

2006

# Bachelor of Health Science Vascular Sonography 2006

Nova Southeastern University

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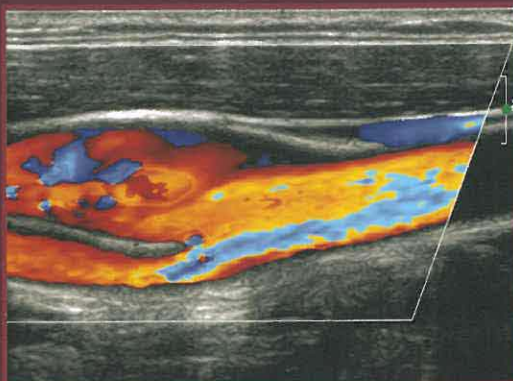
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# vascular sonography

bachelor of  
health science

college of allied health  
and nursing





HEALTH  
PROFESSIONS  
DIVISION

TERRY BUILDING



# nova southeastern university

Nova Southeastern University, synonymous with dynamic innovation and intellectual challenge, is the largest independent not-for-profit university in the southeast, and with an enrollment of more than 25,000, is the seventh largest in the United States. Situated on a beautiful 300-acre campus in Fort Lauderdale, Florida, the university is experiencing a sustained period of academic growth, fiscal strength, and commitment to the challenges of the 21st century.

In this environment of expansion and stability, the university is capitalizing on its strengths in such areas as academic innovation, comprehensive clinical training, and flexible educational delivery systems.

Founded in 1964 as Nova University, the institution merged with Southeastern University of the Health Sciences in 1994, creating Nova Southeastern University. To date, the institution has graduated approximately 79,000 alumni. Fully accredited by the Commission on Colleges of the Southern Association of Colleges and Schools, the university awards associate's, bachelor's, master's, educational specialist, and doctoral degrees in a wide range of fields including the health professions, law, business, marine sciences, psychology, social sciences, computer and information sciences, and education.

The university's programs are administered through 15 academic centers that offer courses at the main campus and at field-based locations throughout Florida; across the nation; and at selected international sites in Europe, Canada, the Pacific Rim, Central and South America, and the Caribbean.

With a budget of more than \$220 million a year and an upward trend in enrollment, the university will continue to maintain a solid record of academic and fiscal strength and excellence in teaching and community service, while expanding its mission in research and scholarship.

## nsu mission statement

**Nova Southeastern University is a dynamic, not-for-profit independent institution dedicated to providing high-quality educational programs of distinction from preschool through the professional and doctoral levels, as well as service to the community. Nova Southeastern University prepares students for lifelong learning and leadership roles in business and the professions. It offers academic programs at times convenient to students, employing innovative delivery systems and rich learning resources on campus and at distant sites. The university fosters inquiry, research, and creative professional activity by uniting faculty and students in acquiring and applying knowledge in clinical, community, and professional settings.**



# health professions division

As a student in the Health Professions Division of Nova Southeastern University, you can anticipate a remarkable experience. You will train, study, interact, and share faculty and resources (either campus-based or online) with students from various backgrounds and disciplines. This interdisciplinary approach distinguishes the Health Professions Division as unique and will better prepare you to master your discipline with a sensitivity and understanding of the entire health care system.

The Health Professions Division, with a student body of more than 2,500, is home to six colleges. The College of Osteopathic Medicine, the first one in the southeastern United States, grants the doctor of osteopathic medicine (D.O.) degree. The College of Osteopathic Medicine also awards the master of public health degree (M.P.H.). The College of Pharmacy offers the doctor of pharmacy (Pharm.D.) degree to entry-level, international, and postbaccalaureate students. The College of Optometry is the only institution in the state of Florida that awards the doctor of optometry (O.D.) degree as well as the master in clinical vision research (M.S.). The College of Allied Health and Nursing offers an entry-level bachelor of science degree in nursing (B.S.N.), as well as an R.N. to B.S.N. program and a master of science in nursing (M.S.N.) degree. The college also offers a physician assistant program that awards the master of medical science in physician assistant (M.M.S.) degree, and a master of occupational therapy (M.O.T.) degree, as well as the entry-level doctor of physical therapy (D.P.T.) degree. Doctoral programs are offered in occupational therapy (Ph.D./O.T., O.T.D.), physical

therapy (Ph.D./P.T., D.P.T.), and audiology (Au.D.). In addition to these programs, the College of Allied Health and Nursing offers the bachelor of health science (B.H.Sc.), master of health science (M.H.Sc.), and doctor of health science (D.H.Sc.) degrees—open to midlevel clinicians and allied health



professionals. There is also a course of study in bachelor of health science—vascular sonography. The College of Medical Sciences grants the master of biomedical sciences (M.B.S.) degree. In the fall of 1997, the College of Dental Medicine admitted its charter class into the doctor of dental medicine (D.M.D.) program.

The Health Professions Division occupies a \$70 million complex, covering 21 acres of the university campus. The division includes eight buildings totaling more than 900,000 square feet of space for classrooms, laboratories, offices, the Health Professions Division Library, an outpatient health center, and a pharmaceutical care center. The adjacent 1,500-vehicle parking garage overlooks the Miami Dolphins Training Camp.

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# letter from the chancellor



If you wish to be a leader in the health professions, Nova Southeastern University can help you reach your potential.

The Health Professions Division is unique in that it has been developed as an interdisciplinary educational center from its inception. The division was founded on the concept that the interdisciplinary approach to education is beneficial to students of all professions, and by preparing students to work effectively with health care providers from different fields, barriers are broken and patient care is enhanced.

In less than two decades, NSU's Health Professions Division has developed into a multidisciplinary academic health center of international stature. Composed of the Colleges of Osteopathic Medicine, Pharmacy, Dental Medicine, Optometry, Allied Health and Nursing, and Medical Sciences, the Health Professions Division has redoubled its commitment to academic excellence, innovation, and community service, while expanding its mission in research and scholarship. Working together, our distinguished faculty members prepare students for an exciting career on tomorrow's dynamic health care team.

A stylized, handwritten signature in black ink, reading "Fred Lippman".

