RAD 851	–	Diagnostic Radiology

Course Director(s):	Course Coordinator(s):	
Jeanne Hill, MD	Jeanne Caire	
	792-0337	
	caire@musc.edu	

	Student Limit			Student Limit				Student Limit				Student Limit				Student Limit		
Blk 1	10	☒	July 2 - July 27	Blk 3	10	☒	Aug 27 - Sept 21	Blk 5A		☐	Oct 22 - Nov 2	Blk 7B		☐	Jan 14 - Jan 25	Blk 10		☐	Mar 25 - Apr 19
Blk 1A		☐	July 2 - July 13	Blk 3A		☐	Aug 27 - Sept 7	Blk 5B		☐	Nov 5 - Nov 16	Blk 8	10	☒	Jan 28 - Feb 22	Blk 10A		☐	Mar 25 - Apr 5
Blk 1B		☐	July 16 - July 27	Blk 3B		☐	Sept 10 - Sept 21	Blk 6		☐	Nov 19 - Dec 14	Blk 8A		☐	Jan 28 - Feb 8	Blk 10B	10	☒	Apr 8 - Apr 19
Blk 2	10	☒	July 30 - Aug 24	Blk 4	10	☒	Sept 24 - Oct 19	Blk 6A		☐	Nov 19 - Nov 30	Blk 8B		☐	Feb 11 - Feb 22	Blk 11		☐	Apr 22 - May 17
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				Blk 5	10	☒	Oct 22 - Nov 16	Blk 7A		☐	Jan 2 - Jan 11	Blk 9B		☐	Mar 11 - Mar 22				

COMMENTS:
The 2 week version of the course will consist of 10 didactic conferences, 9 Case of the Day conferences, clinical rotations and call (the student will be able to select 3 areas of interest for 3 days each and 1 evening shift of call), and on-line reading assignments.

COURSE DESCRIPTION:
Diagnostic Radiology is designed to provide the student with a better understanding of the central role of diagnostic radiology in the evaluation and management of patients through participation in reading room readouts, radiology call, lectures, case conferences, case presentations, on-line assignments, interactive labs, and observation of the various imaging modalities and procedures. Students will be able to tailor their experience to their clinical interest by spending 1 week in each of 4 areas of the department of their choosing.

LEARNING GOALS & OBJECTIVES: (*At the completion of this clinical rotation, students should be able to:)*
1. Appreciate the fundamental role of the radiologist as consultant and the value of imaging to provide timely, accurate, and actionable diagnostic information regarding a patient's medical condition.
2. Recognize the indications and appropriateness of imaging studies for common clinical problems and utilize evidence based resources (ACR Appropriateness Criteria) to determine imaging appropriateness for less common clinical problems.
3. Describe the risks of medical imaging (including radiation induced cancer, contrast nephropathy, contrast reactions, and MRI safety concerns).
4. Describe how common procedures and imaging are performed.
5. Apply basic interpretive skills to evaluate common imaging studies – predominantly plain films and CT- including study identification, recognition of normal radiographic and cross-sectional anatomy as well and common, potentially life-threatening pathology.

INSTRUCTIONAL METHODOLOGIES & ROTATION ACTIVITIES:
(Students on this rotation will be expected to learn and achieve the educational goals and objectives through the following methodologies and activities:)
1. Clinical Exposure: The students will participate in clinical services interacting with and observing the residents and faculty daily. During these services, the students will be exposed to normal and abnormal imaging studies and procedures on current MUSC patients. The students may be asked to gather clinical data on these patients to assist the radiology residents and attendings in the interpretation of the imaging studies. Every student will have the opportunity to tailor their experience to meet their interests, choosing four one-week rotations from the following options: Thoracic Radiology, Pediatric Radiology, Neuroradiology, Ultrasound, Musculoskeletal Radiology, Vascular Interventional Radiology, MUSC Body Imaging (am) and MUSC Nuclear Medicine (pm), Breast Imaging Gastrointestinal and Body Imaging at ART, or Cardiac Imaging @ART. Additionally, the students will select 2 shifts of call per rotation (weekday evenings 5pm – 11pm), spending 1 night shadowing the lower level radiology call resident and 1 night shadowing the upper level call resident. The students may opt to observe additional call shifts and this can be arranged through the course coordinator.

