

Jackson College

DMS 155 Online-Peripheral Venous

Course Syllabus

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Credits: 3

Please feel free to contact me via e-mail or messaging as needed. Messages will be returned as soon as possible, usually within 24 to 48 hours. If I am unavailable for any period of time I will notify the class via email.

Course Description

This course facilitates student learning of diagnostic testing methods and disease processes for the peripheral venous systems of the upper and lower extremities. Venous hemodynamics, pathophysiology, and testing methods covered include all areas of color and spectral Doppler imaging (CDI, PW), air and photo plethysmography.

Course Objective/Competencies

By the completion of DMS 155 the student will be able to apply and demonstrate cognitive, affective, and psychomotor domain competency in the areas of lower extremity and upper extremity venous testing.

Objectives/Competencies
Label normal anatomy of the lower extremity and upper extremity venous system
Recognize and classify venous thrombosis
Explains testing indications, limitations, contraindications, risk factors of lower and upper extremity venous system
Explains and discuss differential diagnosis associated with the upper extremity and lower extremity

Explains and discusses proper imaging techniques of lower extremity and upper venous testing and mapping(including photoplethysmography and air plethysmography)
Explains hemodynamics associated with lower and upper extremity venous system
Explains disease processes of venous thrombosis and venous insufficiency of the upper and lower extremities
Analyze sonographic findings and describe ultrasound findings.
Explains and recognizes abnormal Doppler waveform contours associated with venous pathology
Explain and discuss upper extremity and lower extremity testing protocols
Explain and discuss venous artifacts
Write preliminary interpretation for venous testing of the upper and lower extremity
Explains and recognizes normal Doppler waveform patterns
Discuss the importance of QA programs for peripheral venous testing
Explains and Discusses Color Doppler and Power Doppler settings and concepts

Measurement of Objective

- Student must achieve a passing score of 75% on the module quizzes and exams. Questions are conceptual based to measure knowledge, critical thinking and problem solving
- Student must achieve a passing score of 75% on Case studies and worksheets.

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Facilitator and Student Responsibilities

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 JC 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.

Required Texts/Software

Rummel & McPharlin, Vascular Technology an Illustrated Review 5th Edition, Davis Publishing 2015, ISBN 978-0-941022-85-9

Pellerito & Polak, Introduction to Vascular Ultrasonography 6th Edition, Elsevier Publising, 2012, ISBN978-1-4377-1417-3

Donald Ridgway, Introduction to Vascular Scanning , A Guide for the Complete Beginner, 4th Edition, Davis Publishing, 2014

ISBN 0-941022-83-8

Simitics- Interactive software. You will need to purchase the access code from JC bookstore. The simitics modules are for grade.

- **Learn by doing** - online simulation is an effective, low-cost way of acquiring, perfecting and testing skills
- **Learners get instant feedback** on skills and quickly identify what they need to work on
- **Track learning progress** and study hours using our simple reporting menu

Course Method, Attendance

This class/week will begin Monday and end Sunday at 11:00pm. All the tasks for the week are expected to be completed by 11:00pm **SUNDAY**.

This course is designed to allow you to work at your own pace throughout the week. You can access class any time of the day or night.

A student is expected to sign into class a minimum of twice weekly. Failure to sign into class twice weekly will result in the loss of 10% from the final grade.

Assignments

Lab Worksheets

There are 3 lab worksheets that are to be completed during clinical or if necessary during open lab times.

Class Discussion

Because this class is on-line, group discussions is a great way to share experiences. It is expected that the student will sign in and engage classmates in class at least **twice weekly**. (more is encouraged) Also by participating in-group discussion the student will learn computer technology, researching internet, and additional tools to aid in successful on-line learning.

The nature of online education is different than traditional classroom participation. The students are expected to access each week's materials several times, even daily. In this way, traditional classroom discussion is simulated and even enhanced. The degree and amount of student participation (i.e. "attendance") will contribute to the student's earned grade.

Your discussions will be graded on this scale:

- Comments further the discussion and demonstrate a knowledge of the assigned readings, as well as display critical thinking: 20 points

- Comments further the discussion and display critical thinking: 19-18 points
- Less than required number of comments; comments further the discussion: 17-16 points
- Less than required number of comments; comments brief or of the "I agree" kind: 15-0 points

Simitcs Modules

Click on this link to transport to Smitcis Student Login: <http://www.simitcs.com/login/>

To satisfactorily complete this module you must earn a minimum of 80% on both the practice test and test. Students who earn 80% on both tests will receive a certificate and earn 100% for this assignment.

The certificate can be downloaded as a PDF file and upload to this location. The modules are rigorous and some may take several hours to work through. Do not wait to begin working!

