

## PEDIATRIC CARDIAC ULTRASOUND AND CONGENITAL HEART DISEASE COURSES

### TECHNICAL COURSEWORK

<b>A Review of Cardiac Principles and Embryology of the Heart</b>	<b>PE-I</b>	<p>This is an advanced echocardiography course offering comprehensive training in the specialized techniques necessary for the diagnostic evaluation of congenital heart disease. Cardiac anatomy, fetal transitional and neonatal circulation, and normal embryological development of the heart and great vessels will be discussed. Analysis of congenital cardiac malformations will be defined, discussed and applied in a segmental sequence. Laboratory training will include standard views and methods of cardiac evaluation with volunteer pediatric patients.</p>
<b>Congenital Heart Pathology and Training in the Systematic Ultrasound Assessment of the Pediatric Heart</b>	<b>PE-II</b>	<p>Common congenital cardiac lesions, cardiac surgeries, and postoperative evaluation will be discussed. Congenital heart pathology, patient history, systematic assessment and quantitative assessment, and associated conditions will be taught. Ultrasound evaluation of congenital heart disease with M-mode/2D, PW/CW color flow Doppler will be taught and practiced in the laboratory.</p>
<b>Miscellaneous and Advanced Evaluation of Case Studies and Student Evaluation of Laboratory Knowledge and Assessment of Scanning Skills</b>	<b>PE-III</b>	<p>Students will take a comprehensive final to assess their knowledge of normal and abnormal anatomy, pathology, evaluation of congenital heart disease, scanning settings, and patient care. Students will also perform a pediatric scanning evaluation to include standard views, and demonstrate proficiency with M-mode/2D, PW/CW color flow Doppler. Students are expected to recognize and interpret common congenital heart pathology. This course includes a discussion of the responsibilities of sonographers and legal and medical ethics. Externship is included as part of this course.</p>