2. Lectures/Conferences: The students will participate in a variety of didactic conferences including Daily Resident Interactive Case Conferences (5hrs/week), Radiology resident lectures and Grand Rounds (11:30-1:00 daily), and subspecialty interdisciplinary conferences such as tumor board. In Case of the Day Conferences facilitated by radiology faculty and fellows (Monday-Thursday 4hrs/week), each student will select a case from that day's clinical work that was interesting, demonstrating a nice example of a common problem or disease entity, or demonstrating the value of a certain type of imaging. Although this does not require a formal presentation, each student should be prepared to present the case as an unknown to his/her peers and faculty. The student should provide a brief and appropriate clinical history, be able to point out the important imaging findings, and provide several important teaching points about the case or disease process.

3. Interactive Labs/Workshops: The students will participate in three interactive workshops: Hands on Ultrasound Scanning of standardized patients, Ultrasound Guided Biopsy Simulation, and a 3D CT Reconstruction Module.

4. Reading Assignments: Each student will receive a copy of Herring's Learning Radiology for the elective.

5. On-line assignments: The course has an online teaching site. Each student has the opportunity to review Radiographic Anatomy as needed @ www.netanatomy.com. Patient safety issues in imaging are highlighted in AHRQ's Web M&M Scenarios @ www.webmm.ahrq.gov/index.aspx, and assigned lectures which accompany the text are available @ www.learningradiology.com.

PATIENT ENCOUNTERS: (*Students will be expected to work-up patients with these specified conditions:)*
1. During the clinical rotations and call, the students will be exposed to normal and abnormal imaging studies and procedures on current MUSC patients.
2. Students will be exposed to the imaging of a wide variety of clinical conditions including acute and chronic, medical and surgical diseases in patients of all ages.

EVALUATION / FEEDBACK METHODS:
1. Direct observation of the student's clinical work by the resident and attending physicians (Medical Knowledge, Professionalism, Interpersonal/Communication Skills, System-Based Learning)
2. Evaluation of student participation in case conferences and interactive workshops (Patient Care, Professionalism, Interpersonal/Communication Skills)
3. Performance on a final quiz which will be based on the on-line assignments, textbook, and material presented in resident and case conferences (Medical Knowledge, Practice-Based and Life-Long Learning)

CALL:

RAD 854	– Pediatric Radiology	Course Director(s):	Course Coordinator(s):
		Jeanne Hill, MD	Jeanne Caire
			792-0337
			caire@musc.edu

Student Limit																			
Blk 1	2	☒	July 2 - July 27	Blk 3	2	☒	Aug 27 - Sept 21	Blk 5A		☐	Oct 22 - Nov 2	Blk 7B		☐	Jan 14 - Jan 25	Blk 10		☐	Mar 25 - Apr 19
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				Blk 5	2	☒	Oct 22 - Nov 16	Blk 7A		☐	Jan 2 - Jan 11	Blk 9B		☐	Mar 11 - Mar 22				

COMMENTS:
The 2 week version of the course will consist of 10 didactic conferences, 9 Case of the Day conferences, clinical rotation,1 evening shift of call and on-line reading assignments.

COURSE DESCRIPTION:
Pediatric Radiology is designed to provide the student with a better understanding of the central role of diagnostic radiology in the evaluation and management of patients through participation in Pediatric reading room readouts, radiology call, lectures, case conferences, case presentations, on-line assignments, interactive labs, and observation of the various imaging modalities and procedures. Students will spend the entire rotation in the Pediatric reading room.