Fred Lippman, R.Ph., Ed.D.  
Chancellor





# department of health science

The Department of Health Science is an interdisciplinary group of programs offering educational opportunities from entry-level undergraduate to postprofessional doctoral education. The Department of Health Science offers working health professionals distance online programs at the bachelor's, master's, and doctoral degree levels, as well as one on-campus, entry-level vascular sonography bachelor's degree program. The department uses innovative, online and on-campus components to achieve its mission of preparing professionals for today's health care market.

The Department of Health Science distance programs provide health care professionals with the tools and leadership skills necessary to make changes and answer difficult challenges at the national and international level. At NSU, health care professionals can expand their knowledge and careers through our innovative programs.

## **BACHELOR OF HEALTH SCIENCE— VASCULAR SONOGRAPHY**

Sonography uses diagnostic ultrasound to image soft tissue structures in the body including abdominal and pelvic organs, fetal development, the heart, and blood vessels. Sonographers specializing in vascular diagnosis are referred to as vascular technologists. Vascular technologists use ultrasound and other diagnostic instruments to detect and assess vascular conditions of arteries and veins. Vascular disorders include carotid artery disease, which may lead to stroke; abdominal vascular diseases such as aneurysms and peripheral arterial disease, which can result in loss of limbs; and venous diseases that can lead to blood clots or pulmonary embolism.

Vascular technologists are an important part of the medical team. They typically work in a hospital or clinical

environment under the direction of radiologists, cardiologists, or vascular surgeons. Because of the skills and independence required for the field, vascular technologists are in high demand, and with the aging of Americans, that demand is growing. The Bachelor of Health Science—Vascular Sonography course of study at Nova Southeastern University is designed to train highly skilled and knowledgeable vascular technologists who are prepared to take leadership positions in diagnostic laboratories and clinical research, and in education in the field of vascular sonography.

## **PROGRAM OBJECTIVES**

- to graduate competent vascular technologists who are qualified to perform a variety of standard and specialized diagnostic vascular procedures
- to ensure that graduates are qualified to take and successfully pass the American Registry of Diagnostic Medical Sonography (ARDMS) registry examination in vascular technology
- to prepare graduates for future leadership roles in vascular laboratories and ultrasound departments
- to enhance the student's academic skills for pursuing research studies in the field of vascular sonography

Upon successful completion of the B.H.Sc.—Vascular Sonography course of study, students are eligible to apply for admission to the Master of Health Science (M.H.Sc.) and later the Doctor of Health Science (D.H.Sc.) programs. Both of these are online degree programs. The M.H.Sc. has no residency requirement; The D.H.Sc. has a requirement for students to complete two one-week summer institutes.



## nsu college of allied health and nursing mission statement

**In the spirit of improving and maintaining optimum health conditions in the community, the College of Allied Health and Nursing prepares professionals with the skills necessary for the diagnosis, treatment and prevention of diseases, for the support of the populace in maintaining proper health and safety, for the management of rehabilitative processes, and for the education of the community in understanding the interdependency of health, environment, social and political factors. The College of Allied Health and Nursing endeavors to train both graduate and undergraduate professionals in the arts of improving the quality of life in the community.**

## letter from the dean

The health care marketplace is undergoing rapid change. The pace of this change has provided a formidable challenge



for institutions that provide the educational programs for future health care professionals.

Nova Southeastern University's College of Allied Health and Nursing is committed to providing the highest quality education to students in a vari-

ety of health care disciplines, including occupational therapy, physical therapy, and physician assistant studies, as well as audiology and the newly added nursing programs. In addition, the college is committed to a lifelong learning philosophy through the Ph.D. in physical therapy and the O.T.D. and Ph.D. in occupational therapy. We also have the recent additions of the bachelor of health science (B.H.Sc.), master of health science (M.H.Sc.), doctor of health science (D.H.Sc.), doctor of philosophy in health science (Ph.D.), and post-professional transition doctor of physical therapy (T.-D.P.T.) programs. These new degrees for practicing health care professionals are delivered mainly through the use of innovative distance technology. Lastly, we have started a bachelor of health science course of study in vascular sonography.

The College of Allied Health and Nursing is committed to providing health care educational opportunities in formats that meet the needs of prospective students in the community and adequately prepare graduates to assume greater leadership roles in health care delivery systems.



Richard E. Davis, PA-C, Ed.D.

Dean, College of Allied Health and Nursing



# curriculum overview

Admission to the program requires the completion of a minimum of 30 semester hours of prerequisite general education coursework. The core of the vascular sonography course of study includes 96 semester hours. The entire program requires a total of 126 semester hours for a student to graduate with a Bachelor of Health Science—Vascular Sonography degree.

The first year of the vascular sonography course of study is designed as a combination of on-campus lectures, an ultrasound laboratory practicum, online courses\*, and off-campus integrated clinical training. Students will learn theory in the lecture and online courses, then apply that knowledge in the ultrasound laboratory. The integrated clinical experience relates lecture concepts and lab skills to the clinical setting.

The second year will focus almost entirely on clinical training with more than 1,500 hours of on-site, hands-on experience in an accredited vascular laboratory under the supervision of a registered vascular technologist. Students will be required to fulfill competencies outlined in the clinical handbook. These competencies include all aspects of vascular sonography training and professional duties. In addition, four online courses are required during the senior year.

*\* Online courses are provided to students through NSU computer accounts that include email. Students, however, must obtain their own Internet service provider (ISP) and their own computer system (IBM-compatible PC or Apple Macintosh, and a modem.) New students are provided with an orientation and extensive online support on computer and software requirements, online access, online tools and methods, and library resources.*

