

## NATIONAL SCHOOL OF TECHNOLOGY, INC.

"Celebrating 18 years of Excellence in Education"

## 1995 CATALOG

Volume XV Published March 1995

### MISSION STATEMENT

Our mission is to fulfill the professional and educational needs of growth oriented individuals who are prepared to change their careers and lives for the better. A supportive staff and innovative faculty are open to helping students reach their goals.

In a warm, friendly, and professional setting, students realize their strengths in a team approach with staff and faculty.

With a future in mind, and the wealth and welfare of students continuously considered, a winning spirit which promotes SELF ESTEEM and viable career alternatives becomes the goal of everyone involved with National School of Technology.

### INSTITUTIONAL PHILOSOPHY

The purpose of the school is to provide quality education to students seeking careers in medical and computer related fields.

In an effort to fill the critical needs of these professions for trained personnel, and to provide meaningful and fulfilling careers to capable individuals, the school maintains the highest level of professional dedication.

The school is constantly updating its curricula, recognizing its obligation to the students and the professions they serve. National School of Technology continues to provide quality training for allied health and business professionals.

### **HISTORY**

The school was founded in January, 1977 as National School of Health Technology, Inc. of Florida. Classes began in February, 1977 in North Miami Beach.

In 1982 the school changed its name to National School of Technology, Inc. and moved to the present North Miami Beach location, which was built for the school.

In January, 1985 classes began at a campus in Hialeah, Florida which was designated as an additional classroom facility. In June, 1989 the Hialeah Campus was awarded branch status.

In October, 1991, National School of Technology acquired Ward Stone College, located in Kendall, Florida. Ward Stone College is officially recognized as a candidate for junior college accreditation by the Accrediting Council for Independent Colleges and Schools (ACICS).

### **FACILITIES**

National School of Technology consists of classrooms, medical and computer laboratories, school offices and financial aid offices. The medical classrooms and labs contain equipment commonly found in the medical environment, such as ECG machines, microscopes, examining tables, blood cell counters, ultrasonography and echocardiography equipment as well as other types of cardiovascular diagnostic equipment. The microcomputer labs are equipped with IBM compatible computers to allow students to receive hands-on training. A student lounge, equipped with vending machines for food, drinks and snacks, as well as a microwave oven, is also available. The facilities are accessible to people with disabilities.

### **ACCREDITATION**

National School of Technology, Inc. is institutionally accredited by the Accrediting Commission of Career Schools and Colleges of Technology (ACCSCT).

The Medical Assistant Program is accredited by the Accrediting Bureau of Health Education Schools (ABHES).

### **MEMBERSHIPS**

- Florida Association of Postsecondary Schools and Colleges (FAPSC)
- Florida Association of Student Financial Aid Administrators (FASFAA)
- National Association of Student Financial Aid Administrators (NASFAA)
- Better Business Bureau (BBB)

### **LICENSURE**

The school is licensed by the Florida Board of Independent Postsecondary Vocational, Technical, Trade and Business Schools, Tallahassee, FL 32399 (904) 488-9504. The North Miami Beach campus holds License #599 and the Hialeah campus holds License #747.

### STATEMENT OF OWNERSHIP

National School of Technology, Inc. is owned and controlled by Martin Knobel, C.E.O., Rickie Knobel, Treasurer, Mark Knobel, President and David Knobel.

The corporate offices are located at 1590 N.E. 162nd Street, Suite 300, North Miami Beach, Florida 33162. The telephone number is (305) 945-2929.

