

Jackson College

Vascular Clinical III- 4 Credits

Program Director, Vascular Sonography

Heather Ruttkofsky, B.A.S, RVT ruttkofheatherm@jccmi.edu

Clinical Coordinator(s)

Shani Lebaron, BS, RVT lebaronshnid@jccmi.edu

Vicki Ruttkofsky, RVS ruttkofvickil@jccmi.edu

Lab Instructor (s)

Jessica Hagerty, RVS hagertyjessical@jccmi.edu

Vicki Ruttkofsky, RVS

Course Description:

This 4 credit course is a continuation of DMS 265. Students will be supervised during their clinical experience in an approved vascular lab. This course provides hands-on experiences in basic and advanced color Doppler imaging (CDI), hemodynamics, segmental pressures and duplex sonography. Students are instructed and supervised by registered vascular sonographers (RVT or RVS).

Course Outcome

Measurement of Objective:

1. Student must actively participate in on-line course work and daily clinical activities and receive a minimum score (85%) in the affective, cognitive and psychomotor learning domains. Students are evaluated using research, curiosity, quiz questions, and 2 clinical evaluations.
2. Student must actively participate in daily scheduled vascular exams and complete the required performance assignments.
3. Log a minimum of 334 clinical hours or a total hour of 1,152 supervised clinical hours within an approved clinical education facility

Course Learning Goals.

Complete upper extremity and lower extremity single and multi-level arterial Doppler , TBI, segmental pressures, Doppler waveforms, PVRs
Complete exercise physiological testing (WTT)
Complete bypass graft surveillance of lower extremity
Complete venous insufficiency testing
Complete lower and upper extremity arterial duplex
Complete carotid duplex exam
Complete lower and upper extremity venous duplex for obstruction
Complete lower and upper extremity vein mapping
Discuss and describe hemodynamics and pathophysiology of the intracranial anatomy
Recognize intracranial vasculature
Recognize imaging landmarks of intracranial imaging
Formulate diagnostic decisions and analyze ultrasound findings
Explore Transcranial non-imaging Doppler
Explores AVF, TOS, TCPO2, Allen Test, Cold Immersion, APG
Entry-level in the affective, cognitive, and psychomotor learning domains
Describe Collateral pathways of the venous and arterial systems
Demonstrates proper techniques used to obtain velocity measurements
Demonstrates proper techniques used to obtain diameter measurements
Student explains procedure and performs patient assessments
Uses machine settings to optimize images and recognizes imaging artifacts
Uses image storage system and completes preliminary worksheets and reports
Uses appropriate and effective communication with staff, administrators and physicians
Discuss and describe differential diagnosis of carotid, upper and lower extremity venous, and arterial systems
Adapt abdominal duplex protocol (aortic-iliac)
Seek further understanding of exam outcomes and quality assurance (tests of accuracy)
Explore hepatoportal testing protocol for
Perform Transcranial Doppler testing
Explains hemodynamics and pathophysiology of abdominal venous and arterial systems
Describes and recognizes normal and abnormal spectral Doppler waveforms of the lower extremity arterial system
Uses sonographic terms to describe ultrasound findings
Describes and recognizes plaque contour, texture and morphology
Categorize renal artery disease
Categorizes mesenteric disease
Contributes to group case discussions

Student Responsibilities:

Students are expected to participate and be prepared for each session. It is presumed by the facilitator that assignment, including reading, will be completed on time prior to material on subjects being presented; such preparations allows the student the best learning opportunities to understand material presented and pose questions in areas requiring clarity. The pace of this course makes it very difficult for a student to catch up once a student falls behind.

It is highly suggested by the instructor that students utilize as many references as possible to enhance their learning and understanding.

Facilitator's Responsibilities:

The facilitator's responsibilities include facilitate learning by providing and explaining the necessary materials for each student to understand the assignments and develop course goals, objectives, and performance objectives to a near mastery level. See JCC DMS Handbook for a listing of these goals, course objectives and performance objectives. Knowledge gained from this course should aid students in their clinical experiences. Classes will begin on time weather permitting.

NOTE: It is expected that the student's high learning curve days will be on those days when the clinical affiliate has a lower case load. Low learning curve days are expected when the clinical affiliate is very busy. Students will provide as much help to the staff as possible. However the students are placed in clinical as a learning modality and we wish to utilize this clinical experience to fullest extent possible

Course Method/Attendance

A student is expected to sign into class minimum of four separate days weekly. Failure to sign into class will result in the loss of 20 points from the final grade.

Attendance: Dependability and punctuality are important factors in the DMS clinical component. Any absences or tardiness, no matter how legitimate, disrupts the learning process of the student and disrupts the operational function of the Ultrasound Department. Students must complete a request for clinical absence for an approved scheduled absence. (See Exhibit C). Jackson College does not award sick days or personal days. If a student is absent 2 or more days per semester a written warning will be issued and the student will be dismissed from the DMS VSON program if any additional days are missed. The program faculty and clinical site instructor must approve all absences, including doctor appointments. Vacations are not granted during the JC VSON program. Students are required to notify the appropriate supervisor at their clinical site of their absences for each occurrence. The notification of absence intent should be at least 1/2 hr. (30 minutes) prior to the student's scheduled starting time. All missed clinical time must be made up within the semester that the absence accord. One absence that is

not reported to the appropriate supervisor will result in a **warning action**.

Students are required to be at their DMS clinical site until the completion of an eight (8) hour shift unless permission is obtained from the supervising clinical instructor and the supervising sonographer. Students will only receive clinical hours for time actually spent within the clinical setting. Students are required to submit clinical attendance reporting forms.

The student is to notify the attending sonographer whenever the student leaves the DMS lab/department. Failure to do so may be interpreted as abandonment of the clinical assignment.