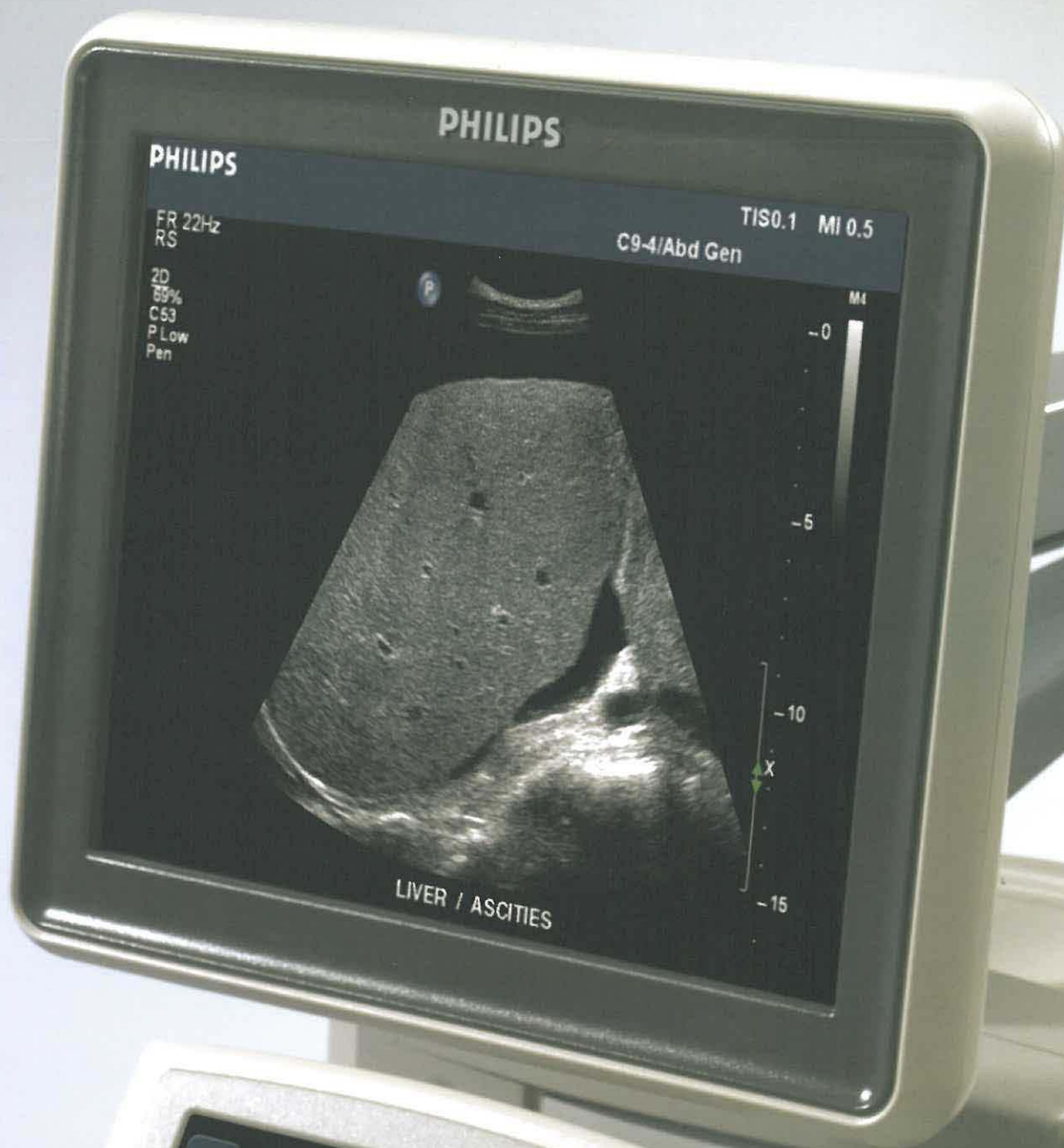
## PREREQUISITES

In order to be eligible to graduate with the Bachelor of Health Science—Vascular Sonography degree, a student must have completed 30 semesters hours of prerequisite general education coursework, in addition to the B.H.Sc. curriculum with a resulting minimum total of 126 semester hours. Only courses with a minimum GPA of 2.0 on a 4.0 grading scale will be accepted.

The Bachelor of Health Science Program is an established program within NSU's College of Allied Health and Nursing. The B.H.Sc. Program was officially approved by the NSU board of trustees in November 2002 on recommendation from the NSU New Program Review Committee.

Nova Southeastern University is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools (1866 Southern Lane, Decatur, Georgia 30033-4097, Telephone number: 404-679-4501) to award associate's, bachelor's, master's, educational specialist, and doctoral degrees. ■ Nova Southeastern University admits students of any race, color, sex, age, nondisqualifying disability, religion or creed, or national or ethnic origin to all the rights, privileges, programs, and activities generally accorded or made available to students at the school, and does not discriminate in administration of its educational policies, admissions policies, scholarship and loan programs, and athletic and other school-administered programs.







# curriculum

## required prerequisite general education courses

REQUIRED SEMESTER HOURS

Written Communication .....	3
Social and Behavioral Sciences .....	9
Humanities* .....	6
Human, Biological, and Physical Sciences** .....	9
Math*** .....	3
<b>Subtotal General Education Courses .....</b>	<b>30</b>

## required b.h.sc. courses

REQUIRED SEMESTER HOURS

BHS 3110 Health Care Ethics .....	3
BHS 3120 Introduction to Epidemiology .....	3
BHS 3130 Research and Design for Health Care .....	3
BHS 3150 Principles in Leadership .....	3
BHS 3155 Conflict Resolution in Health Care .....	3
BHS 3160 Health Policy .....	3
BHS 4000 Cultural Competency in Health Care .....	3
BHS 4100 Academic and Professional Writing .....	3
BHS 4110 Health Care and Aging .....	3
BSV 3100 Ultrasound Physics I/Lab .....	3
BSV 3110 Anatomy .....	3
BSV 3200 Ultrasound Physics II/Lab .....	4
BSV 3210 Physiology .....	3
BSV 3300 Cerebrovascular Testing/Lab .....	5
BSV 3400 Venous Testing/Lab .....	4
BSV 3500 Peripheral Arterial Testing/Lab .....	4
BSV 3600 Abdominal Vascular Testing/Lab .....	5
BSV 3700 Clinical Preparation and Review .....	1
BSV 4500 Clinical Externship I (16 weeks) .....	12
BSV 4600 Clinical Externship II (16 weeks) .....	12
BSV 4700 Clinical Externship III (16 weeks) .....	12
FME 5105 Basic Life Support .....	1
<b>Subtotal Core B.H.Sc. courses .....</b>	<b>96</b>

**minimum total degree semester hours required .....126**

\* recommend 3 credits in foreign language

\*\* recommend 3 credits in biology or anatomy and physiology

\*\*\*recommend 3 credits in college math or above



# admission requirements

Prospective B.H.Sc. students are selected by the Committee on Admissions through consideration of the overall qualities of the applicant. Individuals with diverse education, work, and life experiences who have demonstrated the capacity to pursue the course of study in vascular sonography will be admitted. Areas of consideration include application content, academic record, letters of evaluation, and personal motivation. Upon receipt of the completed application, the committee on admissions will select applicants for interview. All interview expenses are the responsibility of the applicant.

