Adult Echo / Track I

US 205 - Physical Principles and Instrumentation of Ultrasound

This course provides a comprehensive understanding of the fundamental physical principles underlying ultrasound technology, with a specific focus on preparing students to pass the SPI exam. Through a blend of theoretical knowledge and hands-on laboratory experience, students will gain proficiency in ultrasound instrumentation and operation.

Topics covered in the course include the basic acoustic principles of ultrasound, the physics of pulsed ultrasound, Doppler principles, transducer operating principles and composition, components of the ultrasound imaging unit, identification and mitigation of common imaging artifacts, and safety protocols for operating ultrasound equipment.

In the laboratory component of the course, students will receive practical training on the instrumentation controls necessary for optimal operation of ultrasound machines. By mastering these essential skills, students will be well-prepared to excel in both the theoretical and practical aspects of ultrasound imaging, ultimately ensuring success in passing the SPI exam and pursuing a career in the field of medical sonography.

US 210 – History of Ultrasound

Topics covered in the course include the early origins of ultrasound, advancements in transducer technology, landmark discoveries in diagnostic ultrasound applications, and the historical progression of ultrasound equipment and imaging techniques. Students will also examine the role of key figures in ultrasound history and their contributions to the field.

Through a combination of lectures, discussions, multimedia presentations, and interactive learning activities, students will develop a deep appreciation for the historical significance of ultrasound in medicine. By understanding the historical context of ultrasound innovation, students will gain valuable insights into the evolution of medical imaging technology and its impact on healthcare practices and patient care.

Overall, the History of Ultrasound course aims to foster a greater understanding of the rich legacy and ongoing advancements in ultrasound technology, inspiring students to explore the future possibilities of this dynamic and rapidly evolving field.

US 305 - Vascular Ultrasound

This course is designed to instruct the student to ultrasound studies performed in the practice of vascular ultrasound imaging. Delve into the intricate hemodynamics of arterial and venous vascular systems, exploring their anatomical structures and prevalent pathologies. Vascular Sonography is a game of millimeters, this is the time to perfect your game.

In our comprehensive lectures, we'll dissect the anatomy of the body's arterial and venous networks, providing insights into common disorders encountered in clinical practice. During immersive laboratory sessions, you'll receive expert guidance in refining your scanning techniques for crucial areas such as the carotid arteries, upper and lower extremity arteries, upper and lower extremity veins, and abdominal vessels.

As the last class before your externship, mastering ultrasound studies in vascular imaging is paramount. Join us as we equip you with the skills essential for success in your upcoming professional endeavors.

US 310 – Medical Professional

Embark on a comprehensive exploration of the dynamic field of diagnostic medical sonography with this foundational course. Designed to provide a broad overview, students will delve into the essential components of sonography practice, encompassing the roles, skills, and learning strategies vital for success in the profession.

Throughout the course, students will gain insights into the multifaceted nature of a career in sonography, examining various facets including career progression pathways, the significance of professional affiliations, and the advantages of certification and registration. Discussions will encompass crucial topics such as sonographer safety protocols, ethical considerations, and the legal framework surrounding sonography practice, fostering a deep understanding of professional conduct and responsibilities.

Moreover, students will explore diverse employment opportunities within the field, develop essential resume-writing skills, and hone effective interview techniques to navigate the competitive job market with confidence. By the course's conclusion, students will emerge equipped with a comprehensive understanding of the sonography profession, primed to embark on a successful and rewarding career journey in diagnostic medical sonography.

AE 406 Adult Echocardiography I

Course AE 406 is an introductory course focused on providing a thorough

understanding of echocardiographic techniques for assessing adult cardiac anatomy and pathology. The course covers both normal and abnormal anatomical structures through detailed echocardiographic imaging and interpretation.

Students will develop foundational skills in identifying and analyzing normal cardiac anatomy and function using standard echocardiographic modalities. The course emphasizes mastering essential scanning techniques, understanding echocardiographic protocols, and interpreting Doppler and tissue Doppler imaging.

The curriculum also introduces students to various pathological conditions affecting the adult heart, such as valvular diseases, myocardial dysfunction, and congenital heart conditions. Students will learn to differentiate between different cardiac pathologies and use echocardiographic data to support clinical decision-making.

Hands-on laboratory sessions are an integral part of the course, providing students with practical experience in acquiring and analyzing cardiac images. Working with live patient data enhances the application of theoretical knowledge in real-world settings.

US 410 - Patient Care in Radiology

Delve into the critical realm of patient care within the context of Diagnostic Medical Sonography in this comprehensive course. Students will explore various aspects of patient care pertinent to sonographers, with a focus on fostering effective patient/sonographer interaction, ensuring patient confidentiality, and adhering to HIPAA and OSHA compliance standards.
Throughout the course, students will develop essential patient care skills applicable not only to Diagnostic Medical Sonography but also to the broader field of radiology. Emphasis will be placed on mastering vital signs assessment, mastering body mechanics for safe patient transfer, implementing care techniques for patients with tubing, and adhering to standard precautions for infection control.
Moreover, students will learn aseptic/sterile techniques, isolation protocols, and protocols for managing emergency medical situations. By the course's conclusion, students will be well-equipped with the knowledge and practical skills necessary to provide exemplary patient care in the dynamic and fast-paced environment of diagnostic medical sonography.

AE 507 Adult Echocardiography II

Course AE 507 is an intermediate-level course designed to deepen students' understanding and application of echocardiographic techniques for assessing adult cardiac anatomy and pathology. This course provides a comprehensive examination of both normal and abnormal anatomical structures through detailed

echocardiographic imaging and interpretation, equipping students for more complex clinical cases.

