

**Jackson College**

**DMS 265**

**Vascular Clinical II- 4 Credits**

**Program Director, Vascular Sonography**

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**Clinical Coordinator(s)**

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**Lab Instructor**

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**Course Description:**

This course is a continuation of DMS 161. Students receive 300 plus hours of supervised clinical experience in an approved vascular laboratory. It also 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 technologists

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 assessments (2).
3. Log 32 hours each week of supervised clinical hours within an approved clinical education facility.

**Course Outcome:**

Successful completion of DMS 265 the student will able to demonstrate advancing skills in the testing areas of: venous duplex exam, multilevel level arterial Doppler, carotid

duplex imaging, abdominal duplex imaging. Completion of this course will meet requirements for entry into DMS 266.

### **Vascular Clinical II - Weekly Competencies**

Clinical II Competencies/Outcomes
Complete multi-level arterial Doppler , TBI, segmental pressures, Doppler waveforms, PVRs (100% of exam)
Perform exercise physiological testing (WTT) (50% of exam)
Perform bypass graft surveillance of lower extremity( 75% of exam)
Perform venous insufficiency testing (50% of exam)
Complete lower and upper extremity arterial duplex (75% of exam)
Perform carotid duplex exam (50% of exam)
Perform upper extremity arterial Doppler exam (50%)
Discuss and describe hemodynamics associated with lower extremity arterial system
Recognize and Describe Triphasic, Biphasic and Monophasic CW waveform patterns.
Performs proper cuff placement
Explains hemodynamics and pathophysiology of the lower extremity arterial system (Doppler waveforms) associated with exam.
Locates carotid artery branches
Describes hemodynamics (Doppler waveform patterns associated with each carotid artery)
Imitates proper techniques used to obtain velocity measurements
Imitates proper techniques used to obtain diameter measurements
Student explains procedure and patient assessments
Recognizes and Describes normal and abnormal CW arterial Doppler waveform contours
Uses and Completes preliminary worksheets and reports
Uses appropriate and effective communication with staff, administrators and physicians
Discuss and describe differential diagnosis of carotid duplex imaging
Discuss and describe differential diagnosis of arterial duplex imaging
Seek further understanding of exam outcomes and quality assurance (tests of accuracy)
Adapt testing protocol for lower extremity arterial duplex testing
Adapt bypass graft testing protocol
Explore Transcranial Doppler testing
Explore Abdominal Aortic-iliac duplex imaging
Explore Renal artery duplex imaging
Explore upper extremity arterial duplex and Doppler imaging
Explore Visceral duplex imaging (SMA, Celiac)
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
Describe and recognize normal and abnormal PVR waveform tracings
Categorize peripheral arterial disease of the lower extremity
Describe ultrasound findings associated with lower extremity arterial disease
Describe normal and abnormal extracranial Doppler waveform patterns
Categorize carotid artery disease
Contributes in 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.

**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:** May 16--May 22- TIME OFF MUST be approved by the clinical instructor and clinical coordinator

**Please note if you do not have a minimum of 813 clinical hours by May 16, it is NOT recommended you take this week off.**

### **Clinical Documents:**

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

Required Clinical Forms-Print the necessary forms. ALL Original documents (listed above) must be submitted by the completion of clinical II. (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.

SDMS CME Clinical Instructor Log sheets- The log sheets are due end of the clinical semester. Each sonographer should have their own log sheet. These logs sheets must be completed by the student. The clinical staff will sign once the sheet is full. Please make sure you PRINT. All fields must be filled in! If you do not submit the form by the posted due date a written warning will be issued.

### **Assignments**

Weekly Student Report- Report weekly clinical activities (Dailey exam log sheets, exam tallies, clinical hours) within the clinical activities tracking spread sheet (Shared with you in Google Drive Folder).

Learning Goals: Using the clinical student notebook- you will post goals **week 1, 3,5,7,9,11,13,15,17**. Each set of goals should include whether or not the goals from the previous week were met. If you are still working on previous goals, please include your plan to meet old goals and new goals. Vicki Ruttkofsky, will use the clinical student notebook to track your goals and provide feedback. Group Case Discussions Lesson Objective Students will learn to organize case information, present case details and communicate ultrasound findings effectively. Students will engage in collaborative learning through sharing experiences and exposure to diverse testing protocols with a broad patient population.