All applicants for admission must have

1. a minimum of 30 semester credits from a regionally accredited college or university with a minimum cumulative GPA of 2.0 on a 4.0 grading scale  
Only courses with a minimum GPA of 2.0 on a 4.0 scale may be considered for possible transfer of credit.
2. evidence of computer skills through coursework or self-study shown prior to the end of the first term

Students may obtain instruction through the NSU Student Microcomputer Laboratory or other training facilities.

It should be noted that many criteria, in addition to academic credentials, play a role in the admission process for the B.H.Sc. program. While the program allows the student to demonstrate academic capability, it does not ensure admission to any professional school. Admission to the B.H.Sc. program will not guarantee admission to any other program of Nova Southeastern University.

Upon receipt of the completed application, fees, credentials and transcripts, the admissions officers and the College of Allied Health and Nursing will review all material for evidence of the proper education, training, and background to enter the B.H.Sc.—vascular sonography course of study.

The university reserves the right to modify any requirements on an individual basis as deemed necessary by the dean of the College of Allied Health and Nursing.





# application procedures

Applicants for admission must submit or be responsible for submission of

1. a completed application form along with a \$50 non-refundable application fee
2. two letters of evaluation from individuals (other than relatives) such as academic advisers, professors, clinical or non-clinical supervisors, or community associates
3. official college-, certificate-, and/or diploma-based transcripts from all undergraduate and graduate institutions attended, sent directly from the institution to the Enrollment Processing Services (EPS)
4. a student-prepared learning portfolio requesting assessment of prior experiences for academic credit (only for graduates from programs other than those from regionally accredited colleges or universities)
5. copies of national and/or state professional certification, licensure, or registration, if applicable
6. evaluation of coursework taken at a foreign institution for U.S. institutional equivalence (if applicable)

Foreign coursework must be evaluated by one of the following services:

World Education Services, Inc.  
P.O. Box 745  
Old Chelsea Station  
New York, New York 10113-0745  
(212) 966-6311

Josef Silny & Associates  
7101 SW 102nd Avenue  
Miami, Florida 33173  
(305) 273-1616  
(305) 273-1338 (fax)  
[www.jsilny.com](http://www.jsilny.com)

Educational Credential Evaluators  
P.O. Box 514070  
Milwaukee, Wisconsin 53203-3470  
(414) 289-3400  
[www.ece.org](http://www.ece.org)

7. a current curriculum vitae

All admissions information should be sent to

## NOVA SOUTHEASTERN UNIVERSITY

Enrollment Processing Services (EPS)  
College of Allied Health and Nursing  
B.H.Sc. Program Admissions  
3301 College Avenue  
P.O. Box 299000  
Fort Lauderdale-Davie, Florida 33329-9905  
Phone: (954) 262-1101  
Fax: (954) 262-2282

The B.H.Sc. Office of Admissions works on a rolling admissions basis. Applications are accepted year round. To ensure that your application receives prompt consideration, you should apply early.

The B.H.Sc. Committee on Admissions will not consider an application until all required fees, credentials, transcripts, and test scores have been received by the EPS.

The university reserves the right to modify any requirements on an individual basis as deemed necessary by the dean of the College of Allied Health and Nursing. The college reserves the right, and the student (by his or her act of matriculation) concedes to the college the right, to require his or her withdrawal any time the college deems it necessary to safeguard its standards of scholarship, conduct, and compliance with regulations, or for such other reasons as are deemed appropriate.

The dean and B.H.Sc. in vascular sonography program director reserve the right to require the student's withdrawal at any time for the above-mentioned reasons.



# transfer of prerequisite credits

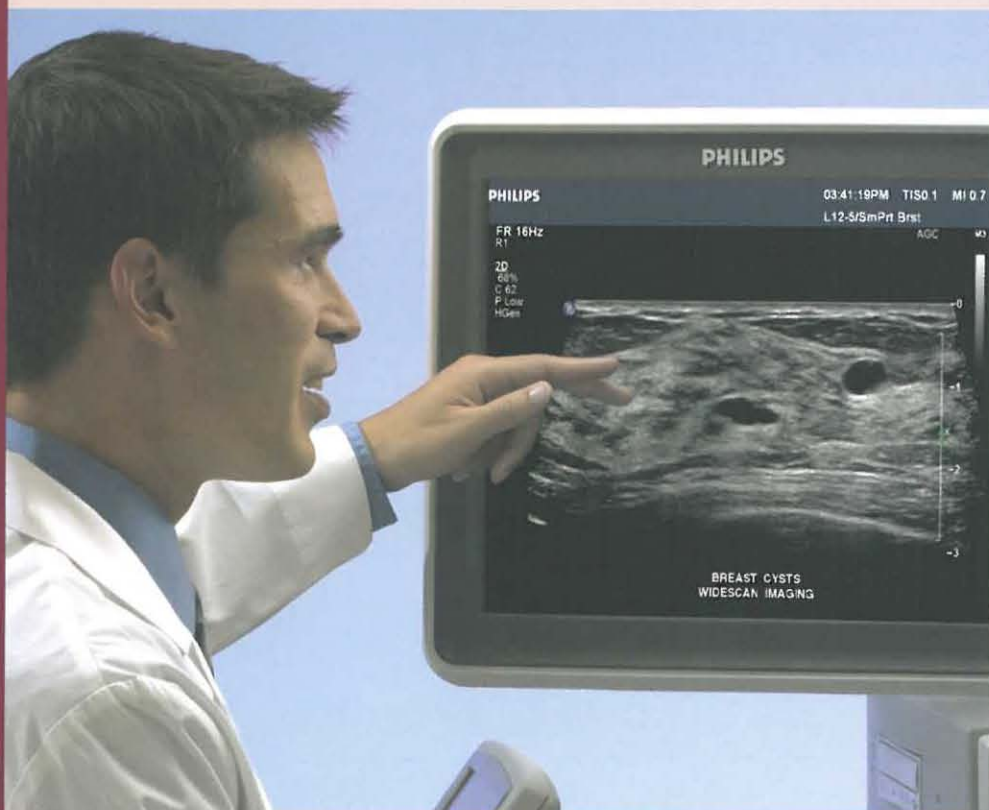
Students who have earned college credits at other regionally accredited colleges or universities can transfer these credits into the B.H.Sc. program. Students should contact a B.H.Sc. admissions counselor to discuss how prior college credits can be used to obtain the B.H.Sc. degree.

