

Course: Interventional Neuroradiology. Course Number: RAD-2106

Academic Group: Medical School

Department: Radiology

Faculty Coordinator: G. Lee Pride, Jr., MD

Asst. Fac. Coordinators: Robin Novakovic, MD, John Barr, MD, Ed Stehel, MD, Lakshmi Chinnaswamy, MHA.

Periods Offered: All

Session:

Length: 4 weeks

Credit hours: (1 credit/2weeks of elective time)

Max # of Students: 2

Grading: Pass/Fail

Repeat for Credit: NO

Allow multiple enroll in term: NO

Special consent to enroll: Y

If Yes, Departmental: Y **Instructor:** Y

Final exam: N

Method of delivery: N/A

First Day Contact: Lee Pride 214-648-7814 (office) 214-535-2959 (cell). Lakshmi Chinnaswamy 214-648-0522 (office) 214-223-3641 (cell).

First Contact Time: 7:30am

First Day Location: Clements University Orange Tower 3rd floor Neuroangiography suites Room 46, 47, and 48.

I.

Prerequisites: *General Surgery Clerkship*

Goals	Objectives (<i>describe activities that will support how goals are to be achieved</i>)	Assessment methods (<i>examples-explain how student will be evaluated</i>)
Patient Care: Assessment and Management 1. <i>Students will demonstrate the knowledge, attitudes and skills necessary to perform appropriately focused and accurate histories and physical assessments related to the</i>	During the rotation the student will be expected to: 1. Observe and perform a targeted physical exam for preprocedural evaluation before neuroendovascular or neurospine procedures. This will	<ul style="list-style-type: none"> • <i>Quality of Medical Records entries</i> • <i>Observations of faculty, fellows and staff.</i>

<p><i>preprocedural evaluation of neurovascular and spine patients and document the findings accurately in the health record.</i></p> <ol style="list-style-type: none"> 2. <i>Students will assist in development of neuroendovascular and neurospine neurointerventional evaluation and treatment plans, and take responsibility for implementation with radiology residents, neurointerventional fellows and faculty.</i> 3. <i>Students will develop procedural understanding and basic procedural familiarity related to neuroendovascular and neurospine neurointerventional procedures</i> 	<p>involve understanding of the informed consent process.</p> <ol style="list-style-type: none"> 2. Observe and scrub into neuroendovascular cases including aneurysm treatments, thrombectomy for stroke, brain and head and neck embolizations, venous procedures, and stenting procedures with neurointerventional fellows and faculty. 3. Observe and scrub into cases including basic and more advanced neurospine procedures including fluoro guided lumbar puncture, percutaneous spine intervention and vertebral augmentation with radiology residents, neuro physician's assistants, neuroradiology fellows and neuroradiology faculty. 	
<p>Medical knowledge:</p> <ol style="list-style-type: none"> 1. <i>The Student will be knowledgeable in basic neurovascular and spine anatomy.</i> 2. <i>The student will be familiar with basic endovascular techniques as they pertain to the diagnosis and treatment of a variety of neuroendovascular procedures.</i> 3. <i>The student will be familiar with basic spine neurointerventional techniques as they pertain to the diagnosis and treatment of a variety of neurospine procedures.</i> 	<p>During the rotation, students will:</p> <ol style="list-style-type: none"> 1. Become familiar with Neurovascular anatomy and wide range of associated pathology through daily cases and readouts with faculty, fellows and residents. 2. Become familiar with basic neuroangiography equipment including digital subtracted angiography, 3D rotational angiography, cone beam CT technology, and basic physiology of intra-arterial contrast administration. Experience will be gained through direct observation of neurovascular 	<ul style="list-style-type: none"> • <i>Observations of fellows, faculty and staff.</i>

	<p>and spine procedures as well as involvement in the pre and post procedure care of neurovascular and spine patients.</p> <p>3. Become familiar with tools used in neuroendovascular and neurospine interventional procedures, including vascular catheters, mechanical thrombectomy devices, aneurysm embolization devices, vascular stents, embolic agents, vertebral augmentation materials, and medications used for spinal injection.</p>	
<p>Interpersonal and communication skills: <i>The students will effectively exchange information with patients, families, consultants and the team, including nurses, faculty, residents and ancillary staff.</i></p>	<p>Students will:</p> <ol style="list-style-type: none"> 1. Observe residents, fellows and faculty perform neuroendovascular and neurospine interventional procedures, as well as observe preprocedural and post procedural care and participate in neurovascular rounds. 	<ul style="list-style-type: none"> • <i>Observations of faculty and staff</i>
<p>Practice Based learning and Improvement: <i>Students will demonstrate the ability to assimilate scientific evidence and improve patient care practices.</i></p>	<p>Students will:</p> <ol style="list-style-type: none"> 1. Investigate and evaluate the care of patients by using information technology (EPIC, journal reviews). 	<ul style="list-style-type: none"> • <i>Observations of faculty and staff</i>
<p>Professionalism: <i>Students must demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population</i></p>	<p>Students will:</p> <ol style="list-style-type: none"> 1. Maintain a professional relationship with patients, radiology faculty, radiology technicians, and referring clinicians. 	<p><i>Observations of faculty and staff</i></p>