LEARNING GOALS & OBJECTIVES: (*At the completion of this clinical rotation, students should be able to:)*
1. Appreciate the fundamental role of the radiologist as consultant and the value of imaging to provide timely, accurate, and actionable diagnostic information regarding a patient's medical condition.
2. Recognize the indications and appropriateness of imaging studies for common clinical problems and utilize evidence based resources (ACR Appropriateness Criteria) to determine imaging appropriateness for less common clinical problems.
3. Describe the risks of medical imaging (including radiation induced cancer, contrast nephropathy, contrast reactions, and MRI safety concerns).
4. Describe how common procedures and imaging are performed.
5. Apply basic interpretive skills to evaluate common imaging studies – predominantly plain films and CT- including study identification, recognition of normal radiographic and cross-sectional anatomy as well and common, potentially life-threatening pathology.

INSTRUCTIONAL METHODOLOGIES & ROTATION ACTIVITIES:
(Students on this rotation will be expected to learn and achieve the educational goals and objectives through the following methodologies and activities:)
1. **Clinical Exposure:** The students will participate in clinical services interacting with and observing the residents and faculty daily. During these services, the students will be exposed to normal and abnormal imaging studies and procedures on current MUSC patients. The students may be asked to gather clinical data on these patients to assist the radiology residents and attendings in the interpretation of the imaging studies. Additionally, the students will select 2 shifts of call per rotation (weekday evenings 5pm – 11pm), spending 1 night shadowing the lower level radiology call resident and 1 night shadowing the upper level call resident. The students may opt to observe additional call shifts and this can be arranged through the course coordinator.
2. **Lectures/Conferences:** The students will participate in a variety of didactic conferences including Daily Resident Interactive Case Conferences (5hrs/week), Radiology resident lectures and Grand Rounds (11:30-1:00 daily), and subspecialty interdisciplinary conferences such as tumor board. In Case of the Day Conferences facilitated by radiology faculty and fellows (Monday-Thursday 4hrs/week), each student will select a case from that day's clinical work that was interesting, demonstrating a nice example of a common problem or disease entity, or demonstrating the value of a certain type of imaging. Although this does not require a formal presentation, each student should be prepared to present the case as an unknown to his/her peers and faculty. The student should provide a brief and appropriate clinical history, be able to point out the important imaging findings, and provide several important teaching points about the case or disease process.
3. **Interactive Labs/Workshops:** The students will participate in three interactive workshops: Hands on Ultrasound Scanning of standardized patients, Ultrasound Guided Biopsy Simulation, and a 3D CT Reconstruction Module.
4. **Reading Assignments:** Student will receive a copy of Herring's Learning Radiology & Donnelly's Pediatric Imaging: The Fundamentals for the elective.
5. **On-line assignments:** The course has an online teaching site. Each student has the opportunity to review Radiographic Anatomy as needed @ www.netanatomy.com. Patient safety issues in imaging are highlighted in AHRQ's Web M&M Scenarios @ www.webmm.ahrq.gov/index.aspx, and assigned lectures which accompany the text are available @ www.learningradiology.com.

PATIENT ENCOUNTERS: (*Students will be expected to work-up patients with these specified conditions:)*
1. During the clinical rotations and call, the students will be exposed to normal and abnormal imaging studies and procedures on current MUSC patients.
2. Students will be exposed to the imaging of a wide variety of clinical conditions including acute and chronic, medical and surgical diseases in patients of all ages.

EVALUATION / FEEDBACK METHODS:
1. Direct observation of the student's clinical work by the resident and attending physicians (Medical Knowledge, Professionalism, Interpersonal/Communication Skills, System-Based Learning)
2. Evaluation of student participation in case conferences and interactive workshops (Patient Care, Professionalism, Interpersonal/Communication Skills)
3. Performance on a final quiz which will be based on the on-line assignments, textbook, and material presented in resident and case conferences (Medical Knowledge, Practice-Based and Life-Long Learning)

CALL:
Will students be expected to participate in call? YES
If yes, please describe the call schedule/frequency:
Student selects 2 evening shifts (5-11pm) over the course of the rotation to rotate and observe the radiology residents on call in the main reading room.