An evaluation of transfer credit will be completed prior to the first semester of enrollment, and applicable credit will be transferred based on all final official transcripts received. Students will be advised to take courses based on the official evaluation in their file.

Transfer students must provide final official transcripts from all their previous colleges. Their previous academic work will then be evaluated. The B.H.Sc.—vascular sonography course of study will transfer a maximum of 30 eligible semester credits (grades of C or better), including credit for CLEP, proficiency exams, and prior experiential learning, toward a degree.

General education courses must have a minimum grade of C (GPA of 2.0 on a 4.0 grading scale) to be accepted for transfer credit. A limited number of D grades may be considered, depending on the total number of credits being transferred and where the D grades are being applied to the curriculum.

Students are provisionally admitted to a degree-seeking program based on a review of unofficial transcripts or other specific program admission requirements. However, this admission includes a condition that final and official transcripts, documents, and requirements must be received within 90 calendar days from matriculation. If these final and official transcripts, documents, and/or requirements are not received by that time, the student will not be allowed to continue class attendance. Financial aid will not be disbursed to a provisional/conditional student until he or she has been fully admitted as a regular student (all admissions requirements have been approved by the college/program admissions office). Students who have an unpaid balance 30 days from the start of the term will be assessed a \$50 fee.





# curriculum outline

## BACHELOR IN HEALTH SCIENCE—VASCULAR SONOGRAPHY

COURSE #	COURSE TITLE	CREDITS	LECTURE HOURS	LAB HOURS	CLINICAL HOURS	TOTAL HOURS
<b>FALL/WINTER</b>						
BSV 3110	Anatomy	3	30	30	0	60
BSV 3210	Physiology	3	30	30	0	60
BSV 3100	Ultrasound Physics I/Lab	3	30	30	0	60
BHS 3130	Research and Design for Health Care	3	45	0	0	45
BHS 3120	Introduction to Epidemiology	3	45	0	0	45
<b>SUBTOTAL</b>		<b>15</b>				<b>270</b>
<b>SPRING</b>						
BSV 3500	Peripheral Arterial Testing/Lab	4	30	30	45	105
BSV 3400	Venous Testing/Lab	4	30	30	45	105
BHS 3160	Health Policy	3	45	0	0	45
BHS 4100	Academic/Professional Writing	3	45	0	0	45
BHS 4000	Cultural Competency in Health Care	3	45	0	0	45
<b>SUBTOTAL</b>		<b>17</b>				<b>345</b>
<b>SUMMER</b>						
BSV 3600	Abdominal Vascular Testing/Lab	5	30	30	90	150
BSV 3300	Cerebrovascular Testing/Lab	5	30	30	90	150
BSV 3200	Ultrasound Physics II/Lab	4	30	60	0	90
BSV 3700	Clinical Preparation and Review	1	15	0	0	15
FME 5105	Basic Life Support	1	10	10	0	20
<b>SUBTOTAL</b>		<b>16</b>				<b>125</b>
<b>FALL/WINTER</b>						
BSV 4500	Clinical Externship I	12	0	0	512	512
BHS 3110	Health Care Ethics	3	45	0	0	45
BHS 3155	Conflict Resolution	3	45	0	0	45
<b>SUBTOTAL</b>		<b>18</b>				<b>602</b>
<b>SPRING</b>						
BSV 4600	Clinical Externship II	12	0	0	512	512
BHS 3150	Principles of Leadership	3	45	0	0	45
BHS 4100	Health Care and Aging	3	45	0	0	45
<b>SUBTOTAL</b>		<b>18</b>				<b>602</b>
<b>SUMMER</b>						
BSV 4700	Clinical Externship III	12	0	0	512	512
<b>SUBTOTAL</b>		<b>12</b>				<b>512</b>
<b>TOTAL</b>		<b>164</b>	<b>670</b>	<b>280</b>	<b>1,806</b>	<b>2,111</b>



# distance education support

Students in the B.H.Sc.—vascular sonography course of study are provided with NSU computer accounts including email. Students, however, must obtain their own Internet service providers (ISP) and use their own computer systems (IBM-compatible PC or Apple Macintosh, and a modem). New students receive an orientation and extensive online technical support dealing with online access, online tools and methods, and library resources.

Online interactive learning methods involve Web pages to access course materials, announcements, the electronic library, and other information, plus a range of online activities that facilitate frequent student-professor interaction. Faculty members and students interact via online forums

