

RAD SCI VASCULAR TECHNOLOGY (RSV)

RSV 302: Noninvasiv Principles & Proced

Credits: 2

College: Jefferson College of Health Professions

Schedule Type: Lecture

RSV 311: Cardiovascular Physiology

Students will learn the etiology, signs, symptoms, clinical recognition and detection, and treatment of various acquired and congenital cardiovascular disorders. The student will also be introduced to the varied drug classifications that are used to treat cardiovascular disorders. Emphasis will be placed on mechanism of action, indications, contraindications and potential side effects of common cardiac medications.

Credits: 2

College: Jefferson College of Health Professions

Schedule Type: Lecture, On-Line

RSV 312: Cardiovascular Pathophysiology

Credits: 2

College: Jefferson College of Health Professions

Schedule Type: Lecture

RSV 313: Vascular Pathophysiology

Credits: 1

College: Jefferson College of Health Professions

Schedule Type: Lecture

RSV 321: Pat Care & Serv in Diag Imag

Presents basic concepts of the healthcare delivery system and an introduction to medical imaging and radiation sciences with a focus on sonography. Emphasizes patient care, diversity, sterile procedure, ergonomics and body mechanics, communication, essential sonographer skills, professional ethics and medicolegal issues.

Credits: 2

College: Jefferson College of Health Professions

Schedule Type: Lecture, Lecture/On-Line, On-Line

RSV 322: Cardiovascular Pharmacology

Credits: 2

College: Jefferson College of Health Professions

Schedule Type: Lecture

RSV 323: Patient Care & Serv in Diag Im

Credits: 1

College: Jefferson College of Health Professions

Schedule Type: Lecture, Lecture/On-Line, On-Line

RSV 331: Cardiac Procedures I

Credits: 3

College: Jefferson College of Health Professions

Schedule Type: Lecture/Lab

RSV 332: Cardiac Procedures II

Credits: 3

College: Jefferson College of Health Professions

Schedule Type: Lecture

RSV 335: Vascular Procedures I

Lecture presentation and hands-on operation of equipment utilized in a vascular laboratory to evaluate upper and lower extremity arterial and venous disease states and vascular sonography. Emphasizes the clinical application, operation and knobology associated with such equipment. Provides guided practice in the performance of vascular procedures utilized in the assessment of arterial and venous diseases of the upper and lower extremities. Topics include plethysmographic procedures, two-dimensional imaging and nonimaging techniques

Credits: 2

College: Jefferson College of Health Professions

Schedule Type: Lab, Lecture

RSV 336: Vascular Procedures II

"Continuation of Radiologic Sciences V 335, Vascular Procedures I. Provides guided practice in the performance of direct and indirect cerebrovascular testing, intracranial Doppler and abdominal procedures. Emphasizes the operation and knobology of the equipment utilized in these procedures via lecture and hands-on experience. Prerequisite: RSV 335 "

Credits: 2

College: Jefferson College of Health Professions

Schedule Type: Lab, Lecture/Lab

RSV 338: Invasive Procedures I

Credits: 3

College: Jefferson College of Health Professions

Schedule Type: Lecture

RSV 339: Invasive Procedures II

Credits: 3

College: Jefferson College of Health Professions

Schedule Type: Lecture/Lab

RSV 347: Invasive Instrumentation

Credits: 1

College: Jefferson College of Health Professions

Schedule Type: Lecture

RSV 351: Cardiac Principles I

Credits: 3

College: Jefferson College of Health Professions

Schedule Type: Lecture

RSV 352: Cardiac Principles II

Credits: 3

College: Jefferson College of Health Professions

Schedule Type: Lecture

RSV 353: Vascular Principles I

Introduces the fundamental skills and principles needed to perform vascular diagnostic testing of the upper and lower extremities. Includes arterial and venous vascular procedures with an emphasis upon the physical principles and cross-sectional anatomy common to each of these procedures. Presents the fundamentals necessary to evaluate acquired and congenital vascular disease of the upper and lower extremities.