RAD 856	– Interventional Radiology	Course Director(s):	Course Coordinator(s):
		Chris Hannegan, MD	Jeanne Caire
			792-0337
			caire@musc.edu

	Student Limit			Student Limit				Student Limit				Student Limit				Student Limit		
Blk 1	2	☒	July 2 - July 27	Blk 3	2	☒	Aug 27 - Sept 21	Blk 5A		☐	Oct 22 - Nov 2	Blk 7B		☐	Jan 14 - Jan 25	Blk 10		☐	Mar 25 - Apr 19
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Blk 2A		☐	July 30 - Aug 10	Blk 4A		☐	Sept 24 - Oct 5	Blk 6B	2	☒	Dec 3 - Dec 14	Blk 9	2	☒	Feb 25 - Mar 22	Blk 11A		☐	Apr 22 - May 3
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				Blk 5	2	☒	Oct 22 - Nov 16	Blk 7A		☐	Jan 2 - Jan 11	Blk 9B		☐	Mar 11 - Mar 22				

COMMENTS:

COURSE DESCRIPTION:
Rad-856 is designed to help students understand the role of interventional radiology within the department of radiology as well as to gain insight into the services it provides for patients referred from outside sources. This is accomplished by incorporating the student into the daily management of patients and through participation in preprocedural planning, image guided interventional procedures, and the planning of post procedural follow up. The student will also take part in general radiology lectures, case conferences, case presentations, and on-line assignments. Students will spend four weeks in the interventional radiology section and participate in two evenings of general radiology call at MUSC and two nights of interventional radiology call from home for emergency situations.

LEARNING GOALS & OBJECTIVES: (*At the completion of this clinical rotation, students should be able to:)*
1. Appreciate the fundamental role of the interventional radiologist as a consultant and the value of image guided procedures to provide safe minimally invasive procedures to aid in the treatment regarding a patient's medical condition.
2. Recognize the indications, contraindications and appropriateness of imaging studies and image guided procedures for common clinical problems and utilize evidence based resources (ACR Appropriateness Criteria) to determine imaging appropriateness for less common clinical problems.
3. Describe the risks and benefits of the various image guided procedures offered by our service as well as alternative strategies available to the patient regarding their specific medical condition.
4. Describe how patients are worked up, how common procedures are performed, and how patients are followed post procedure.
5. Apply basic interpretive skills to evaluate images obtained during procedures – predominantly fluoroscopic images and CT images- including study identification, recognition of normal radiographic and cross-sectional anatomy as well and common, potentially life-threatening pathology.

INSTRUCTIONAL METHODOLOGIES & ROTATION ACTIVITIES:
(Students on this rotation will be expected to learn and achieve the educational goals and objectives through the following methodologies and activities:)
1. Clinical Exposure: The students will participate in clinical services interacting with and observing the residents, fellows and faculty daily. During these services, the students will be exposed to normal and abnormal imaging studies and procedures on current MUSC patients. The students may be asked to gather clinical data on these patients to assist the radiology residents, fellows and attendings in the interpretation of the imaging studies. Students will spend the entire rotation in Interventional Radiology. Additionally, the students will select two shifts of call per rotation (weekday evenings 5pm – 11pm), spending one night shadowing the lower level radiology call resident and one night shadowing the upper level call resident. The student will also take two nights of at home call for interventional radiology. The students may opt to observe additional call shifts and this can be arranged through the course coordinator.

2. Lectures/Conferences: The students will participate in a variety of didactic conferences including Daily Resident Interactive Case Conferences (5hrs/week), Radiology resident lectures and Grand Rounds (11:30-1:00 daily), and subspecialty interdisciplinary conferences such as liver tumor board and vascular surgery conference. In Case of the Day Conferences facilitated by radiology faculty and fellows (Monday-Thursday 4hrs/week), each student will select a case from that day's clinical work that was interesting, demonstrating a nice example of a common problem or disease entity, or demonstrating the value of a certain type of imaging. Although this does not require a formal presentation, each student should be prepared to present the case as an unknown to his/her peers and faculty. The student should provide a brief and appropriate clinical history, be able to point out the important imaging findings, and provide several important teaching points about the case or disease process.

