

2016

B.S. in Medical Sonography Curriculum

Nova Southeastern University

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B.S. in Medical Sonography (B.S.M.S.) Curriculum 2016

Curriculum

27 month program; some courses are offered online: Ethics, Epidemiology, Principles of Leadership, Health Policy, Conflict Resolution, Research Design in Health Care, Cultural Competency, Academic and Professional Writing, Health care and Aging. All sonography courses are delivered on campus.

Course Number	Course Title	Credits
BHS 3110	Health Care Ethics This course is designed to introduce ethical thinking and concepts regarding health care to prepare the student with the essential vocabulary and thought processes to understand, evaluate and participate in ethical decision making.	3
BHS 3120	Introduction to Epidemiology The purpose of this course is to introduce the history and development of epidemiology in relation to public health and disease. Communicable, epidemic and endemic as well as social disease will be discussed.	3
BHS 3130	Research Design in Health Care This course is designed as an introduction to critical analysis of research and medical literature as well as basic research methods. The course includes an introduction to descriptive and inferential statistics and research design. Statistical and research concepts and procedures are combined with an emphasis on practical health care applications.	3
BHS 3150	Principles in Leadership This course will provide an overview of numerous leadership theories to prepare the student for a leadership role in Health Care. The course will critically analyze the differences between leadership and management	3
BHS 3155	Conflict Resolution in Health Care The purpose of this course is to develop an understanding of the conflict and effective methods and strategies for reducing the incidence of workplace conflict including employee-employee conflict, supervisor subordinate conflict, patient-patient conflict and patient/client provider conflict.	3
BHS 3160	Health Policy This course provides the student with a broad understanding of policy, how health care is organized, dispensed and how the practitioner can better work in the system. Topics of discussion include cost control, long term care, quality control, ethical issues and insurance.	3
BHS 4000	Cultural Competency in Health Care The purpose of this course is to develop competency and better understanding when confronted with issues related to culture, diversity and ethnically based customs, rituals, alternative health care choices, folk medicine, cultural structure and viewpoints and the practitioner's delivery of health care.	3
BHS 4100	Academic and Professional Writing The purpose of this course is to strengthen the skills and thought processes students require for successful academic and professional writing. Proper sentence and paragraph structure, grammar, punctuation usage, formatting and bibliographic referencing will be discussed. Students will learn the five chapter model utilized in scholarly writing and be introduced to the fundamentals of APA formatting.	3

Course Number	Course Title	Credits
BHS 4110	Health Care and Aging This course examines the psychosocial and cultural variations associated with maturing and aging. Topics covered will be an overview of life choices, living wills, and treatment, as well as cultural implications of senior care.	3
BHS 3102	Ultrasound Physics I This course is designed to help the student acquire knowledge of all the fundamental principles and concepts necessary to understand the properties of sound and ultrasound as used in diagnostic imaging. These principles and concepts will span from basic properties of sound in soft tissue to advanced techniques such as Doppler, spectral analysis, M-Mode, etc. as they pertain to evaluation for abdominal, ob-gyn, small parts, vascular and cardiac ultrasound imaging. The students will also learn about artifacts, safety, and the concepts of bioeffects, as well as quality assurance and image storage.	3
BHS 3112	Ultrasound Cross Sectional Anatomy This course is designed to expand upon a student's present knowledge and understanding of normal anatomy through developing spatial relationships of organs, vessels, bones, muscles, and connective tissues.	4
BHS 3200	Ultrasound Physics II/SPI Exam This course is designed to review the principles and concepts learned in Ultrasound Physics I through quizzes and exams. It will help to prepare students for the Sonography Principles and Instrumentation (SPI) exam administered by the ARDMS. Students will take the exam after the completion of the course.	1
BHS 3220	Introduction to Diagnostic Medical Sonography This course is designed to introduce students to the equipment used in diagnostic ultrasound. The course will be primarily taught in the ultrasound training laboratory in small groups. The focus of the course will be to lead students toward proficiency and competency in using the tools available on the ultrasound equipment for the production of quality images, as well as proper ergonomics and scanning techniques. This course is the foundation for all the following core courses.	3
BHS 3300	Cerebrovascular Testing/Lab This course will focus on hemodynamic principles and the use of ultrasound for the evaluation of the extracranial and intracranial cerebrovascular circulation. This course will have a strong hands-on component with students spending several hours per week in the ultrasound training laboratory. Lectures will focus on anatomy, pathologies, treatment options, and analysis of data obtained by ultrasound, as well as some other imaging techniques.	4
BHS 3400	Venous Testing/Lab This course will focus on the use of ultrasound for the evaluation of the venous circulation of the upper and lower extremities. This course will have a strong hands-on component with students spending several hours per week in the ultrasound training laboratory. Lectures will focus on anatomy, pathologies, treatment options, and analysis of data obtained by ultrasound, as well as some other imaging techniques.	4
BHS 3500	Peripheral Arterial Testing/Lab This course will focus on the use of ultrasound for the evaluation of the arterial circulation of the upper and lower extremities. This course will have a strong hands-on component with students spending several hours per week in the	4