Credits: 2

College: Jefferson College of Health Professions

Schedule Type: Lecture, On-Line

RSV 354: Vascular Principles II

Continuation of Radiologic Sciences V 353, Vascular Principles I. Emphasizes the anatomy, pathology and pathophysiology of the intracranial and extracranial cerebrovascular vasculature and abdominal vessels. Includes assessment of intracranial and extracranial bloodflow, abdominal vessel diagnostic assessment, current therapies in vascular treatment, two-dimensional imaging and Doppler waveform analysis with an emphasis upon the physical principles common to each of these procedures. Prerequisite: Radiologic Sciences RSV 353

Credits: 2**College:** Jefferson College of Health Professions**Schedule Type:** Lecture**RSV 357: Invasive Principles I****Credits:** 3**College:** Jefferson College of Health Professions**Schedule Type:** Lecture**RSV 358: Invasive Principles II****Credits:** 3**College:** Jefferson College of Health Professions**Schedule Type:** Lecture**RSV 376: Clinical Vascular Sonog VI****Credits:** 8**College:** Jefferson College of Health Professions**Schedule Type:** Clinical**RSV 400: Ultrasound Physics I**

Presents general acoustic principles including energy transfer through wave propagation, transducer construction, spatial and temporal resolution, beam steering and focusing, imaging modes, and 3D/4D ultrasound. Emphasizes applied principles of instrumentation, including knobology and image optimization.

Credits: 2**College:** Jefferson College of Health Professions**Schedule Type:** Lecture, Lecture/On-Line, On-Line**RSV 401: Vascular Anatomy**

Presents anatomy specific to vascular sonography, consisting of normal anatomy, anomalies and related structures. Includes correlation with radiographic, CT, angiographic and ultrasonographic images as well as cadaver specimens, utilizing a multimedia approach.

Credits: 2**College:** Jefferson College of Health Professions**Schedule Type:** Lecture, On-Line**RSV 403: Ultrasound Physics II**

Presents properties of ultrasound's interaction with tissue and instrumentation of the ultrasound machine. Topics include computer technology, creation and storage of the ultrasound image, hemodynamics, spectral, color and power Doppler, acoustic artifacts, bioeffects & safety, and quality assurance/quality improvement relative to ultrasound. Advanced topics such as new imaging methods and new developments in ultrasound technology will also be introduced. . Prerequisite: RSV 400

Credits: 2**College:** Jefferson College of Health Professions**Schedule Type:** Lecture, Lecture/Lab**RSV 411: Clinical Cardiac I****Credits:** 2**College:** Jefferson College of Health Professions**Schedule Type:** Clinical**RSV 412: Clinical Cardiac II****Credits:** 3**College:** Jefferson College of Health Professions**Schedule Type:** Clinical**RSV 413: Clinical Cardiac III****Credits:** 4**College:** Jefferson College of Health Professions**Schedule Type:** Lecture**RSV 414: Clinical Cardiac IV****Credits:** 3**College:** Jefferson College of Health Professions**Schedule Type:** Clinical**RSV 415: Clinical Cardiac V****Credits:** 3**College:** Jefferson College of Health Professions**Schedule Type:** Clinical**RSV 416: Clinical Cardiac VI****Credits:** 8**College:** Jefferson College of Health Professions**Schedule Type:** Clinical**RSV 421: Clinical Vascular I**

Students participate in the diagnostic process of performing sonographic vascular examination and testing at a designated clinical site. They are responsible for obtaining the knowledge and understanding of the various sonographic vascular examination protocols and the technical factors necessary to obtain diagnostic images. This is accomplished by initial observation, hands-on experience and the performance of vascular examinations under the supervision of a staff vascular technologist. Evaluation is based upon competency in performing, patient care skills, technical factors, and the observance and application of healthcare principles. Students must demonstrate competency in the performance of vascular testing. Content and clinical practice experiences should be designed to sequentially develop, apply, critically analyze, integrate, synthesize, and evaluate concepts and theories in the performance of vascular testing. Through structured, sequential, competencybased clinical assignments, concepts of team practice, patient-centered clinical practice and professional development are discussed, examined, and evaluated. Clinical practice experiences should be designed to provide patient care and assessment, competent performance of vascular sonography imaging and testing, and total quality management. Levels of competency and outcomes measurement ensure the well-being of the patient prior to, during, and following the procedure.