3. Interactive Labs/Workshops: The students will participate in two interactive workshops: Hands on Ultrasound Scanning of standardized patients, Ultrasound Guided Biopsy Simulation.

4. Reading Assignments: Each student will receive a copy of Herring's Learning Radiology for the elective as well as Kandarpa and Aruny's Handbook of Interventional Radiologic Procedures.

5. On-line assignments: The course has an online teaching site. Each student has the opportunity to review Radiographic Anatomy as needed @ www.netanatomy.com. Patient safety issues in imaging are highlighted in AHRQ's Web M&M Scenarios @ www.webmm.ahrq.gov/index.aspx, and assigned lectures which accompany the text are available @ www.learningradiology.com.

PATIENT ENCOUNTERS: (*Students will be expected to work-up patients with these specified conditions:)*
1. During the clinical rotations and call, the students will be exposed to normal and abnormal imaging studies and procedures on current MUSC patients.
2. Students will be exposed to the imaging of a wide variety of clinical conditions including acute and chronic, medical and surgical diseases in patients of all ages.

EVALUATION / FEEDBACK METHODS:
1. Direct observation of the student's clinical work by the resident and attending physicians (Medical Knowledge, Professionalism, Interpersonal/Communication Skills, System-Based Learning)
2. Evaluation of student participation in case conferences and interactive workshops (Patient Care, Professionalism, Interpersonal/Communication Skills)
3. Performance on a final quiz which will be based on the on-line assignments, textbook, and material presented in resident and case conferences (Medical Knowledge, Practice-Based and Life-Long Learning)

CALL:

RAD 857 – Neuroradiology	Course Director(s):	Course Coordinator(s):
	Zoran Rumboldt, MD	Jeanne Caire
		792-0337
		caire@musc.edu

Student Limit																				
Blk 1	2	☒	July 2 - July 27	Blk 3	2	☒	Aug 27 - Sept 21	Blk 5A		☐	Oct 22 - Nov 2	Blk 7B		☐	Jan 14 - Jan 25	Blk 10		☐	Mar 25 - Apr 19
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Blk 2A		☐	July 30 - Aug 10	Blk 4A		☐	Sept 24 - Oct 5	Blk 6B	2	☒	Dec 3 - Dec 14	Blk 9	2	☒	Feb 25 - Mar 22	Blk 11A		☐	Apr 22 - May 3
Blk 2B		☐	Aug 13 - Aug 24	Blk 4B		☐	Oct 8 - Oct 19	Blk 7	2	☒	Jan 2 - Jan 25	Blk 9A		☐	Feb 25 - Mar 8	Blk 11B		☐	May 6 - May 17
				Blk 5	2	☒	Oct 22 - Nov 16	Blk 7A		☐	Jan 2 - Jan 11	Blk 9B		☐	Mar 11 - Mar 22				

COMMENTS:

COURSE DESCRIPTION:

LEARNING GOALS & OBJECTIVES: (*At the completion of this clinical rotation, students should be able to:)*

1. Appreciate the fundamental role of the radiologist as consultant and the value of imaging to provide timely, accurate, and actionable diagnostic information regarding a patient's medical condition.
2. Recognize the indications and appropriateness of imaging studies for common clinical problems and utilize evidence based resources (ACR Appropriateness Criteria) to determine imaging appropriateness for less common clinical problems.
3. Describe the risks of medical imaging (including radiation induced cancer, contrast nephropathy, contrast reactions, and MRI safety concerns).
4. Describe how common procedures and imaging are performed.
5. Apply basic interpretive skills to evaluate common imaging studies – predominantly plain films and CT- including study identification, recognition of normal radiographic and cross-sectional anatomy as well and common, potentially life-threatening pathology.