	<ol style="list-style-type: none"> 2. Keep patient's identifying information confidential. 3. Dress appropriately and have adequate hygiene. 	
<p>Systems based practice:</p> <ol style="list-style-type: none"> 1. Know how fits into the larger system of health care. 2. Work with the team and patients to optimize use of system resources 	<p>Students will:</p> <ol style="list-style-type: none"> 1. Observe residents, fellows and faculty discuss with referring clinicians and patient's families the indications for and objectives of neuroendovascular and neurospine procedures and the importance of medication compliance, imaging, and clinical follow-up. 	<p><i>Observations of faculty and staff</i> <i>Group discussion</i></p>

III. Methods of Instruction:

A. Didactic:

1. Weekly Neurovascular conference 7am-8:30am Tuesday mornings (Teams conference).
2. Monthly Neuroradiology Interesting case conference (Teams conference) 2nd Wednesday of month.
3. Monthly Neuroradiology Journal Club (Teams conference) 3rd Wednesday of month.
4. Monthly Neurointerventional conference 7:30am-8:30am third Monday of month (Teams conference).

Optional conferences:

1. Friday 12:00 p.m. - Resident Neuroradiology Conference (CS0.106 and Teams)
2. Friday 12:30 p.m. - Brain Tumor Conference (Zale Doctor's Conference Room and Teams)
3. Wednesday 7:00 a.m. – ENT Skull Base Malignancy conference and ENT Malignancy Conference (CS0.106 and Teams)

- B. Clinical: Faculty teaching will be performed throughout the day during regular angiographic and spine image interpretation read-out sessions, patient image evaluation for procedure screening/evaluation and during procedures/pre-procedural and post-procedural care.
 - 1. Schedule:
 - i. Week 1 & 2 Students report to Clements University Hospital Neuroangiography suite by 7:30 am and meet with Neurointerventional fellows and Dr. Pride 214-535-2959 for orientation.
 - ii. Week 3&4 Students report to Clements University Hospital spine service by 7:30 am and meet with Dr. Stehel for orientation.
- C.

IV. Overview of student responsibilities

The student is expected to participate in the evaluation and treatment of neurovascular and neurospine patients managed by the Neuroradiology and CNS Endovascular Surgery faculty and trainees. The student will also be expected to attend all conferences and lectures outlined in this course description.

A. Attendance:

Per UTSW requirements for attendance for MS-4 clinical electives, the student may not miss more than **4 days of excused absences**. Missing more than 4 days will result in an Incomplete grade. Due to limits on departmental resources and full monthly course enrollments, “make-up days” will not be permitted. Only four (4) total days of excused absences are permitted to still pass the course, with documentation of an appropriate reason provided to the Clerkship Coordinator.

Examples of appropriate reasons for excused absences include residency interviews or illness. Students should contact the Clerkship Coordinator, or the Radiology Education Office (RADEducation@UTSouthwestern.edu), with expected dates of excused absences at least one (1) week prior to the start of the course. In the event of illness or an unexpected absence (or missed lecture) arises, promptly contact the Clerkship Coordinator or the Radiology Education Office.

Students must attend required conferences. A conference is considered “missed” after the first 15 minutes. Any missed conferences (excluding those from pre-approved/excused absences) are required to be made up by attending the next available conference(s). Failure to make up missed lectures could result in unexcused absences. There is a limit of two (2) make-ups for missed lectures. Each additional missed lecture thereafter would result in an unexcused absence.

Please note that a Professionalism Form may be filled out when an unexcused absence occurs, and this becomes a part of the student's record in the student deans' office.

IV. Method of evaluation of students and requirements: Evaluation based on assessment methods listed above, grade is Pass/Fail

A. This course is graded on a "Pass" or "Fail" basis. To receive a "Pass" grade, you must:

1. Meet the attendance requirements assessed by Conference attendance and faculty

signatures on the Clinical Site Attendance logs.

2. Complete evaluations of the faculty and the overall course by Sunday following the last day

of the block:

- 1 Medhub conference evaluations per weekly or monthly conference = approximately 2 Conference evaluations/week
- 1 Medhub course evaluation (overall course evaluation)

All evaluations must be completed prior to the final day of the block. Students will not receive a Pass grade until all evaluations are completed and all other requirements have been met.

PLEASE LEAVE COMMENTS! We do rely on student feedback to make improvements to the course.