## TABLE OF CONTENTS

MISSION STATEMENT, INSTITUTIONAL PHILOSOP	1A YH	ND E	IIST	ORY																		. i
FACILITIES, ACCREDITATION, LICENSURE, MEMBI	ERSHI	PS A	ND	STA	TEM	<b>IEN</b>	T OI	OW	NE	RSH	IP.				_							. ii
A MESSAGE FROM THE CEO																						. 1
ACADEMIC PROGRAMS																						
Medical Assistant																						2-3
Medical Assistant Technician			٠																			2-3
Surgical Technologist															٠							4-5
Cardiovascular Technologist														٠								6-7
Invasive Cardiovascular Technologist		• •	٠		•		•			٠		•		•	٠							
Ultrasound Technologist		• •	•		•	٠.	٠			•		٠			٠			•				10-11
Diagnostic Cardiac Sonographer	• •	٠.	٠		•	• •	•			•		٠		•	٠	•		٠	•	• •		10-11
Diagnostic Medical Sonographer Midwifery		٠.	٠		•	• •	٠			٠	٠.	٠		•	٠	•		•	•			10-11
Business Administration		٠.	•		•	٠.	•			•	• •	٠		•	•		•	•	•	• •		12-13
CENERALINGORMATION																						14-15
Class Size																						1.6
Equal Opportunity Statement			•		•		•	٠.		•		•	٠.	٠	•		•	•	•		,	. 10
Hour of Operation		•	·		•		•			•		•	٠.	٠	•		•	•	•		•	16
Rules and Regulations		•	•		•		•	•		•		•		•	•	• •	•	•	•	٠.	٠	16
Student Complaints/Grievance Procedure																						1.7
Disclosure Statement																						. 17
School Holidays				. ,	,					Ċ		·		·				•				. 13
STUDENT SERVICES																						
Job Placement Assistance																						. 18
Counseling , , , , , , , , , , , , , , , , , , ,																						15
CPR/First Aid Classes																						1.9
Graduation																						. 18
Insurance																						. 1
Library																						. 18
Photo Identification Badges			•																			. 1
Professional and Credentialing Organizations .										•				٠								. 18
Community Service Awards			•					•												٠.		18-19
Professional Examinations		• •	٠		٠.			•		•		•		٠	•		•	•	•		•	. 19
Tutoring			•			• •	• •	•		•		•		٠	•		•	•	•		•	. 15
Student Records			•		٠.	• •	• •	•	• •	•		•		•	•		٠	٠	•		•	. 19
Family Educational Rights and Privacy Act		٠.	•		٠.	•		•		•		•		٠	•		•	•	•		٠	. 15
Transcripts	• •		•		. ,	•		•	• •	•	• •	•		•	•		•	•	•		٠	10
Diplomas			•					•		•		•		•	•		•	•	•	•	•	10
ACADEMIC INFORMATION																						
Admissions Procedures and Requirements					, ,																	. 20
Credit For Previous Training								_														20
Transfer of Course Credits								_														20
Admissions Representative																						. 20
Application Procedures for International Student	C 2																					2
Important International Visa Student Information	1.													٠		٠.		٠				21-23
Class Hours and Start Dates														_		_		_	_			2.3
Grading System			٠			. ,				•				٠								. 22
Changes in Program and Tuition Charges	• •		٠			•		٠				•		٠	•		•				•	. 23
Withdrawal and Termination			•		٠.	•	٠,	٠		•		•		٠	٠			٠			٠	. 23
Internship or Project		• •	•		٠.	•	• •	•		•		٠		٠	٠		•	٠	•		٠	. 23
Application to Upper Division Programs DCS Program Advancement Conditions & Considerations			•			•	٠,	٠		•		٠	* •	٠	•		٠	٠	•		٠	. 23
FINANCIAL INFORMATION	auoi		•			•	٠.	•		٠	• •	٠	• •	٠	•		٠	٠	٠	• •	٠	. 43
Financial Aid Programs																						2
Applying for Financial Aid Assistance			•		٠.	•	٠.	•		•	• •	•		٠	٠		•	٠	٠	•	٠	. 2
Scholarship Program			•		• •	•	٠.	•		•	• •	•	• •	•	•		•	٠	•		•	. 24
Student Financial Services Hours of Operation			•		٠.	•	٠.	•		•		٠		•	•	• •	٠	٠	•		٠	. 24
Tuition and Fees		٠.	•		٠.	•		•	• •	٠		•		•	•		•	٠	•	• •	•	. 2
Textbooks, Uniforms and Supplies		• •	•	• •		•	٠.	•		•	٠.	•	• •	•	•	٠.	٠	•	•	٠,	٠	21
Veterans Administration			•		•	•	• •	•		٠	• •	٠	• •	•	•	• •	٠	•	•		•	. 2
Satisfactory Progress Statement			•			•		•	• •	٠	• •	•	• •	•	•		٠	•	•	• •	٠	. 48
Incompletes, Withdrawals, Repetitions, Remedial	Work	ς .		•		•		•		•		•	• •	•	•		•	•	•	• •	•	. 2
Maximum Time Frame						•		•		•		•		•	•		•	٠	•		•	. 20
Refund Policy						•	. '	•				•		•			•	•	•		•	7/
COURSE DESCRIPTIONS																						27-40
ADMINISTRATION AND FACULTY						•		·		:		•	•	•	•		•	•	•		•	41
TUITION AND FEES												•		•	•		•	•	•		•	47
	- '	-	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•		٠	. 12



Congratulations for the decision you have made to start career training at National School of Technology!

For over 18 years, National School of Technology has been providing quality education to students seeking careers in the medical and computer fields. Our programs are geared to provide you with the skills necessary to meet the demands of today's fast paced, competitive and technological job market.

National School's faculty consists of professionals with extensive experience in each specialized field - our instructors practice what they teach. A supportive classroom environment allows for personalized instruction and individual attention. Classrooms house the high-tech equipment, creating a realistic work environment for practical hands-on training. curriculum is career-oriented, and is enhanced by special projects or internship programs designed to prepare you for work in your chosen field.

Our objective is to offer you the training necessary to realize your career goals. We look forward to making your plan to enter National School of Technology one of the best decisions of your life.

Sincerely,

NATIONAL SCHOOL OF TECHNOLOGY

Martin torolel Martin Knobel

Chief Executive Officer

## **Medical Division**

### **MEDICAL ASSISTANT**

Diploma 900 Clock Hours

### MEDICAL ASSISTANT TECHNICIAN

Diploma 1200 Clock Hours

### PROGRAM OBJECTIVE:

This contemporary training program is designed to teach students the skills necessary for employment in the modern medical facility. A qualified medical assistant is capable of performing a wide range of duties, with a variety of technical detail; thus helping the physician in many administrative and clinical situations. Training in medical ethics and professional etiquette, as well as basic office procedures are taught as required elements of the course.

### **CAREER OPPORTUNITIES:**

Medical Assistants enjoy secure, prestigious positions. Graduates work in entry-level positions with one or more physicians in private practices, clinics, hospitals, laboratories and other health facilities. Medical Assistant Technicians may be qualified for enhanced employment opportunities with the addition of computer operations and basic x-ray training to their core curriculum.