Grading:

Class assignments and quizzes= 40%

Exams 1&2= 60%

A quiz of 20 points will follow each lesson. Quizzes and exams must be completed by 11pm EST by the designated due date to avoid penalty. If previous arrangements are not made, five points will be deducted each day the quiz is late. There will be two exams. These are timed exams, students are allowed 35 secs per question. However, a proctor will NOT be required..

Assessment Element	Value	Quantity	Points
Venous Discussion Topics (Class Discussion)	20	4	80
Simitics Modules	3	50	150
Exams	150	2	300
Quizzes	20	14	280
Lab Worksheets	20	3	60

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Grading Scale:

****Students must maintain a 2.0 in each DMS class to remain in the vascular sonography program****

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

15-Week Course Schedule and Due dates: All Module work is due Sunday @ 11pm EST.

Module 1 Gross and Microscopic Venous Anatomy of the Upper and Lower Extremities~

Reading Assignment: Read and Study lesson notes:
Pellerito/Polak, Chapter 21 pg 353-354; **McPharlin/Rummell**, Chapter 24 266-273; **Ridgway**, Chapter 8 and 10 pg~-195-202, 273-277

Module Tasks : Quiz 1

Module 2 Venous Hemodynamics ~

Reading Assignment: Read and Study lesson notes:
Pellerito/Polak, Chapter 1 page 15-19; **McPharlin/Rummell**, Chapter 25 277-280

Module Tasks : Quiz 2, Discussion 1, Begin chapters 1-9 Simitics Module-Lower Limbs Venous,

Module 3 Color Flow Imaging ~

Reading Assignment: Read and Study lesson notes:
Pellerito/Polak, Page 45-46; **Ridgway**, Chapter 12 page pg. 373-376

Module Tasks : Quiz 3

Module 4 Risks Factors; Indications and Limitations of Venous Testing~

Reading Assignment: Read and Study lesson notes:
Pellerito/Polak, Chapter 20; **McPharlin/Rummell**, Chapter 26 281-292

Module Tasks : Quiz 4 , Discussion #2,

Module 5 Ultrasound characteristics of Normal veins, Abnormal Veins & Conditions that mimic deep vein thrombosis ;

Interpretation of Peripheral Extremity Venous Studies ~

Reading Assignment: Read and Study lesson notes:

Pellerito/Polak, chapter 22; **McPharlin/Rummell**, Chapter 30

Module Tasks : Quiz 5 ,

Module 6 Venous Duplex Imaging - Evaluate for Obstruction~

Reading Assignment: Read and Study lesson notes:

Pellerito/Polak, chapter 21 pages 353-369;

McPharlin/Rummell, Chapter 29, 301-306, ; **Ridgway**, 202-238

Module Tasks : Quiz 6, Discussion #3, Finish Simitics Module- Lower Limb Veins

Module 7 Venous Insufficiency-Evaluating for Venous Insufficiency ~

Reading Assignment: Read and Study lesson notes:

Pellerito/Polak, Chapter 24; **Ridgway**, 239-245;

Module Tasks : Quiz 7

Module 8 Upper Extremity Imaging~

Reading Assignment: Read and Study lesson notes:

Pellerito/Polak, pages 370-376; **Ridgeway**, 273-299

Module Tasks : Quiz 8, Exam #1

Module 9 Superficial Vein Mapping~

Reading Assignment: Read and Study lesson notes:

Pellerito/Polak, pages 370-376; **McPharlin/Rummell**, Chapter 15 pg. 159-164;

Module Tasks : Simitics Module- Vessel Mapping

Module 10 Photoplethysmography, Air Plethysmography and Strain Gauge Plethysmography~

Reading Assignment: Read and Study lesson notes:

McPharlin/Rummell, Chapter 27 and 28

Module Tasks : Quiz 10, Lab Worksheet #1

Module 11 Venous Disease Treatments~

Reading Assignment: Read and Study lesson notes:

McPharlin/Rummell, Chapter 32 and 33

Module Tasks : Quiz 11, Lab Worksheet #2

Module 12

Preliminary Reports~

Reading Assignment: Read and Study lesson notes:

Module Tasks : Quiz 12,

Module 13

Other Venous Imaging Modalities-

Reading Assignment: Read and Study lesson

*notes: **McPharlin/Rumwell, Chapter 31; Ridgway, Chapter 16***

pg. 476

Module Tasks: Quiz 13,

Module 14

Accuracy of Venous Imaging and Sources of Error~

Module Tasks; Lab Worksheet #3 . Prepare for Exam #2

Module 15

Exam #2: May 6

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.