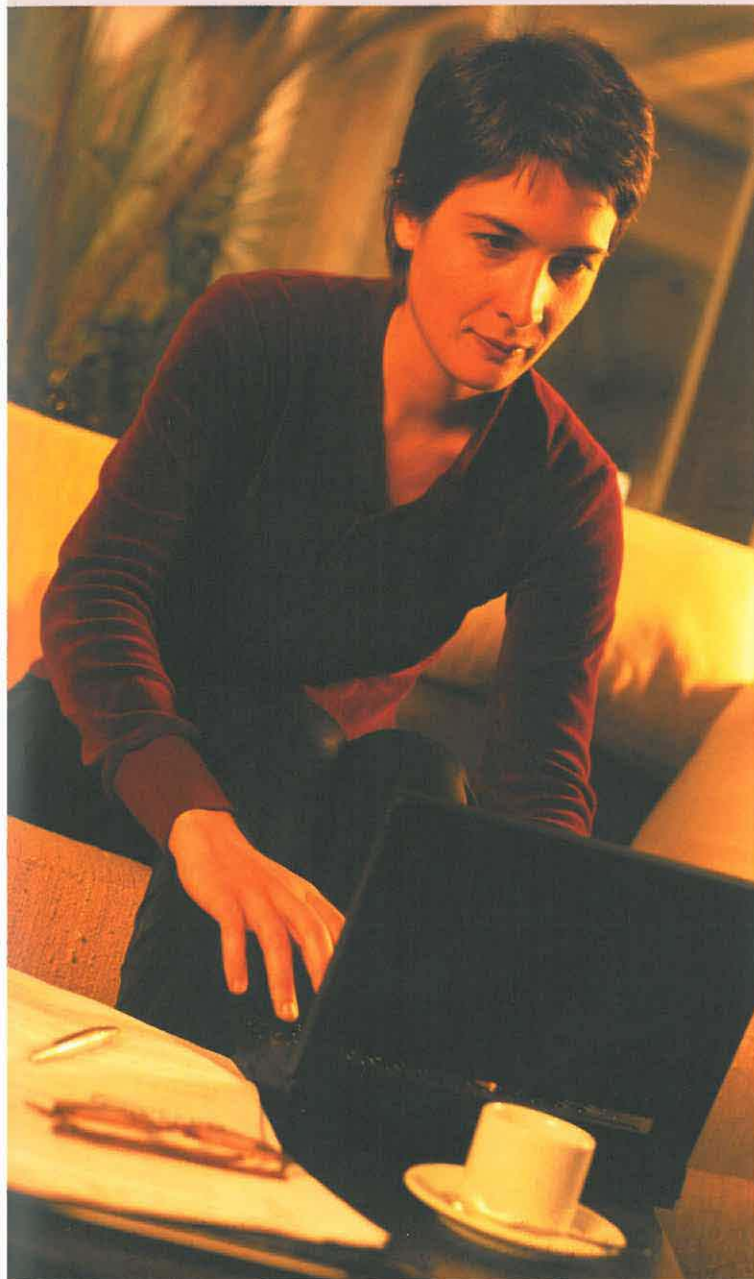
using threaded bulletin boards, chatrooms, and email. Students are able to submit assignments as email attachments, through the use of online forms sent directly to program instructors, fax-to-fax, fax-to-email, and through WebCT. Some online courses may include electronic classroom sessions.

Online students have online access to books, journal articles, microfiche, dissertations, index searches, catalog searches, and reference librarians. The online medical database collection at NSU is extensive and includes access to quality subscription services free of charge to the student.

## computer requirements

All students in the department are **required** to have a computer meeting the minimum requirements listed below.

- Pentium or AMD at 800 MHz minimum or equivalent Macintosh processor
- 128 MB RAM
- Video and monitor capable of 1024 x 768 resolution or higher.
- CD-ROM drive
- Full duplex sound card and speakers
- 56.6 baud modem (DSL or cable modem preferred)
- Internet connection with private Internet service provider (ISP) for access from home to the Internet
- Windows 2000/ME/XP or NT
- Microsoft Office 2000 or newer with PowerPoint, Word, and Excel minimum (The Students and Teachers version is a good choice for students.)
- Surge suppressor recommended
- Suggested option: Zip drive
- Suggested option: laptop computer with wireless Internet capability for use during campus institutes





# course descriptions

	SEMESTER HOURS		SEMESTER HOURS
<b>BSV 3100 Ultrasound Physics I/Lab</b> .....	3	<b>BHS 3150 Principles in Leadership</b> .....	3
This course is designed to introduce the students to the fundamental principles of sound and ultrasound. Students will learn how sound is generated, transmitted, and reflected in soft tissue.		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.	
<b>FME 5105 Basic Life Support</b> .....	1	<b>BHS 3155 Conflict Resolution in Health Care</b> ....	3
This American Heart Association-approved course leads to certification upon successful completion.		The purpose of this course is to develop an understanding of, and effective methods and strategies for reducing incidences of, workplace conflict including employee-employee conflict, supervisor-subordinate conflict, patient-patient conflict, and patient/client-provider conflict.	
<b>BHS 3110 Health Care Ethics</b> .....	3	<b>BHS 3160 Health Policy</b> .....	3
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.		This course provides the student with a broad understanding of policy, how health care is organized and 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.	
<b>BHS 3130 Research and Design for Health Care</b> ..	3	<b>BSV 3200 Ultrasound Physics II/Lab</b> .....	4
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.		This course is a continuation of Ultrasound Physics I and will concentrate on more advanced topics including Doppler, color flow, and power Doppler. The student will also learn the principles of quality assurance and ultrasound safety associated with diagnostic imaging.	
<b>BSV 3110 Anatomy</b> .....	3	<b>BSV 3300 Cerebrovascular Testing/Lab</b> .....	4
This course is designed to develop general understanding of human anatomy for the vascular sonographer. Students will learn both gross and cross-sectional anatomy and the overall relationship of the cardiovascular system to the structure of the human body. More specific vascular anatomy will be provided in the system courses.		This course will review the cerebrovascular anatomy and physiology associated with cerebrovascular disease. The student will learn the scanning protocols for extra and intracranial cerebrovascular testing and the diagnostic criteria for assessing disease. The student will also review various diagnostic and treatment options for the patient.	
<b>BHS 3120 Introduction to Epidemiology</b> .....	3	<b>BSV 3400 Venous Testing/Lab</b> .....	4
The purpose of this course is to introduce the history and development of epidemiology in relation to public health and disease. Communicable, epidemic, endemic, and social disease will be discussed.		This course will review the venous anatomy and physiology associated with venous disease. The student will learn the scanning protocols for deep and superficial venous testing and the diagnostic criteria for assessing disease. The student will also review various diagnostic and treatment options for the patient.	
<b>BSV 3210 Physiology</b> .....	3		
This course is designed to develop general understanding of human physiology for the vascular sonographer. Students will learn the function of the human system and the overall relationship to the structure of the human body. More specific vascular physiology will be provided in the system courses.			



**SEMESTER  
HOURS**

**BSV 3500 Peripheral Arterial Testing/Lab .....5**

This course will review the peripheral arterial anatomy and physiology associated with the peripheral arterial system. The student will learn the scanning protocols for upper and lower extremity arterial testing and the diagnostic criteria for assessing disease. The student will also review various diagnostic and treatment options for the patient.

**BSV 3600 Abdominal Vascular Testing/Lab .....5**

This course will review the abdominal anatomy and physiology associated with visceral vascular disease. The student will learn the scanning protocols for abdominal vascular testing and the diagnostic criteria for assessing disease. The student will also review various diagnostic and treatment options for the patient.