Tardiness: Excessive tardiness may result in a **warning action**. JC has identified 2 or more to be considered excessive.

Approved Holiday(s) off:

NONE

Clinical Documents:

Time Sheets; Exam Log Sheets; Performance Assignments; Evaluations: The student is responsible for providing the proper forms to clinical instructor and staff for completion prior to the due date. Students are responsibility for submitting and maintaining all forms for grade by the posted due date. Failure to submit all forms could result in a written warning.

There is a list of all material to be available on-site for review during scheduled clinical site visits. Please see file folder on the course home page for the master list requirements.

ALL Original documents (listed above) must be submitted by the completion of the final semester (3) for graduation status to be updated to GRADUATE. (via USA mail, or hand carried) Be sure to make copies of all documents. I will not accept any documents that have white out or dark slash marks. If an error is made, cross a signal line through the error and have your clinical instructor provide an initial next to the error.

Assignments: Quality Assurance Meeting: The student will arrange a meeting with the reading physician to review a case the student performed with little assistance. The exam should have a comparison exam(invasive, operative or tech to tech) and include positive findings.

Student SWOT Paper: See instructions located within the course

Performance Assignments- Further instructions are provided on the performance assignment sheet. Several tables are combined onto one sheet. **All exams must be performed on real life patient's.** If an exam is not performed at your clinical location, arrangements will be made to provide you with opportunities.

Clinical III	1-6	(1) Upper Extremity Arterial Doppler(segmental, PVR, Doppler waveform, PPG) (1) TCD (1) Visceral Vascular (SMA, Hepatoportal) (1) Renal/Aortic Ratio (1) Venous Duplex (Insufficiency) (1) Lower Extremity Vein Mapping
Clinical III	7-16	Exams logged must meet program goals (2) Carotid Duplex (1) TCD (1) Venous Insufficiency (2) Lower Extremity Venous Duplex for obstruction (2) Upper Extremity Arterial (2) Upper extremity venous (2) Lower Extremity Arterial Duplex (1) Lower Extremity Arterial Doppler (segmental, PVR, Doppler, PPG) (2) Exercise Arterial (WTT) (1) Visceral Vascular(SMA, hepatoportal) (1) Renal/Aorta Ratio (2) Aorta-iliac Duplex (includes AAA)

**TDS-Technically Difficult Study

**+ pathology

**100% completed by student with only supervision of sonographer, all images kept and diagnostic.

Community Service

All students are required to log a minimum of 8 hours of community service. The required event must be health related and preferably an event that provides information and screenings related to vascular health. **The hours must be logged by end of spring semester**

Outstanding Clinical Instructor Award

Students and Faculty can nominate supervising clinical instructor and clinical instructors who have demonstrated outstanding commitment to clinical education and superior clinical teaching.

The following characteristics are considered:

- o Attitude toward clinical teaching
- o Communication skills
- o Clinical teaching skills
- o Commitment of the profession/professional role modeling
- o Mentoring abilities

Please submit your nomination to the Program Director or Clinical Coordinator. Provide a brief written statement of the attributes the clinical instructor(s) demonstrate.

Grading Scale and Due dates

ALL WORK IS DUE ON SUNDAY at 11:00 (IT IS YOUR RESPONSIBILITY TO CHECK DUE DATES for any exceptions). FINAL EVALUATION, PERFORMANCE ASSIGNMENTS, CLINICAL DOCUMENTS AND 1,152 CLINICAL HOURS COMPLETED AND SUBMITTED BY August 31, 2017

Grading in a clinical course is based on both objective and subjective observations. The student will be responsible for completing and submitting assignments on time. Evaluations will be completed at mid-term (week 7) and final (week 15). It is the student's responsibility to be sure evaluations are on time. The evaluation and attendance forms will not be accepted unless signed by both the student and the clinical instructor.

95-100%	4.0
90 - 94%	3.5
85 - 89%	3.0
80 - 84%	2.5
75 - 79%	2.0
70 - 74%	1.5
65 - 69%	1.0
60 - 64%	0.5

HQV Grades:

What are HQV grades? HQV grades are mandated by the federal government to be entered on each student throughout the semester. These grades verify or confirm that a student is participating in class or not participating. If a student does not access class for a period greater than 7 class days a H will be recorded. If a student does not access class for a period greater than 14 class days, a Q will be recorded.

Once a student is "Q'd" I will not allow re-admission into class.

All faculty are required to report each student's progress through the HQV grade process:

- **H** indicates the student is not doing acceptable work and needs **Help** to be successful.
- **Q** indicates the student has not attended and the instructor believes they have unofficially withdrawn (**Quit**). As a result of a "Q" grade, the student will be dropped from the class.
- **V** indicates the instructor **Verifies** that the student is attending.

Grading Rubric

Clinical Performance=70% of overall grade

Clinical Form	Assessment Element	Points
Mid-term Evaluation	Competency turned in on-time	10
Final Exam Evaluation	Competency turned in on-time	10
Time Sheets	Available on site and turned in on time	5
Attendance	Complete Required Clinical Hours (2 points reduction for every 8 hours missed)	15
Log Sheets	Available on site and turned in on time	5
Mid-term/final	Demonstrate continued progressed as outline in the course objectives and goals (5% reduction for marks placed in "NO" of section 1 and 2% reduction for marks placed in "NO" of sections 2-4 each category)	100 (each)
Performance Assignments	Demonstrate passing skills in all fields and completed by due date	100 (each log sheet)

Didactic Course Work=30% of overall grade

Assessment Element	Points	Quantity
Student Clinical Progress Forum	100	1
Quality Assurance Meeting	100	1
Student SWOT Paper	50	1
Community Service	20	8 Hours
SIMITCS-Vascular 2-Integrated Clinical	100	1

Congratulations