## Medical Assistant-Program Outline

<u>Bloc</u>	k 1			<u>Bloc</u>	k 4 (1	For Medical Assistant Technicians Only)	)
MA	110	Human Bio-organization	15	MA	140	Computer Fundamentals	30
MA	112	Body Structure, Movement		MA	142	Medical Office Management	
		and Function	75			Software	10
MA	114	Specialized Sense Organs	10	MA	144	Computer Applications for	
MA	120	The Cardiovascular System-				Office Practice	60
		Electrocardiography	60	MA	150	Keyboarding Skills/Data Entry	35
MA	122	The Respiratory System	15	MA	152	Rules for Medical Word	
MA	124	The Nervous System	15			Processing and Terminology	20
MA	126	CPR Certification - Emergency		MA	154	Basic Medical Reports	15
		Cardiac Care	10	MA	156	Medical Word Processing Lab	30
Bloc	<u>k 2</u>			<u>Bloc</u>	<u>:k 5 (F</u>	For Medical Assistant Technicians Only)	
MA	130	Psychology of Patient Care-		RT	190	Fundamentals of Radiology,	
	13/0	Legal & Ethical Issues	25			Terminology, and Mathematics	35
MA	132	Medical Office Management	•	RT	192	Radiation Physics &	
1711 1	132	Procedures	105			Electronics	20
MA	160	Infection Control and		RT	194	Radiographic Technique and	
1,11, 7	100	Sterilization	10		-	Production	35
MA	162	Clinical Assisting Skills	50	RT	196	Basic X-Ray Machine Operator	
MA	166	Nutrition and Diet Therapy	10			Certification Exam Review	10
<u>Bloc</u>	ck 3			<u>Inte</u>	rnshi	p	
MA	170	Organization of the Clinical		MA	208	Internship or Project	300
		Laboratory	15				
MA	171	Pharmacology and Drug		MED	ICAL.	ASSISTANT	
		Therapy	30	TOT	AL CL	OCK HOURS	900
MA	172	Phlebotomy Techniques	35	9 mo	nths da	ys/12 months evenings	
MA	174	Hematology	35				
MA	180	Clinical Chemistry	25	MED	ICAL.	ASSISTANT TECHNICIAN	
MA	182	Basic Urinalysis	35	TOT	'AL CL	OCK HOURS	1200
MA	184	Serology Testing	5	12 m	onths o	days/15 months evenings	
MA	186	Microbiology	20				

## **Surgical Division**

### SURGICAL TECHNOLOGIST

### Diploma 1200 Clock Hours

### **PROGRAM OBJECTIVE:**

This program prepares individuals to perform the services of a surgical technologist practitioner which include such duties as passing instruments to surgeons during surgical procedures, checking supplies and equipment required for surgical procedures, setting up sterile tables with instruments and other equipment needed for procedures, draping sterile fields, and other similar activities.

### **CAREER OPPORTUNITIES:**

Graduates are eligible for employment in entry-level positions as surgical technologists, assisting surgeons in hospital surgical suites, out-patient surgical centers, private physician's offices and other clinical areas. The surgical technologist practitioner may be assigned other functions as permitted by the hospital and/or employer policy.

## Surgical Technologist-Program Outline

<u>Bloc</u>	ck 1		····	Blog	ck 3	
ST	1110	Medical Terminology	15	ST	1310	Introduction to Surgical
ST	1112	Human Body Organization,				Technology 40
		Cells Tissues & Organs	15	ST	1312	Surgical Techniques &
ST	1114	Integumentary System	15			Procedures 40
ST	1116	Skeletal System	20	ST	1314	Surgical Specialties I -
ST	1118	Muscular System	20			General, OB/GYN, Plastics &
ST	1120	Nervous System & Special				Orthopedics 40
		Senses	15	ST	1316	Surgical Specialties II -
ST	1122	Circulatory System	20			Ophthalmology, ENT & Urology 40
ST	1124	Lymphatic System	15	ST	1318	Surgical Specialties III -
ST	1126	Respiratory System	15			Cardiovascular, Thoracic &
ST	1128	Digestive System	20			Neuro 40
ST	1130	Genitourinary &				
		Reproductive System	15	Inta	ernship	1
ST	1132	Endocrine System	15	11110	, nonep	
		·		ST	1410	Internship 600
Bloc	ck 2	and the first of the second se		тот	AL CL	OCK HOURS 1200
ST	1210	Microbiology	40		onths d	
ST	1212	Patient Psychology	15	12 11	ionins u	uyo
ST	1214	Legal Aspects of Medicine	1.5			
01	1217	& Professional Ethics	20			
ST	1216	Mathematics Fundamentals &	20			
ŲΙ	1210	Metric System	30			
ST	1218	Pharmacology	40			
ST	1210	Cardiopulmonary Resuscitation	15			
ST	1222	Computer Concepts	40			
<i>U</i> 1	1000	Comparer Concepto	, ,			

## **Cardiology Division**

### CARDIOVASCULAR TECHNOLOGIST

### Diploma 1500 Clock Hours

### PROGRAM OBJECTIVE:

This program will enable students to perform electrocardiograms (ECG), ambulatory monitoring and graded exercise diagnostic examinations; as well as basic x-ray and cardiovascular laboratory procedures through the acquisition of medical knowledge and techniques in the field of cardiology. This program also prepares students with the foundation for advanced study in cardiovascular technology and diagnostic imaging.