**BSV 3700 Clinical Preparation and Review .....1**

Clinical Preparation and Review is a brief course to review general medical anatomy and physiology, terminology, treatment, and medications used in the treatment of vascular disease. It is designed to reinforce the nontechnical/ultrasound components of the training. This course is to ensure the student is well prepared for the clinical experience that follows.

**BHS 4000 Cultural Competency in Health Care . .3**

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.

**BHS 4100 Academic and Professional Writing . . .3**

The purpose of this course is to introduce students to the format, content, and thought processes needed for successful academic and professional writing. This is done through the use of the NSU B.H.Sc. form and style manual, as well as introduction to APA and AMA manuals. An overview of proper sentence and paragraph structure, grammar, punctuation usage, formatting, and bibliographic referencing will be discussed.

**BHS 4110 Health Care and Aging .....3**

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.

**SEMESTER  
HOURS**

**BSV 4500 Clinical Externship I (16 weeks) .....12**

The first 12 weeks of the clinical externship is designed to acquaint the student with the vascular laboratory and health care environment. The student will be expected to transport and/or escort patients into the examination room, prepare patients for procedures, initially observe and later perform normal studies as requested by the preceptor, and prepare studies for interpretation. Students will complete competency-based assessment reports each week for the clinical instructor and clinical coordinator.

**BSV 4600 Clinical Externship II (16 weeks) ....12**

This segment of the externship is designed to transition the student into less directly supervised vascular testing and more independent scanning. The student will be expected to complete normal and abnormal studies, write technical impressions on the studies performed, and present and document findings of the study. Students will continue to complete competency-based assessment reports each week for the clinical instructor and clinical coordinator.

**BSV 4700 Clinical Externship III (16 weeks) ....12**

The final clinical externship is designed to ensure the student has gained an independent level of competency with both normal and abnormal studies with greater technical expertise and efficiency. The student will be expected to complete abnormal studies completely independently, present cases to the technical and medical director, and write technical impressions on the studies performed. Students will continue to complete competency-based assessment reports each week for the clinical instructor and clinical coordinator.



## tuition and fees

Tuition for 2006–2007 (subject to change by the board of trustees without notice): \$16,900. A Health Professions Division general access fee of \$125 is required each year. An NSU student services fee of \$750 is also required annually.

1. **Acceptance Fee—\$500.** This fee is required to reserve the accepted applicant's place in the entering first-year class, but is not refundable in the event of a withdrawal. It is payable within two weeks of an applicant's acceptance.
2. **Deposit—\$250.** This is due March 15 (June start date) or May 15 (August start date), under the same terms as the Acceptance Fee.
3. **Preregistration Fee—\$250.** This is due May 15 (June start date) or July 15 (August start date), under the same terms as the Acceptance Fee.

The first semester's tuition and fees, less the \$1,000 previously paid, are due on or before registration day. Tuition for each subsequent semester is due on or before the appropriate registration day. Students will not be admitted until their financial obligations have been met. The Financial Aid Department and the Health Science Department are eager to assist you in exploring all the grants and loans currently available for sonography students. Please do not hesitate to ask if you need assistance.

Each student is required to carry adequate personal medical and hospital insurance. Students may avail themselves of the hospitalization insurance plan obtainable through the university.

## financial aid

The primary financial responsibility for a student's education rests with the student and his or her family, but economic circumstances for some families may make it necessary for the student to obtain assistance from other sources.

The purpose of the Student Financial Aid Program at Nova Southeastern University is to help as many qualified students as possible to complete their health professions education. Various loans, scholarships, and grants are available to qualified students to help ease the high cost of a health professions education. These financial assistance programs are described in a separate university publication, *The NSU Guide to Student Financial Assistance*.

For a copy or information, contact

**NOVA SOUTHEASTERN  
UNIVERSITY**

Department of Student Financial Aid  
3301 College Avenue  
Fort Lauderdale-Davie, Florida  
33314-7796  
(954) 262-3380 • 800-806-3680

## b.h.sc. program contact information

**ONLINE:** Web site: [www.nova.sonography](http://www.nova.sonography)

Online application download:  
[www.nova.edu/cah/sonography/forms/sonography\\_application.pdf](http://www.nova.edu/cah/sonography/forms/sonography_application.pdf)

Online evaluation form download:  
[www.nova.edu/bhs/admissions/forms/103422BachHlthSciEval.pdf](http://www.nova.edu/bhs/admissions/forms/103422BachHlthSciEval.pdf)

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**PHONE:** Vascular Sonography admissions office: (954) 262-1111 or 800-356-0026, ext. 1111/1101  
Vascular Sonography course of study office: (954) 262-1220 or 800-356-0026, ext. 1220

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**MAIL:** NOVA SOUTHEASTERN UNIVERSITY  
College of Allied Health and Nursing  
B.H.Sc.—Vascular Sonography  
3200 South University Drive  
Fort Lauderdale-Davie, Florida 33328-2018



## 1 terry administration building

### FIRST FLOOR

- Student Affairs
- Admissions
- Financial Aid
- HPD Cafeteria

### SECOND FLOOR

- College of Allied Health and Nursing
  - Audiology Department
  - Health Sciences Department
  - Occupational Therapy Department
  - Physical Therapy Department
  - Physician Assistant Department

### THIRD FLOOR

- College of Medical Sciences
- College of Pharmacy

### FOURTH FLOOR

- College of Osteopathic Medicine
- College of Optometry

### FIFTH FLOOR

- HPD Administration
- Public Health Program
- Nursing Department
- Area Health Education Center

## 2 assembly building

- Finkelstein Auditorium (125 seats)
- Jonas Auditorium (125 seats)
- Melnick Auditorium (125 seats)
- Resnick Auditorium (125 seats)
- Terry Auditorium (125 seats)
- Auditoria A, B, and C (125 seats each)
- Robert A. Steele Auditorium (500 seats)
- Hull Auditorium (250 seats)
- Seminar Rooms

## 3 library/laboratory building

### FIRST FLOOR

- Drug Information Center
- "Harvey" Cardiac Patient Simulation Room
- HPD Library
- Student Computer Laboratory
- Patient Simulation Center

### SECOND FLOOR

- Occupational Therapy Laboratories
- Optometry Laboratories
- Physical Therapy Laboratory
- Student Lounge
- FOMA Osteopathic Manipulative Medicine Laboratory