Course Number	Course Title	Credits
BHS 3800	<p>ultrasound training laboratory. Lectures will focus on anatomy, pathologies, treatment options, and analysis of data obtained by ultrasound and other technologies specific to vascular laboratories, as well as some other imaging techniques.</p> <p>Abdominal Sonography This course will review the abdominal anatomy and physiology with a focus on cross-sectional anatomy. It will have a strong hands-on component with students spending several hours per week in the ultrasound training laboratory learning to recognize normal sonographic anatomy. Lectures will focus on the above mentioned aspects, as well as on how to collect patient information relevant to the different ultrasound studies and other imaging techniques. This course provides a foundation that will help students understand the clinical exam and the elements contributing to their role and the scope of practice as general sonographers.</p>	4
BHS 3801	<p>Abdominal Sonography/Lab II This course will review abnormal abdominal anatomy and physiology with a focus on clinical correlations. It will have a strong hands-on component with students spending several hours per week in the ultrasound training laboratory strengthening the skills learned from Abdominal Sonography I. Lab assignments will incorporate case studies, clinical correlations, and other imaging modalities (e.g.,MRIs, nuclear medicine, CTs, etc.). Lectures will focus on the above mentioned aspects, as well as on how to collect patient information relevant to the different ultrasound studies and pathologies. This course provides a foundation that will help students understand the clinical exam and the elements contributing to their role and the scope of practice as general sonographers.</p>	4
BHS 3900	<p>Obstetrics and Gynecology Ultrasound I This course will focus on the use of ultrasound for the evaluation of the organs contained in the human female pelvic cavity in both, normal and abnormal, gravid and non-gravid anatomy and physiology. This course will have a strong hands-on component with students spending several hours per week in the ultrasound training laboratory. The lectures will focus on the aspects previously mentioned as well as on fetal abnormalities and abnormal conditions of the fetus. The course will explore infertility and assisted reproductive technologies.</p>	4
BHS 3910	<p>Obstetrics and Gynecology Ultrasound II This course is a continuation of Obstetrics and Gynecology Ultrasound I. It is a further comprehensive approach to in-depth studies of the organs contained within the human female pelvic cavity in both, normal and abnormal, gravid and non-gravid anatomy and physiology. The course will focus on fetal abnormalities and abnormal conditions of the fetus.</p>	4
BHS 3830	<p>Small Parts Sonography This course will focus on the use of ultrasound for the evaluation of superficial structures such as the thyroid and parathyroid glands, breast, male reproductive system, superficial soft tissue structures, shoulder, hand and wrist; as well as the neonatal brain, pediatric spine, pediatric hip/pelvis, and pediatric abdomen. The students will have a strong hands-on component spending several hours in the laboratory. Lectures will focus in relevant normal and abnormal anatomical and physiological aspects as well as on clinical findings, signs and symptoms of disease related to these areas.</p>	4

Course Number	Course Title	Credits
BHS 3700	Clinical Preparation and Review This course will provide and reinforce the nontechnical aspects of the profession of diagnostic medical Sonography. This will include, but it is not limited to, patient care, professionalism, and clinical rationale. This course will also prepare students for the clinical experience that follows in the second year.	4
BHS 4500	Clinical Externship I This course will mainly be provided through immersion in a clinical setting assigned by the end of the first year. Students will be a daily integral part of the operations of the Diagnostic Ultrasound Department they have been assigned to for the length of the term. Students will report to the clinical coordinator or to the assigned professor of the program at NSU.	6
BHS 4600	Clinical Externship II This course is a continuation of the Clinical Externship I	7
BHS 4700	Clinical Externship III This course is a continuation of the Clinical Externship II	