Course Description
This course will introduce the student to the practical technique of cardiac & vascular sonography and the clinical environment. The course will develop the student’s skills in the use of cardiac & vascular ultrasound as applied to image production and analysis and understanding of the daily operational activities within a cardiovascular diagnostic department to the point of functional competence. It will provide the practical experience in support of classroom studies.

Through hands-on ultrasound imager use in the laboratory, observation and practical application of classroom instruction the student will demonstrate the proper patient care and testing management in the cardiovascular diagnostic department. The course requires attendance in compliance with the overall policy of the program which is no more than two unexcused absences in the semester.

Credits/Modes of Instruction
103 laboratory hours (hands-on). 2 credits will be awarded upon successful completion.

Prerequisites
- Students matriculated in the Cardiac Sonography Program.
- CDXS 4000 Cardiac Principles and Testing - Co-requisite

Instructor
Garth Nanni, office 908-889-2468, email nannigs@shp.rutgers.edu. Hours by appointment.
Renee Rapuano, office 908-889-2564, email rapuanre@shp.rutgers.edu. Hours by appointment.

Course Goals and Objectives:

Goals
The general goal of Introduction to Clinical Practice is to provide the student with the fundamental practical skills of cardiac and vascular sonographic techniques and basic knowledge of the daily operational activities within a cardiovascular diagnostic department.

Objectives
The general objective of this course is to introduce the student to the clinical practice environment. The students will be able to:
1. Demonstrate the use of cardiac sonography to produce the basic industry standard views, Doppler sampling and acquired analysis.
2. Demonstrate the use of vascular sonography to produce the basic industry standard views, Doppler sampling and acquired data analysis of the following procedures:
- Venous duplex (LE & UE)
- Carotid duplex
- Arterial duplex (LE & UE)
- Pulse volume recording and segmental blood pressure physiologic testing

3. Demonstrate image acquisition, archival, and/or processing for interpretation.
4. Help to prepare room and patient for each examination.
5. Review and/or record the pertinent history and supporting clinical data to facilitate optimum diagnostic results.
6. Attend to patients’ safety and comfort.
7. Assist in keeping all necessary records.
8. Help to keep a neat, orderly, and properly supplied room and department.
10. Observe patient confidentiality and HIPAA regulations according to institution specific protocols.

Course Requirements

Requirements for Completion
A grade of 80% has been established as the satisfactory level for all academic and clinical courses in the Cardiac Sonography program. A final grade below 80% at any time during enrollment in the program may subject a student to dismissal. A student who receives two final grades below 80% will automatically be dismissed from the program.

<table>
<thead>
<tr>
<th>Requirements</th>
<th>Weight</th>
</tr>
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<tbody>
<tr>
<td>Sonographic technique demonstration</td>
<td>50%</td>
</tr>
<tr>
<td>Attendance</td>
<td>25%</td>
</tr>
<tr>
<td>Clinical coordinator evaluation (practical</td>
<td>25%</td>
</tr>
<tr>
<td>examinations)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
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Special Enrollment Requirements

The student will need the use of a computer with internet access for any web enhanced components (Moodle course management software).

Evaluation, Feedback and Grading

Evaluation/Assessment Methods
The efficacy of this course will be assessed through:
- student evaluation of the course and instructor
- student adaption of material to clinical education
- ongoing analysis of test scores
- certification exam results (as applicable)
Feedback on Progress
The student will receive weekly feedback on progress from the instructors. This feedback will be in the form of a review of images discussion of areas of weakness and strengths.

Course Evaluation by Students
At the conclusion of the course, students will complete the standard SHP course evaluation form available by hardcopy distributed by the instructor or via the Moodle course management system.

The program faculty and staff also monitor national credentialing examinations (offered American Registry of Diagnostic Medical Sonography and Cardiovascular Credentialing International) for graduate pass rates as a measure of course/program effectiveness.

The program also conducts an employer survey post graduation as a further measure of course/program effectiveness.

Any additional suggestions/comments during the semester may be solicited.

Grade Determination
A grade of 80% has been established as the satisfactory level for all academic and clinical courses in the Cardiac Sonography program. A final grade below 80% at any time during enrollment in the program may subject a student to dismissal. A student who receives two final grades below 80% will automatically be dismissed from the program.

The grade for this course will be Pass/Fail grade as noted below.

<table>
<thead>
<tr>
<th>Weighted Average of All Requirements</th>
<th>Final Letter Grade</th>
<th>Grade Quality Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>80-100%</td>
<td>P</td>
<td>Pass</td>
</tr>
<tr>
<td>Below 80%</td>
<td>F</td>
<td>Fail</td>
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*Should the student's final average fall below 80% but above 75% they will be afforded an opportunity to retake a failed mid-term or final examination to achieve a passing final average. This is with the understanding that the highest final average for grading achievable will be 80%. Retake of an examination is at the discretion of the instructor in consultation with the program director taking into consideration the student’s standing in other courses (i.e. a student with multiple failed or failing courses may not be afforded the examination retake opportunity). In the case of Pass/Fail grading the student will be allowed to retake a practical examination – at the discretion of the instructors.

Faculty/Student Honor Code
Refer to your SHP Student Handbook at http://shp.rutgers.edu/current_students/pdf/Handbook.pdf
The faculty of Rutgers-School of Health Professions believe that students must observe and support high standards of honesty and integrity in all aspects of education, practice, and research. For this reason, all matriculated and non-matriculated students in this course are expected to abide by the School's Faculty/Student Honor Code and accept responsibility to help ensure that these standards are maintained by reporting violations of the Honor Code observed in others. All violations will be considered with gravest concern and may be punishable with sanctions as severe as suspension or dismissal.

General Learning Resources

Required Textbook(s)
None

Other Required Learning Resources

Recommended or Supplemental Learning Resources
None

Course Units/Schedule

The course will take place during the first Fall (Fall I) program semester. Scheduling details are noted on the program, which is distributed to students a minimum of 2 weeks prior to semester start. The schedule can also be found on the webpage, Rutgers-SHP internet portal – my.Rutgers.edu.

Information for Students with Disabilities

Rutgers University welcomes students with disabilities into all of the University's educational programs. In order to receive consideration for reasonable accommodations, a student with a disability must contact the appropriate disability services office at the campus where you are officially enrolled, participate in an intake interview, and provide documentation: http://shp.rutgers.edu/current_students/disability_services/register_ds.html. If the documentation supports your request for reasonable accommodations, your campus’s disability services office will provide you with a Letter of Accommodations. Please share this letter with your instructors and discuss the accommodations with them as early in your courses as possible. To begin this process, please complete the Registration form on the OSA web site at: https://cas.rutgers.edu/login?service=https://apps.shrp.rutgers.edu/projects/disabilities/cas_Validate.cfm&CFID=35912&CFTOKEN=f5b7579709604a44-5AC9F92B-155D-14A0-006D3A514224E2CD.