### Group Case Discussions

#### Lesson Objective

Students will learn to organize case information, present case details and communicate ultrasound findings effectively. Students will engage in collaborative learning through sharing experiences and exposure to diverse testing protocols with a broad patient population.

**Performance Assessment**-Students will begin working through steps of each exam and complete assessments throughout the clinical weeks. Pacing the assessments is the best method to begin with. Follow the grid below to ensure the assessments are completed on time. **You may ask your instructor to complete an assessment at any time during clinical 2, prior to the due date. When necessary, scan models can be used for assessments. The clinical instructor and clinical coordinator must approve the use of scan models for assessments.**

Rotation	Week	Performance Assessment #1
Clinical II	1-9	Lower Extremity Arterial Duplex Carotid Duplex Venous Duplex (Insufficiency) Lower Extremity Venous Duplex (obstruction)
		Performance Assessment #2.
Clinical II	9-18	Abdominal Aorta (AAA) Aortic/iliac Renal Duplex/SMA Lower Extremity Arterial Doppler, (segmental pressures, PVR, Doppler waveforms, PPG) Exercise Arterial Doppler (WTT) TCD

		Upper extremity venous duplex Upper extremity arterial duplex
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**Journal Article review:**

You will be responsible for obtaining and evaluating an article from a peer reviewed professional journal. Your analysis of the article should include a brief synopsis of the article, what you liked or disliked about the article, what you learned from the article and whether or not you would recommend the article to a peer.

Your analysis should include the article title, author and journal from which it was obtained. Your analysis should be 1 page single-spaced.

You will be graded on relevance of your article, readability of your analysis, sentence structure, paragraph structure and whether or not you followed all directions.

**Case Study Report**

You will pick an interesting case in which you were involved. You may choose either an interesting peripheral arterial case, carotid case or venous case and write a Case Study Paper. More detailed instructions are located within the assignment (under assignments). You may want to use the new log sheets to assist you in the documentation of the interesting studies that you were involved with. This case study will require a video-poster presentation. Further instructions are located within assignment link.

**\*\*\*All assignments are due by 11 pm on the due date. Example: Late assignments will not be accepted without prior arrangements. If you have difficulty uploading your assignments call my cell or text and leave a message with the date and time the technical trouble started.**

**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**

**Grading Rubric**

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.

Grading in a clinical course is based on objective and subjective observations, attendance, clinical site visit reports, and reports made by clinical staff/clinical instructor. The program faculty calculates and submits the clinical grade. The student will be responsible for completing and submitting assignments on time. Performance Assessments will be submitted prior to the midterm and final evaluation. Evaluations will be completed at mid-term (week 9) and final (week 18). It is the student's responsibility to be sure evaluations and performance assignments are on time. The evaluations, performance assignments and attendance forms will not be accepted unless signed by both the student and the clinical instructor

**Grading Scale:**

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

**Grading Rubric**

**Clinical Performance=70% of overall grade**

<b>Clinical Form</b>	<b>Assessment Element</b>	<b>Points</b>
Mid-term Evaluation	Competency turned in on-time	10
Final Exam Evaluation	Competency turned in on-time	10
Time Sheets	Available on site	5
Attendance	Complete Required Clinical Hours (2 points reduction for every 8 hours missed)	15
Mid-term/final Grading Criteria	<p>1-2 marks within Partial Demonstration=100-95</p> <p>3 marks within "Partial Demonstration" =90-94%</p> <p>4 marks within Partial Demonstration=89-85%</p> <p>6 or more marks within Partial Demonstration-84-80%</p> <p>4 or more marks within "Does NOT demonstrate=74%</p>	100 (each)

Performance  
Assessments

5 pt

**Didactic Course Work=30% of overall grade**

Assessment Element	Points
Case Study Paper	35
Case Discussion video/poster presentation	50
Clinical Reports (Clinical Activity Tracking)	100
Article Review	20
Clinical Goals	90
Orientation Quiz	15

**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.

**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.