### THIRD FLOOR

- Basic Science Laboratories
- Gross Anatomy Laboratories
- Microscopy Laboratory
- Research Laboratories
- Moran Pharmacy Practice Laboratory
- Pharmacokinetics Laboratory
- Pharmaceutics Laboratory

## 4 pharmacy and pharmaceutical care center

## 5 sanford I. ziff health care center

### FIRST FLOOR

- Family Medicine
- Occupational Therapy
- Pediatrics
- Dermatology
- Physical Therapy
- Radiology

### SECOND FLOOR

- Optometry Clinics
- Optometry Dispensary

### THIRD FLOOR

- Business Offices
- Specialty Clinics
  - Cardiology
  - Internal Medicine
  - Osteopathic Manipulative Medicine
  - Pulmonary Medicine
- Emergency Medicine Training Center



## 6 dental medicine building

### FIRST FLOOR

- Oral Medicine and Radiology Clinic
- Oral Surgery Clinic
- Student Dental Clinic
- Clinic Support Laboratory
- Predoctoral and Postgraduate Oral Surgery

### SECOND FLOOR

- Faculty Practice
- Simulation Lab
- Postgraduate Endodontics
- Postgraduate Orthodontics
- Postgraduate Pediatric Dentistry
- Postgraduate Periodontics
- Postgraduate Prosthodontics

### THIRD FLOOR

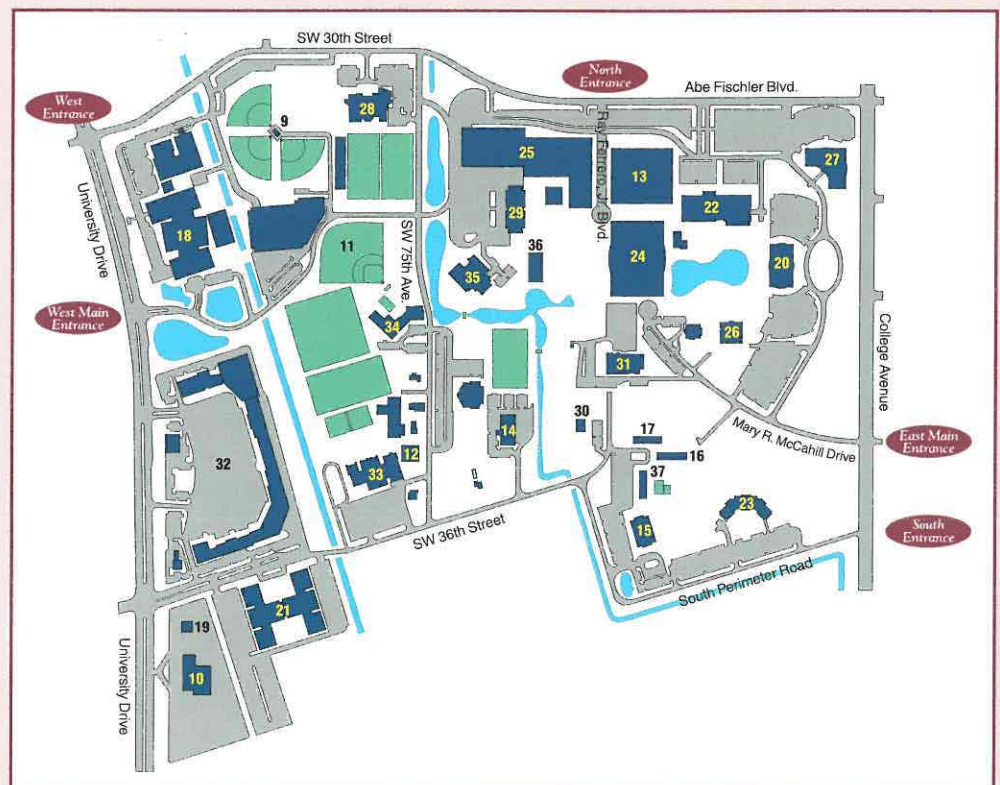
- Research Laboratories
- Seminar Rooms
- Central Sterilization Area
- Dispensing
- Faculty Offices
- Student Dental Supply Depot

## 7 parking garage

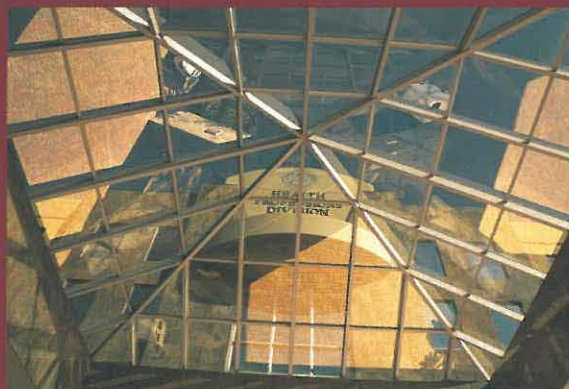
## 8 hpd assembly building

- Auditorium
- Computer Science Laboratory
- Seminar Rooms
- Physical Assessment Laboratory
- Compliance Office
- Sonography Laboratory

A.D. Griffin Sports Complex with Lighted Softball Fields	9
Administrative Services Center	10
Athletics Field	11
Athletics House	12
Carl DeSantis Building	13
Central Services Building	14
Cultural Living Center	15
Farquhar Residence Hall	16
Founders Residence Hall	17
Health Professions Division Complex	18
Hearing and Balance Clinic	19
Horvitz Administration Building	20
Jim & Jan Moran Family Center Village	21
Leo Goodwin Sr. Hall	22
Leo Goodwin Sr. Residence Hall	23
Alvin Sherman Library, Research, and Information Technology Center	24
Library and Main Student Parking Garage	25
Mailman-Hollywood Building	26
Maltz Psychology Building	27
Miami Dolphins Training Facility	28
Parker Building	29
Recreation Complex (RecPlex)	30
Rosenthal Student Center	31
University Park Plaza	32
University School Lower School	33
University School Middle School (Dauer Building)	34
University School Upper (Sonken Building)	35
University School (Sonken Building East)	36
Vettel Residence Hall	37







NOVA SOUTHEASTERN UNIVERSITY  
Health Professions Division  
3200 South University Drive  
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Office of Admissions  
(954) 262-1101 • 800-356-0026, ext. 1101  
[www.nova.edu/sonography](http://www.nova.edu/sonography)