INSTRUCTIONAL METHODOLOGIES & ROTATION ACTIVITIES:

(Students on this rotation will be expected to learn and achieve the educational goals and objectives through the following methodologies and activities:)

1. Clinical Exposure: The students will participate in clinical services interacting with and observing the residents and faculty in Neuroradiology. During these services, the students will be exposed to normal and abnormal imaging studies and procedures on current MUSC patients. The students may be asked to gather clinical data on these patients to assist the radiology residents and attendings in the interpretation of the imaging studies. Additionally, the students will select 2 shifts of call per rotation (weekday evenings 5pm – 11pm), spending 1 night shadowing the lower level radiology call resident and 1 night shadowing the upper level call resident. The students may opt to observe additional call shifts and this can be arranged through the course coordinator.
2. Lectures/Conferences: The students will participate in a variety of didactic conferences including Daily Resident Interactive Case Conferences (5hrs/week), Radiology resident lectures and Grand Rounds (11:30-1:00 daily), and subspecialty interdisciplinary conferences such as tumor board. In Case of the Day Conferences facilitated by radiology faculty and fellows (Monday-Thursday 4hrs/week), each student will select a case from that day's clinical work that was interesting, demonstrating a nice example of a common problem or disease entity, or demonstrating the value of a certain type of imaging. Although this does not require a formal presentation, each student should be prepared to present the case as an unknown to his/her peers and faculty. The student should provide a brief and appropriate clinical history, be able to point out the important imaging findings, and provide several important teaching points about the case or disease process.
3. Interactive Labs/Workshops: The students will participate in three interactive workshops: Hands on Ultrasound Scanning of standardized patients, Ultrasound Guided Biopsy Simulation, and a 3D CT Reconstruction Module.
4. Reading Assignments: Each student will receive a copy of Herring's Learning Radiology for the elective.
5. On-line assignments: The course has an online teaching site. Each student has the opportunity to review Radiographic Anatomy as needed @ www.netanatomy.com. Patient safety issues in imaging are highlighted in AHRQ's Web M&M Scenarios @ www.webmm.ahrq.gov/index.aspx, and assigned lectures which accompany the text are available @ www.learningradiology.com.

PATIENT ENCOUNTERS: (*Students will be expected to work-up patients with these specified conditions:)*

1. During the clinical rotations and call, the students will be exposed to normal and abnormal imaging studies and procedures on current MUSC patients.
2. Students will be exposed to the imaging of a wide variety of clinical conditions including acute and chronic, medical and surgical diseases in patients of all ages.

EVALUATION / FEEDBACK METHODS:

1. Direct observation of the student's clinical work by the resident and attending physicians (Medical Knowledge, Professionalism, Interpersonal/Communication Skills, System-Based Learning)
2. Evaluation of student participation in case conferences and interactive workshops (Patient Care, Professionalism, Interpersonal/Communication Skills)
3. Performance on a final quiz which will be based on the on-line assignments, textbook, and material presented in resident and case conferences (Medical Knowledge, Practice-Based and Life-Long Learning)

CALL:

Will students be expected to participate in call? YES

If yes, please describe the call schedule/frequency:

Each student will select 2 evening shifts (5-11 p.m.) over the course of the rotation to rotate and observe the radiology residents on call in the main reading room.

RAD 858	–	Ultrasound Radiology	Course Director(s):	Course Coordinator(s):
			Susan Ackerman, MD	Jeanne Caire
				792-0337
				caire@musc.edu

Student Limit																				
Blk 1	2	☒	July 2 - July 27	Blk 3	2	☒	Aug 27 - Sept 21	Blk 5A		☐	Oct 22 - Nov 2	Blk 7B		☐	Jan 14 - Jan 25	Blk 10		☐	Mar 25 - Apr 19
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				Blk 5	2	☒	Oct 22 - Nov 16	Blk 7A		☐	Jan 2 - Jan 11	Blk 9B		☐	Mar 11 - Mar 22				

COMMENTS:

COURSE DESCRIPTION:
This course is designed to introduce participants to the role of ultrasound as a imaging modality. This includes the appropriateness criteria for the use of diagnostic ultrasound and ultrasound guided procedures.