Credits: 6**College:** Jefferson College of Health Professions**Schedule Type:** Clinical

RSV 422: Clinical Vascular II

"Continuation of Radiologic Sciences RSV 421, Clinical Vascular II. Students participate in the diagnostic process of performing sonographic vascular examination and testing at a designated clinical site. They are responsible for obtaining the knowledge and understanding of the various sonographic vascular examination protocols and the technical factors necessary to obtain diagnostic images. This is accomplished by initial observation, hands-on experience and the performance of vascular examinations under the supervision of a staff vascular technologist. Evaluation is based upon competency in performing, patient care skills, technical factors, and the observance and application of healthcare principles. Students must demonstrate competency in the performance of vascular testing. Content and clinical practice experiences should be designed to sequentially develop, apply, critically analyze, integrate, synthesize, and evaluate concepts and theories in the performance of vascular testing. Through structured, sequential, competencybased clinical assignments, concepts of team practice, patient-centered clinical practice and professional development are discussed, examined, and evaluated. Clinical practice experiences should be designed to provide patient care and assessment, competent performance of vascular sonography imaging and testing, and total quality management. Levels of competency and outcomes measurement ensure the well-being of the patient prior to, during, and following the procedure. Prerequisite: RSV 421 "

Credits: 6
College: Jefferson College of Health Professions
Schedule Type: Clinical

RSV 423: Clinical Vascular III

"Continuation of Radiologic Sciences RSV 422, Clinical Vascular II. Students participate in the diagnostic process of performing sonographic vascular examination and testing at a designated clinical site. They are responsible for obtaining the knowledge and understanding of the various sonographic vascular examination protocols and the technical factors necessary to obtain diagnostic images. This is accomplished by initial observation, hands-on experience and the performance of vascular examinations under the supervision of a staff vascular technologist. Evaluation is based upon competency in performing, patient care skills, technical factors, and the observance and application of healthcare principles. Students must demonstrate competency in the performance of vascular testing. Content and clinical practice experiences should be designed to sequentially develop, apply, critically analyze, integrate, synthesize, and evaluate concepts and theories in the performance of vascular testing. Through structured, sequential, competencybased clinical assignments, concepts of team practice, patient-centered clinical practice and professional development are discussed, examined, and evaluated. Clinical practice experiences should be designed to provide patient care and assessment, competent performance of vascular sonography imaging and testing, and total quality management. Levels of competency and outcomes measurement ensure the well-being of the patient prior to, during, and following the procedure. Prerequisite: RSV 422 "

Credits: 8
College: Jefferson College of Health Professions
Schedule Type: Clinical

RSV 424: Clinical Vascular IV

Credits: 3
College: Jefferson College of Health Professions
Schedule Type: Clinical

RSV 431: Clinical Invasive I

Credits: 2
College: Jefferson College of Health Professions
Schedule Type: Clinical

RSV 432: Clinical Invasive II

Credits: 6
College: Jefferson College of Health Professions
Schedule Type: Clinical

RSV 433: Clinical Invasive III

Credits: 4
College: Jefferson College of Health Professions
Schedule Type: Clinical

RSV 481: Cardiac Review Seminar

Credits: 2
College: Jefferson College of Health Professions
Schedule Type: Lecture

RSV 482: Vascular Review Seminar

Presents a comprehensive review of the physical principles, instrumentation and clinical applications of peripheral vascular imaging in preparation for the RVT certification examination.
Credits: 2
College: Jefferson College of Health Professions
Schedule Type: Lecture, Lecture/On-Line, On-Line

RSV 483: Invasive Review Seminar

Credits: 2
College: Jefferson College of Health Professions
Schedule Type: Seminar

RSV 491: Spec Topics in Cardiac Sonog

Credits: 2
College: Jefferson College of Health Professions
Schedule Type: Lecture

RSV 493: Spec Topics in Vascular Tech

Presents new techniques and information, clinical experiences and presentation of case studies in a weekly seminar format.
Credits: 2
College: Jefferson College of Health Professions
Schedule Type: Lecture

RSV 495: Special Topics in Invasive

Credits: 2
College: Jefferson College of Health Professions
Schedule Type: Lecture

RSV 499: Cardiovascular Ind Study

Credits: 1
College: Jefferson College of Health Professions
Schedule Type: Independent Study