### **CAREER OPPORTUNITIES:**

Cardiovascular Technologists are employed in hospitals, cardiologists' offices, cardiology mobile units and many other health facilities.

## Cardiovascular Technologist-Program Outline

<u>Bloc</u>	ck 1			Block 3					
CV	1106	Medical Terminology	15	CV	1310	Graded Exercise Testing	15		
CV	1110	Cellular Basis of		CV	1312	Ambulatory Monitoring	15		
		Anatomy and Physiology	15	CV	1314	Stress and Holter Lab	30		
CV	1112	Musculoskeletal System	15	CV	1316	Cardiac Pathology	180		
CV	1114	Nervous System	30	CV	1318	Introduction to Vascular			
CV	1116	Respiratory System	15			Diseases	30		
CV	1118	Gastrointestinal System	45	CV	1320	Psychology of Patient Care	15		
CV	1120	Genitourinary System	15	CV	1322	Professionalism & Medical			
CV	1122	Endocrine System	15			Ethics	15		
CV	1124	Reproductive System	15						
CV	1126	Cardiac Anatomy and		Bloc	· l· A				
		Physiology	60	Dive	N T				
CV	1128	Vascular Anatomy and		CV	1410	Business and Medicine	10		
		Physiology	45	CV	1412	Records Management Systems &	Sz		
CV	1130	Cardiopulmonary Resuscitation	15			Procedures	50		
		,		CV	1414	Sterilization & Infection			
Bloc	·k 2					Control	15		
Dive	.n 2	· · · · · · · · · · · · · · · · · · ·		CV	1422	Advanced Concepts in			
CV	1210	Computational Science	15			Cardiac Technology	35		
CV	1212	Medical Physics	15	CV	1424	Introduction to Vascular			
CV	1213	Clinical Laboratory				Studies	30		
		Procedures	60	CV	1426	Non-Invasive Vascular Lab	30		
CV	1214	Normal ECG and Normal		CV	1428	Physics of Ultrasound	30		
		Variants	45	RT	0190	Fundamentals of Radiology,			
CV	1216	Vectorial Analysis	15			Terminology, and Mathematics	35		
CV	1218	Hypertrophies and		RT	0192	Radiation Physics &			
		Interventricular Conduction				Electronics	20		
		Disturbances	15	RT	0194	Radiographic Technique and			
CV	1220	Ischemia, Injury,				Production	35		
		& Infarction	15	RT	0196	Basic X-Ray Machine Operator			
CV	1224	Arrhythmia Recognition	•			Certification Exam Review	10		
		and Management	75						
CV	1226	Pacemaker Rhythms	15	Inte	rnship	•			
CV	1228	Cardiovascular Pharmacology	15	•					
CV	1230	Basic Medical Skills	15	CV	1450	Internship or Project	300		
				TOT	AL CLO	OCK HOURS	1500		

## **Cardiology Division**

### INVASIVE CARDIOVASCULAR TECHNOLOGIST

### Diploma 1200 Clock Hours

### **PROGRAM OBJECTIVE:**

This program will prepare students to function effectively in cardiac catheterization laboratories as Invasive Cardiovascular Technologists.

### **CAREER OPPORTUNITIES:**

Due to the highly specialized nature of their training, graduates are afforded entry-level employment opportunities in various challenging and rewarding clinical environments. Invasive Cardiovasular Technologists may be employed in hospitals, stand-alone medical centers and mobile cardiac catheterization services.

# Invasive Cardiovascular Technologist-Program Outline

Bloc	ck 1			Internship
IC	1110	Orientation to the Cardiac Catheterization Lab	25	IC 1310 Clinical Practicum, Special Projects & Seminars 600
IC	1112	Introduction to		·
		Cardiovascular Lab		TOTAL CLOCK HOURS 1200
,	1114	Procedures I	60	12 months days
IC	1114	Concepts of Hemodynamic  Monitoring	75	Note: Applicants without acceptable radiography
IC	1116	Hemodynamic Monitoring Lab I	50	credentials may take these prerequisites at NST at no
IC	1118	Adult Cardiac Pathophysiology	10	additional cost (students must purchase texts).
IC	1120	Cardiovascular Pharmacology	20	•
IC	1122	Acid-Base Physiology &		
		Techniques	25	
IC	1124	Angiography Cine Review	25	
IC	1126	Case Presentations in	10	
		Cardiovascular Technology I	10	
Blog	ck 2			
IC		Carried Diamondia Dragadores	15	
IC	1210 1212	Special Diagnostic Procedures Interventional Cardiac	IJ	
	1212	Procedures	60	
IC	1214	Applied Electrophysiologic		
		Studies (EPS)	25	
IC	1216	Introduction to Pacemakers &		
		Automatic Implantable Cardiac	10	
10	1210	Difibrilators (AICD)	10	
IC	1218	Orientation to Neonatal & Pediatric Cardiovascular		
		Procedures	10	
IC	1220	Cardiovascular Lab	~~	
.	0	Procedures II	45	
IC	1222	Hemodynamics & Cardiovascula		
		Pathophysiology	75	
IC	1224	Hemodynamic Monitoring	50	
	1227	Lab II	50	
IC	1226	Case Presentations in Cardiovascular Technology II	10	
		Caldiovascular reciniology if	10	

## **Diagnostic Imaging Division**

### ULTRASOUND TECHNOLOGIST Diploma - 1200 Clock Hours

### **PROGRAM OBJECTIVE:**

This program will provide students with the foundation leading to the performance of abdominal and OB/GYN diagnostic examinations through the acquisition of medical knowledge and techniques in ultrasound.