LEARNING GOALS & OBJECTIVES: (*At the completion of this clinical rotation, students should be able to:)*
1. Appreciate the fundamental role of the radiologist as consultant and the value of imaging to provide timely, accurate, and actionable diagnostic information regarding a patient's medical condition.
2. Recognize the indications and appropriateness of imaging studies for common clinical problems and utilize evidence based resources (ACR Appropriateness Criteria) to determine imaging appropriateness for less common clinical problems.
3. Describe the risks of medical imaging (including radiation induced cancer, contrast nephropathy, contrast reactions, and MRI safety concerns).
4. Describe how common procedures and imaging are performed.
5. Apply basic interpretive skills to evaluate common imaging studies – predominantly plain films and CT- including study identification, recognition of normal radiographic and cross-sectional anatomy as well and common, potentially life-threatening pathology.

INSTRUCTIONAL METHODOLOGIES & ROTATION ACTIVITIES:
(Students on this rotation will be expected to learn and achieve the educational goals and objectives through the following methodologies and activities:)
1. Clinical Exposure: The students will participate in clinical services interacting with and observing the residents and faculty in Ultrasound. During these services, the students will be exposed to normal and abnormal imaging studies and procedures on current MUSC patients. The students may be asked to gather clinical data on these patients to assist the radiology residents and attendings in the interpretation of the imaging studies. Additionally, the students will select 2 shifts of call per rotation (weekday evenings 5pm – 11pm), spending 1 night shadowing the lower level radiology call resident and 1 night shadowing the upper level call resident. The students may opt to observe additional call shifts and this can be arranged through the course coordinator.
2. Lectures/Conferences: The students will participate in a variety of didactic conferences including Daily Resident Interactive Case Conferences (5hrs/week), Radiology resident lectures and Grand Rounds (11:30-1:00 daily), and subspecialty interdisciplinary conferences such as tumor board. In Case of the Day Conferences facilitated by radiology faculty and fellows (Monday-Thursday 4hrs/week), each student will select a case from that day's clinical work that was interesting, demonstrating a nice example of a common problem or disease entity, or demonstrating the value of a certain type of imaging. Although this does not require a formal presentation, each student should be prepared to present the case as an unknown to his/her peers and faculty. The student should provide a brief and appropriate clinical history, be able to point out the important imaging findings, and provide several important teaching points about the case or disease process.
3. Interactive Labs/Workshops: The students will participate in three interactive workshops: Hands on Ultrasound Scanning of standardized patients, Ultrasound Guided Biopsy Simulation, and a 3D CT Reconstruction Module.
4. Reading Assignments: Each student will receive a copy of Herring's Learning Radiology for the elective.
5. On-line assignments: The course has an online teaching site. Each student has the opportunity to review Radiographic Anatomy as needed @ www.netanatomy.com. Patient safety issues in imaging are highlighted in AHRQ's Web M&M Scenarios @ www.webmm.ahrq.gov/index.aspx, and assigned lectures which accompany the text are available @ www.learningradiology.com.

PATIENT ENCOUNTERS: (*Students will be expected to work-up patients with these specified conditions:)*
1. During the clinical rotations and call, the students will be exposed to normal and abnormal imaging studies and procedures on current MUSC patients.
2. Students will be exposed to the imaging of a wide variety of clinical conditions including acute and chronic, medical and surgical diseases in patients of all ages.

EVALUATION / FEEDBACK METHODS:
1. Direct observation of the student's clinical work by the resident and attending physicians (Medical Knowledge, Professionalism, Interpersonal/Communication Skills, System-Based Learning)
2. Evaluation of student participation in case conferences and interactive workshops (Patient Care, Professionalism, Interpersonal/Communication Skills)
3. Performance on a final quiz which will be based on the on-line assignments, textbook, and material presented in resident and case conferences (Medical Knowledge, Practice-Based and Life-Long Learning)

CALL:
Will students be expected to participate in call? YES
If yes, please describe the call schedule/frequency:
Each student will select 2 evening shifts (5-11 p.m.) over the course of the rotation to rotate and observe the radiology residents on call in the main reading room.