Students will enhance their proficiency in identifying and analyzing normal cardiac anatomy and function using advanced echocardiographic modalities. The course emphasizes mastering key scanning techniques, understanding standard echocardiographic protocols, and interpreting Doppler, tissue Doppler, and strain imaging.

The curriculum covers a wide range of pathological conditions affecting the adult heart, including valvular diseases, myocardial dysfunction, and congenital heart conditions. Students will learn to differentiate between various cardiac pathologies, apply differential diagnoses, and use echocardiographic data to inform clinical decision-making and patient management.

Practical skills are reinforced through hands-on laboratory sessions focused on real-world echocardiographic imaging. Students will gain experience in acquiring and analyzing cardiac images, with opportunities to work with live patient data. Case studies and interactive discussions further develop critical thinking and problem-solving skills, preparing students to contribute effectively in clinical practice.

US 510 – Clinical Prep Course

Embark on your journey towards clinical readiness with our Clinical Preparation for Sonography course. Throughout this comprehensive program, students will cultivate essential skills in patient communication, interdisciplinary collaboration, and compassionate care for individuals with diverse needs.

In this course, students will delve into the intricacies of patient interaction, mastering effective communication strategies tailored to the healthcare setting. Additionally, students will learn the art of preparing patients for various ultrasound examinations, ensuring optimal comfort and cooperation throughout the process.

As students prepare for their clinical practicum, emphasis will be placed on completing essential requirements such as physical examinations, background checks, and drug screenings. These prerequisites are crucial for ensuring a smooth transition into the clinical environment.

Furthermore, students will gain valuable insights into the significance of the externship experience, viewing it as a pivotal six-month job interview. Through discussions and guidance, students will learn how to position themselves for success during their externship, ultimately paving the way for fulfilling career opportunities upon completion of the program.

Adult Echocardiography Clinical Practicum I

Prepare to step into the dynamic world of echocardiographic imaging through our Echocardiography Clinical Practicum I. This immersive experience offers students the opportunity to engage directly with real-world echocardiography facilities, including hospitals, clinics, and specialized cardiac imaging centers.

Throughout this course, students will undergo comprehensive training under direct supervision in the clinical setting, gaining firsthand insight into the operations of an echocardiography department. Guided by experienced supervising echocardiographers or cardiologists, as well as our school's Clinical Coordinator, students will acquire the essential hands-on skills required for a competent echocardiographer.

This course serves as a critical bridge between classroom learning and real-world practice, enabling students to apply theoretical knowledge to practical echocardiographic scenarios. Through active participation in clinical case studies and patient examinations, students will develop a deep understanding of echocardiographic techniques, patient care protocols, and departmental operations.

Moreover, this immersive experience provides students with invaluable insights into the daily realities of working in a clinical echocardiography setting. By observing and participating in echocardiographic examinations, students will build confidence in their abilities and cultivate the professionalism necessary for success in their future careers as echocardiographers.

Overall, Echocardiography Clinical Practicum I is a cornerstone of our program, offering students a transformative opportunity to refine their skills, expand their knowledge, and prepare for the rewarding challenges that lie ahead in the field of echocardiography.

Adult Echocardiography Clinical Practicum II

Echocardiography Clinical Practicum II builds upon the foundational experiences of Clinical Practicum I, offering students the opportunity to delve deeper into the intricacies of echocardiographic imaging. As a more advanced continuation of the clinical training journey, this course empowers students to refine their skills, expand their knowledge, and prepare for the next phase of their professional careers.

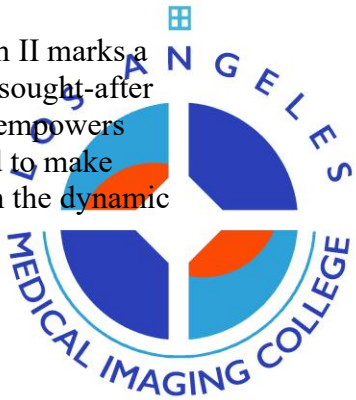
Throughout Clinical Practicum II, students will continue their immersion in the clinical environment, working under the guidance of experienced echocardiographers and cardiologists. By actively participating in a variety of cardiac cases, students will enhance their proficiency in echocardiographic imaging techniques, focusing on complex evaluations of cardiac structures, including advanced Doppler studies and tissue characterization.

As students progress through this practicum, they will fine-tune their skills in performing complex echocardiographic procedures, honing their ability to obtain high-quality images and provide accurate diagnostic assessments. The course emphasizes mastering advanced imaging techniques that are essential for addressing the diverse needs of patients with varying cardiac conditions.

An integral aspect of Clinical Practicum II is preparing students for successful integration into the workforce post-graduation. Recognizing the importance of securing employment in the field of echocardiography, this course equips students with the practical skills, professional competencies, and industry insights needed to excel in their careers.

By engaging with challenging cases, navigating clinical protocols, and collaborating with interdisciplinary healthcare teams, students gain invaluable experience and confidence in their abilities. Additionally, Clinical Practicum II provides networking opportunities, allowing students to connect with potential employers and industry professionals.

The successful completion of Echocardiography Clinical Practicum II marks a crucial milestone in the journey toward becoming a proficient and sought-after echocardiographer. Beyond mastering technical skills, this course empowers students to embrace their role as healthcare professionals, prepared to make meaningful contributions to patient care and diagnostic accuracy in the dynamic field of echocardiography.



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