### **CAREER OPPORTUNITIES:**

Because of their extensive training, sonographers are capable of working in a variety of clinical environments including a physician's private practice, diagnostic centers, and when considered registry-eligible, hospitals.

Pre-requisite: Cardiovascular Technologist Program or equivalent (see Statement of Application to Upper Division Programs)

## DIAGNOSTIC CARDIAC SONOGRAPHER Diploma - 1200 Clock Hours

### PROGRAM OBJECTIVE:

This program will enable students to perform diagnostic examinations through the acquisition of medical knowledge and techniques in diagnostic cardiac and vascular sonography.

### **CAREER OPPORTUNITIES:**

Diagnostic Cardiac Sonographers are employed in hospitals, cardiologists' offices, cardiology mobile units and many other health facilities.

Prerequisite: Cardiovascular Technologist Program (see Statement of Application to Upper Division Programs)

### **DIAGNOSTIC MEDICAL SONOGRAPHER** Diploma - 2400 Clock Hours

### **PROGRAM OBJECTIVE:**

Upon completion of both the Ultrasound Technologist and Diagnostic Cardiac Sonographer programs, graduates are able to perform abdominal and OB/GYN diagnostic ultrasound examinations, as well as diagnostic cardiac and vascular sonography.

### **CAREER OPPORTUNITIES**

Diagnostic Medical Sonographers possess diverse skills in ultrasonography and are prepared for employment in entry-level positions at hospitals, diagnostic centers, mobile diagnostic services and private physician's offices.

<u>Prerequisites:</u> Applicants to this program must first be enrolled in either the Ultrasound Technologist or Diagnostic Cardiac Sonographer program and be within 90 days of program completion. Applicants must also excel academically and professionally, and be formally recommended to the program by their respective program director.

## **Ultrasound Technologist-Program Outline**

Bloc	ck 1			Bloc	ck 3		
US	1110	Physics of Ultrasound &		US	1310	First Trimester, Fetal	
		Instrumentation	70			Anatomy & Common Defects	90
US	1112	Cross Sectional &		US	1312	Fetal Development &	
		Sagittal Anatomy	60			Cardiovascular Malformations	50
US	1114	Liver, Gall Bladder,		US	1314	Anatomy of the Female Pelvis &	ζ
		Pancreas, Biliary System &				Scanning Technique	30
		Spleen	100	US	1316	Pelvic Inflammatory Diseases	30
US	1116	Renal System & Adrenal		US	1318	Congenital Anomalies of the	
		Gland/Retroperitoneum	70			Female Genital Tract/Benign	
		-				Diseases of the Vagina	40
Rlo	ck 2			US	1320	Malignant Diseases of the	
Dive	.n 2					Uterus & Cervix/Benign	
US	1210	Vascular System	70			Masses, Malignant Masses	
US	1212	Thyroid & Parathyroid Glands	30			of the Ovaries, Fallopian	
US	1214	Mammary Gland	15			Tubes & Broad Ligaments	60
US	1216	Scrotum & Prostate Gland	30				
US	1218	Overview of Obstetrics Ultrasound Measurements,		Inte	ernship.	)	
		Biophysical Profile &		US	1430	Internship	300
		Multiple Fetuses	100		-	· .	
US	1220	Incompetent Cervix, Placenta		TOT	AL CLO	OCK HOURS 1	1200
		Doppler Assessment of		12 m	onths d	ays/15 months evenings	
		Pregnancy & Instrumentation i	in				
		Obstetrics	55				

## Diagnostic Cardiac Sonographer-Program Outline

Bloc	ck 1		· · · · ·	<u>Clir</u>	nical P	racticum	
CS	1110	Introduction to		CS	1220	Sonography Clinicals	810
		Cross-sectional Echo Anatomy	15	CS	1250	Special Projects and Seminars	90
CS	1112	Introduction to Normal					
		2-Dimensional Examination	15	TOT	CAL CLO	OCK HOURS	1200
CS	1114	Two-Dimensional Lab	45	12 m	onths d	ays	
CS	1116	Introduction to Normal M-mode	: 15				
CS	1118	Introduction to Conventional					
		Doppler Exam	15				
CS	1120	Conventional Doppler Lab	45				
CS	1122	Introduction to Color Flow					
		Mapping and Principles	15			•	
CS	1124	Echocardiographic Pathology	75				
CS	1126	Non-Invasive Lab II	60				

## **Midwifery Division**

## MIDWIFERY (Direct Entry)

### Diploma 2700 Clock Hours

### **PROGRAM OBJECTIVE:**

This program provides training to qualified persons to become proficient in the practice of midwifery, including the supervision and facilitation of the process of normal labor and childbirth, including providing prenatal and postpartum care.

### **CAREER OPPORTUNITIES:**

The licensed direct-entry Midwife may practice as an independent practitioner following protocols established by the State of Florida. The licensed Midwife may practice alone or in a partnership with another midwife in the home (if appropriate) or office setting. Licensed Midwives may open Birth Centers or be employed by a Birth Center.

Note: Licensed Midwives are considered as primary care practitioners and by Florida State Law are eligible for insurance reimbursement, including Medicaid reimbursement for prenatal and postpartum care for home births and full reimbursement for Birth Center births.