RAD 859	–	Research in Radiology

Course Director(s):	Course Coordinator(s):	
Jeanne Hill, MD	Jeanne Caire	
	792-0337	
	caire@musc.edu	

Student Limit																				
Blk 1	2	☒	July 2 - July 27	Blk 3	2	☒	Aug 27 - Sept 21	Blk 5A		☐	Oct 22 - Nov 2	Blk 7B		☐	Jan 14 - Jan 25	Blk 10	2	☒	Mar 25 - Apr 19
Blk 1A		☐	July 2 - July 13	Blk 3A		☐	Aug 27 - Sept 7	Blk 5B		☐	Nov 5 - Nov 16	Blk 8	2	☒	Jan 28 - Feb 22	Blk 10A		☐	Mar 25 - Apr 5
Blk 1B		☐	July 16 - July 27	Blk 3B		☐	Sept 10 - Sept 21	Blk 6	2	☒	Nov 19 - Dec 14	Blk 8A		☐	Jan 28 - Feb 8	Blk 10B		☐	Apr 8 - Apr 19
Blk 2	2	☒	July 30 - Aug 24	Blk 4	2	☒	Sept 24 - Oct 19	Blk 6A		☐	Nov 19 - Nov 30	Blk 8B		☐	Feb 11 - Feb 22	Blk 11		☐	Apr 22 - May 17
Blk 2A		☐	July 30 - Aug 10	Blk 4A		☐	Sept 24 - Oct 5	Blk 6B		☐	Dec 3 - Dec 14	Blk 9	2	☒	Feb 25 - Mar 22	Blk 11A		☐	Apr 22 - May 3
Blk 2B		☐	Aug 13 - Aug 24	Blk 4B		☐	Oct 8 - Oct 19	Blk 7	2	☒	Jan 2 - Jan 25	Blk 9A		☐	Feb 25 - Mar 8	Blk 11B		☐	May 6 - May 17
				Blk 5	2	☒	Oct 22 - Nov 16	Blk 7A		☐	Jan 2 - Jan 11	Blk 9B		☐	Mar 11 - Mar 22				

COMMENTS:

COURSE DESCRIPTION:
This elective gives students an opportunity to pursue a clinical/basic research project. Depending on the stage of advancement and desire of the individual, the student chooses their project or participates in a project already in progress. In either case, the student has close supervision from one or more faculty members. Arrangements for a research elective must be made in advance with Jeanne Caire and the individual faculty member under whom the student wishes to study. The medical student and sponsor must submit a title, purpose and a method for approval.

LEARNING GOALS & OBJECTIVES: (*At the completion of this clinical rotation, students should be able to:)*
1. Learn how to read and evaluate scientific literature.
2. Learn how to design experiments and the techniques necessary to conduct them.
3. Learn how to analyze and interpret results.
4. Learn how to generate hypotheses from the literature and one's own data.
5. Learn how to write a scientific paper.

INSTRUCTIONAL METHODOLOGIES & ROTATION ACTIVITIES:
(Students on this rotation will be expected to learn and achieve the educational goals and objectives through the following methodologies and activities:)
1. Students will work with faculty in either basic research laboratories or in the clinical areas.
2. Students will participate in rounds/discussions.
3. Students will become familiar with interviews and screening methods frequently used to assess eligibility for research participation.
4. Students will become familiar with issues related to research ethics, such as, informed consent procedures, IRS application process.
5. Students will learn data collection and entry procedures, and database management strategies.

PATIENT ENCOUNTERS: (*Students will be expected to work-up patients with these specified conditions:)*
N/A

EVALUATION / FEEDBACK METHODS:
1. At the completion of the research elective, the medical student must submit a final abstract: title, purpose, method, results and conclusion. (Medical Knowledge)
2. A short powerpoint presentation that explains the purpose of the study, what was done, what was obtained and what was concluded is also required. This PPT presentation will normally consist of 10 to 20 PPT slides which can be formally presented. (Interpersonal/Communication Skills)
3. Grade will be determined upon completion of their project and the effort put forth. The methods for designing and conducting research projects are emphasized.

CALL:
Will students be expected to participate in call? NO
If yes, please describe the call schedule/frequency: