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Year in Review:

NREF's 2025 Courses



Minimally Invasive Spine Surgery (MISS) and Emerging Technologies Course for Senior Residents and Fellows

August 1 – 3, 2025
Phoenix

Course Director(s): Praveen Mummaneni, MD, FAANS and Juan Uribe, MD, FAANS

The MIS and Emerging Technologies Course at the Barrow Neurological Institute provided senior residents and fellows with a unique opportunity to advance their skills in spine surgery. This course had 26 attendees, two international attendees through the Global Exchange Program, 20 faculty, and six hands-on stations. Expert-led case presentations and lectures covered a wide range of topics – including TLIF, ALIF, endoscopy, pedicle screw placement, sacropelvic fixation, and anterior and posterior cervical approaches – followed by hands-on cadaver labs where residents practiced these same techniques under the guidance of our experienced faculty. Attendees explored cutting-edge navigation, robotics, and virtual reality tools that are advancing the future of neurosurgical spine care.

This course continues to offer the opportunity to master advanced spine techniques in a focused, real-world setting.



"The MIS and emerging technology course is the premier course for all neurosurgery residents interested in spine surgery. This course sets the standard for education and discourse at the highest level. The course is curated perfectly to address expertly the most contentious matters in spine surgery."

"The lectures condensed a large body of very important spine knowledge and literature into short and digestible segments that otherwise faculty do not necessarily have time to sit down and present to us as residents as thoroughly. Also it was an excellent networking opportunity to meet both faculty and other residents."



The NREF extends our sincerest thanks to the following for their support of the
2025 Minimally Invasive Spine Surgery (MIS) and Emerging Technologies Course for Senior Residents
and Fellows

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Spinal Deformity Course for Residents

September 12 - 14, 2025
 Long Island, NY

Course Director(s): Daniel Sciubba, MD, FAANS
 Local Host: Larry Lo, MD

The Spinal Deformity Course for Residents was held September 12–14 at Northwell Health’s Bioskills Education Center in Long Island, NY. Senior residents (PGY5+) gained advanced training through expert-led lectures, case discussions, and immersive cadaveric labs. This course had 21 attendees, one international attendee through the Global Exchange Program, nine faculty, and five hands-on stations. Topics ranged from thoracolumbar and cervical deformity evaluation and osteotomies to lateral approaches, pedicle screw placement, and cervical fixation. This focused, hands-on curriculum prepared participants to confidently address complex spinal deformity cases as they transition into independent practice.



"I love hearing the faculty discuss/debate their experiences with certain cases and how they would and have approached things differently. The nuances of each individuals approach to thinking about these cases and knowing what they can accomplish in their hands is invaluable."



"One of the best courses I've attended as a resident. I appreciated the ratio of proctors to residents. Unforgettable experience and I will always remember the generosity of the guest faculty. I hope to contribute to this course one day."

The NREF extends our sincerest thanks to the following for their support of the 2025 Spinal Deformity Course for Residents



Endovascular and Vascular Techniques Course for Senior Residents

September 25 - 27, 2025
 Memphis, TN

Course Director(s): Andrew Grande, MD, FAANS, FACS, FAHA and Mark Bain, MD, FAANS

The 2025 Endovascular and Vascular Techniques Course at the Medical Education & Research Institute brought senior neurosurgery residents and expert faculty together for an enriching weekend of advanced cerebrovascular neurosurgery training. This course had 26 attendees, one international attendee through the Global Exchange Program, 20 faculty, and six hands-on stations and flow models.

Participants explored everything from angiography basics, endovascular aneurysm treatments, liquid embolics, mechanical embolectomy, and carotid stenting to bypass surgery and AVM reconstruction. Hands-on labs featured cadavers/animals, web models, virtual simulators, flow models, offering residents the chance to refine critical techniques under expert guidance.



"This is easily one of the best courses I have ever attended. The faculty to resident ratio was amazing. Lectures were at an accessible yet informative level. I received so much advise, clinically, technically, personally, and professionally. Attending this course has changed my perspective and helped clarify my future career goals."



"I am so grateful for the AANS/NREF, faculty, course directors, and course coordinators for the incredible amount of work and dedication they contributed to this course. I learned so much and this weekend significantly impacted my future career planning. I was inspired, learned, and was able to network with incredible leaders in our field and I am so excited to apply what I learned during this course to my practice."

The NREF extends our sincerest thanks to the following for their support of the 2025 Endovascular and Vascular Techniques Course for Senior Residents

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Neuroendovascular Surgery Techniques Course for Fellows

November 7-9, 2025

Memphis, TN

Course Director(s): Mandy Binning MD, FAANS and Lucas Elijovich, MD

The Neuroendovascular Surgery Techniques Course, held in Memphis, TN, once again delivered an exceptional educational experience for fellows from institutions across the U.S. and abroad. This course had 28 attendees, two international attendees through the Global Exchange Program, 12 faculty, six hands-on stations and flow models. This intensive hands-on and didactic course provided advanced training in neuroendovascular procedures using swine models and flow systems, allowing attendees to refine their skills in managing aneurysms, AVMs, and acute stroke while gaining practical insights into emerging technologies and complication management.

Small-group instruction by leading experts in neurosurgery, neurology and radiology emphasized real-time decision-making and complication management, while didactic sessions explored evolving device technologies, clinical case studies, and emerging trends in endovascular neurosurgery. The combination of practical and theoretical learning provided participants with an in-depth understanding of both current standards and innovations shaping cerebrovascular care.



"Expert discussion based on science only and comparing all the available devices without any bias. That is the main superior point of this course compared to all the industry-funded courses that I attended over the last 2 years (more than 12 in total). Also this is the largest faculty I saw in any course, that made the discussion one of a kind."

"It is always great to hear how people do things vastly different from institution to institution and learn from different people."



"Overall, the best animal model work show I had ever been by far compared to all the other courses I ever attended."

The NREF extends our sincerest thanks to the following for their support of the 2025 Neuroendovascular Surgery Techniques Course for Fellows



The NREF extends our sincerest thanks to the following for the roles they played in making our 2025 courses possible:

Hosts

Medical Education and Research Institute (MERI), Memphis, TN – *Endovascular and Vascular Techniques Course for Fellows and the Neuroendovascular Surgery Techniques Course for Fellows*

Bioskills Education Center, Northwell Health, Long Island, NY - *Spinal Deformity Course for Residents*

Barrow Neurological Institute, Phoenix - *Minimally Invasive Spine Surgery (MIS) and Emerging Technologies Course for Senior Residents and Fellows*

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Methodist Hospital – Written release; [NREF Partners with Methodist to Deliver Two Prestigious Neurosurgical Training Courses in Memphis](#)