Registered or licensed practical nurses may complete the Midwifery program in two years and are exempt from the third year clinical practicum. Clinical practice hours are substituted for the science courses and advanced standing credit is awarded for the Basic Nursing Skills course in the first year curriculum. The second year curriculum is the same as the three year Midwifery program. Advanced standing is granted as credit for previous training and must be verified by means of an official transcript from the nursing program attended.

## Midwifery-Program Outline

FIRST Y	EAR	Bloc	ek 5		***************************************
Block 1		MW	6510	Normal Antepartum	
*MW 6110 MW 6115	Anatomy & Physiology Practice Management I  75	) (SV)	6515	Knowledge & Skills II Normal Labor, Delivery &	45 25
MW 6120 MW 6125 MW 6150	Basic Nursing Škills 40 Lactation/Breastfeeding 15 Clinical Lab: Birth Observation		6520	Postpartum I Complications of Pregnancy, Birth Postpartum & the	
11177 0130	Practicum I 150	MW MW	6525 6530	Newborn I Birth Review IV Parenting	20 10 10
Block 2		MW	6535	The Neonate	25
*MW 6210	Anatomy & Physiology of the Reproductive Cycle 35		6540 6450	Collaborative Management Clinical Lab: Birth Observation Practicum II (cont)	15 150
*MW 6215 *MW 6220	Human Growth & Development 20 Fetal Growth & Development/ Embryology 20		ck 6	,	
MW 6225	Laboratory & Diagnostic Testing 25		6610	Well-Woman Natural	***************************************
MW 6230 ·	Nutrition for the Childbearing & Lactating Woman 15			Family Planning	20 15
MW 6235	Practice Management II 20		6615 6620	Suturing Well-Woman Gynecology	25
MW 6240 MW 6150	Birth Review I 15 Clinical Lab: Birth Observation	MW	6625	Birth Review V	65
WW 0150	Practicum I (cont) 150	MW	6630	Complications of Pregnancy, Birth Postpartum and the Newborn II	25
Block 3		MW	6450	Clinical Lab: Birth Observation Practicum II (cont)	
*MW 6310 *MW 6315 *MW 6317 *MW 6320 MW 6325 MW 6330 MW 6335	Applied Psychology 20 Epidemiology 25 AIDS 5 Basic Nutrition 25 Childbirth Education 20 Birth Review II 15 Practice Management III 20	Ti		YEAR Practicum	
MW 6340 MW 6345	Loss & Grieving 10 Religious & Cultural Diversities 10	) MW	6750	Clinical Lab: Birth Observation Practicum III	225
MW 6150	Clinical Lab: Birth Observation Practicum I (cont) 150	MW	6755	Clinical Lab: Birth Observation Practicum IV	225
CECON		MW	6760	Clinical Lab: Birth Observation Practicum V	
SECON	D YEAR	MW	6765	Clinical Lab: Birth Observation Practicum VI	225
Block 4		-			
MW 6410 .	Knowledge & Skills I 45	; 			
MW 6415	Legal & Ethical Aspects of Midwifery 25	34 n		OCK HOURS ays & evenings	2700
MW 6420 MW 6425	Applied Pharmacology 25 Normal Labor, Delivery & 25 Postpartum II 25	* Sc	ence Co	purses	
MW 6430	Health Care Communications 15	5			
MW 6435 MW 6450	Birth Review III 15 Clinical Lab: Birth Observation Practicum II 150				

## **Business Division**

### **BUSINESS ADMINISTRATION**

Diploma 900 Clock Hours

### **PROGRAM OBJECTIVE:**

This program will prepare students for the multi-faceted contemporary business workplace. Courses include decision making, problem solving, management procedures, accounting operations, business writing, and computer competency in business software. Students must achieve a minimum keyboarding speed of 35 wpm to graduate. This program will also prepare the student with the foundation for advanced study in business administration.

### **CAREER OPPORTUNITIES**

The objective of this program is to prepare students for the positions of administrative assistant or other entry-level business careers in such areas as accounting and micro-computer operations.

## **Business Administration-Program Outline**

<u>Bloc</u>	ck 1			<u>Bloc</u>	ck 4		
ВА	100	Keyboarding	50	ВА	410	Business Communication/	400
BA	110	Business Mathematics	50			English II	100
BA	120	Computer Concepts		ВА	420	Advanced Word Perfect	50
		(DOS, Lotus 123)	50				
				<u>Bloc</u>	<u>ck 5</u>		
<u>Bloc</u>	ck 2			ВА	500	Business Law	50
ВА	200	Introduction to Business	50	ВА	510	Principles of Accounting II	50
BA	210	English Usage and Composition	50	ВА	520	Computerized Accounting	50
BA	220	Word Perfect	50				
				Inte	rnshij	)	
Bloc	ck 3			ВА	600	Internship or Project	150
BA	300	Principles of Management,					
		Advertising and Marketing	50			OCK HOURS	900
BA	310	Principles of Accounting I	50	12 m	onths d	lays or evenings	
ΒA	320	Advanced Lotus 123	50				

## GENERAL INFORMATION

### CLASS SIZE

Class size averages between 15 and 30 students. Medical laboratory class size usually will not exceed 20 students, allowing for personal attention and individualized instruction.

