaminectomy 	<i>Dr. Amanda Taylor</i>
1:50-2:20 pm	Ventral Slot with Mag <ul style="list-style-type: none"> Review advantages of magnification in ventral slots Review available forms of magnification 	<i>Dr. Fred Wininger</i>
2:20-2:30 pm	Break	
2:30-5:00 pm	Lab: Laboratory Overview, Review Instrumentation, Dorsal Cervical Stabilization and Decompression, Cervical Hemilaminectomy, Ventral Slot, Optional MM/NN Biopsy <ul style="list-style-type: none"> Faculty Demonstration of Cervical Hemilaminectomy on Cadaver Perform approach to lateral cervical region and hemilaminectomy Perform dorsal cervical approach and decompression (optional based on need for neurosurgery certificate) Perform ventral slot with aid of magnification Optional – perform nerve and muscle biopsy 	<i>Dr. Nick Jeffery, Dr. Sharon Kerwin, Dr. Talisha Moore, Dr. Amanda Taylor, Dr. William Thomas, Dr. Fred Wininger</i>
5 pm	Closing Remarks and Course Wrap Up	<i>Dr. Amanda Taylor, Dr. Talisha Moore</i>
5:10 pm	Faculty Debrief	

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