### EQUAL OPPORTUNITY STATEMENT

National School does not discriminate in the admission or recruitment of its students. The financial aid program is administered free from discrimination as specified by federal laws. National School of Technology is an equal opportunity employer.

### **HOURS OF OPERATION**

The school is open from 8:00 a.m. to 11:00 p.m., Monday thru Thursday; and from 8:00 a.m. to 4:00 p.m. on Friday.

### **RULES AND REGULATIONS**

Students must attend all classes regularly and arrive punctually. In the event of illness or inability to attend, the student must notify the school in writing, presenting a valid and verifiable excuse. Students must arrive to class at the scheduled times and return to class immediately after all breaks and lunch periods, or be considered tardy. Tardiness is defined as arrival to class 15 minutes after the scheduled class time. Three tardies are considered as one absence. Students may be suspended when absences and tardiness constitute more than 20 percent of total class hours. Upon readmission to class, the student must make up lost instruction time to the satisfaction

of the instructor. Habitual tardiness shall be cause for termination of the student.

The student lounge is open for use during specified lunch and break periods. This is the only area in which students may have food or beverages. Students who wish to smoke may do so only in designated areas.

Public telephones are located in the student lounge. Telephones within the school offices are for school use only. Incoming calls for students will be accepted only in cases of extreme emergency.

Firearms, drugs, alcoholic beverages and weapons are strictly prohibited.

Students will not play games of chance, use offensive language, make unnecessary noise or engage in behavior unbecoming a professional.

Children are not allowed in classrooms.

Students will be responsible and pay for all property destroyed or damaged. Vandalism will result in immediate expulsion and contract termination without recourse or appeal.

Students must conduct themselves in class with proper decorum, respect and attention to the instructors. They will behave with courtesy and regard for other persons and school property.

Students are expected to attend class in professional attire. All students enrolled in medical programs are required to wear white uniforms, including white shoes. Students are expected to maintain a high standard of personal cleanliness and grooming. All clothing must be clean and neat. Male students must be clean shaven and maintain beards and mustaches neatly trimmed.

Students are expected to dress in clothing that they would wear to their jobs. Shorts, jeans, T-shirts and hats may not be worn in the classrooms.

### General Information Continued

All students must keep work areas clean. Class will be dismissed only after the room has been inspected.

Failure to cooperate with school rules and regulations will be considered reason for student suspension or expulsion. Students may appeal expulsion in writing within 72 hours to the Chief Executive Officer of the school. In the absence of an appeal, the student shall be considered terminated.

### STUDENT COMPLAINT/ GRIEVANCE PROCEDURE

National School of Technology endeavors to be responsive to the needs of its students. In the event that a complaint arises, students are expected to resolve such grievances in a constructive and appropriate manner. Most complaints are resolved on an informal basis, however, if necessary, students may pursue more formal channels. Students may contact the Campus Director to obtain information on National School's complaint policy and procedures.

Schools accredited by the Accrediting Commission of Career Schools and Colleges of Technology must have a procedure and operational plan for handling student complaints. If a student does not feel that the school has adequately addressed a complaint or concern, the student may consider contacting the Accrediting Commission. All complaints considered by the Commission must be in written form, with permission from the complainant(s) for the Commission to forward a copy of the complaint to the school for a response. The complainant(s) will be kept informed as to the status of the complaint as well as the final resolution by the Commission. Please direct all inquiries to:

Accrediting Commission of Career Schools and Colleges of Technology 750 First Street, N.E., Suite 905 Washington, D.C. 20002-4242 (202) 336-6850 A copy of the Commission's Complaint Form is available at the school and may be obtained by contacting Mr. Ortiz, NMB Campus Director, or Mr. Wurst, Hialeah Campus Director.

### **DISCLOSURE STATEMENT**

Courses are not necessarily taught in the same order they appear on the curriculum outline. The school reserves the right to change the program outline, start dates, tuition, or to cancel programs. Currently enrolled students will not be affected by tuition increases. All program cancellations shall be in accordance with the Department of Education and State of Florida rules and regulations.

Certain programs, blocks of instruction or courses may be offered at either the main campus in North Miami Beach or the branch campus in Hialeah, Florida. This may require students to attend classes at another campus in order to complete their studies. Administrative circumstances such as enrollment levels, availability of specialized equipment or facilities, or other limitations of resources may warrant such offerings.

A block of instruction may occasionally not be offered due to insufficient enrollment levels. Under these circumstances, students will experience a delay in the completion of their program.

### SCHOOL HOLIDAYS

New Year's Day - Martin Luther King Day - President's Day - Good Friday - Memorial Day - Independence Day - Labor Day - Thanksgiving Weekend - Christmas Vacation.

There are two one week recesses; normally the first week in July and the week of Christmas thru New Year's. Exact vacation dates are announced and additional holidays may be declared by the Director, when warranted.

## STUDENT SERVICES

### JOB PLACEMENT ASSISTANCE

The Career Development Department helps graduates find employment in the fields for which they have been trained. Employment advisement, including resume preparation and interviewing tips, is available.

By assisting students with part-time employment, internships and job placement services for graduates, the Career Development Department makes every effort to secure positions for graduates. National School is not permitted by law to guarantee employment. All programs are designed to prepare graduates for entry-level positions.

### COUNSELING

Students may be referred to counseling opportunities in the community by faculty or staff of the school.

### CPR/FIRST AID CLASSES

Cardiopulmonary-Resuscitation (CPR) and first aid classes are held three to four times a year at the school for medically-related programs. CPR certification is awarded upon completion.

### **GRADUATION**

Upon successful completion of all prescribed subjects of instruction with a cumulative grade average of 77 percent or better; demonstrating the ability to perform all required competencies; satisfaction of all financial obligations to the school and an exit interview, the student will be awarded a diploma credential as stated in the catalog program information.

Students may participate in the graduation ceremony and will be eligible for placement assistance, providing that all graduation requirements have been met.

### *INSURANCE*

Each medical student is provided professional liability insurance at no extra charge, while on approved internships, practicums and during classroom training exercises.

### *LIBRARY*

A library of professional reference books are available for student use.

### PHOTO IDENTIFICATION BADGES

For security purposes, all students are required to wear a photo identification badge. This badge is issued by the school and is free of charge. Lost badges must be replaced and cost \$5.00.

### PROFESSIONAL AND CREDENTIALING ORGANIZATIONS

Students are encouraged to associate themselves with the professional and credentialing organizations in their respective career fields for the purpose of continuing education, licensing, certification, employment opportunities and awareness of industry trends.

- Registered Medical Assistant by the American Medical Technologists (RMA/AMT)
- Certified Medical Assistant by the American Association of Medical Assistants (CMA/AAMA)
- Basic X-ray Machine Operator, license necessary to take x-rays in the doctor's office, issued by the State of Florida.
- American Society of Phlebotomy Technicians (ASPT)
- American Society of Cardiovascular Professionals (ASCP)
- Cardiovascular Credentialing International (CCI)
- Greater Miami Society of Echocardiography
- Society of Diagnostic Medical Sonographers (SDMS)
- Midwives Association of Florida (MAF)
- Midwives Alliance of North America (MANA)
- Association of Surgical Technologists, Inc. (AST)

### COMMUNITY SERVICE AND AWARDS

National School of Technology recognizes the importance of community service. As a part of the technical training, NST will try to instill a feeling of responsibility towards the community in its students and encourage them to participate as volunteers in various community projects.

### Student Services Continued

National School participates in health fairs and sponsors blood drives in conjunction with the American Red Cross several times a year.

In recognition of its efforts and accomplishments in service to the community, National School has received several awards and citations. Mayors of Metro-Dade County, the City of Miami, the City of North Miami Beach and the City of Hialeah have all issued proclamations honoring National School for its community service.

### REGISTERED MEDICAL ASSISTANT (RMA) EXAM

The school is a site for the Registered Medical Assistant Examination. This exam is given four times a year. Students are notified of examination dates as they are scheduled.

### CERTIFIED PHLEBOTOMY TECHNICIAN (ASPT) EXAM

The school is a site for the American Society of Phlebotomy Technician Examination. This exam is given six times a year. Students are notified of examination dates as they are scheduled.

### CERTIFIED CARDIOGRAPHIC TECHNICIAN (CCT) EXAM

The school is a site for the Certified Cardiographic Technician Examination offered by Cardiovascular Credentialing International (CCI). This exam is given three times a year in March, June and September.

## BASIC CARDIOVASCULAR SCIENCE EXAM (Component)

The school is a site for the Basic Cardiovascular Science Examination offered by Cardiovascular Credentialing International (CCI). This exam is given three times a year in March, June and September. In order to be eligible for a professional credential, examinees must also pass one or more of the following registry exams in addition to this Basic Science exam:

- Registered Cardiovascular Technologist (RCVT) Non-invasive Registry Exam
- Registered Cardiovascular Technologist (RCVT) Invasive Registry Exam
- Registered Cardiovascular Technologist (RCVT) Vascular Registry Exam

### CERTIFIED SURGICAL TECHNOLOGIST (CST) EXAM

This exam is offered semi-annually in March and September by the Liaison Council on certification for the Surgical Technologist. The exam is administered nationwide including a local Miami test site.

### **TUTORING**

Tutoring is available by appointment with instructors at no additional cost to the student.

### REFRESHER COURSES

Refresher courses are available to graduates at the cost of materials only. Costs generally do not exceed \$150.00 in addition to the costs of textbooks and supplies.

### STUDENT RECORDS

Student records are maintained indefinitely. Students may examine their academic records by scheduling an appointment with the registrar.

### FAMILY EDUCATIONAL RIGHTS AND PRIVACY ACT

National School of Technology is committed to the protection of students' rights and privacy of information. In accordance with Public Law 93-380, Family Educational Rights and Privacy Act, Florida Statute 5.229.782, the school provides for the students to have access to their educational records, to challenge records they believe to be inaccurate, incomplete or misleading and to limit the release of such information.

Records will not be released without the written consent of the student.

The parent(s) of a dependent student (as defined in Title 26 U.S.C.S. S. 152 Internal Revenue Code) has the right to inspect records which are maintained by the school on behalf of the student.

### **TRANSCRIPTS**

Copies of transcripts may be obtained by submitting a written request to the school. A fee of \$1 per copy is charged. Please allow 10 days for processing time.

### **DIPLOMAS**

Copies of diplomas may also be obtained by submitting a written request to the school. A fee of \$5 is charged. Please allow 30 days for processing time.

## **ACADEMIC INFORMATION**

## ADMISSIONS PROCEDURES AND REQUIREMENTS

Applicants are interviewed on campus by admissions representatives, who discuss the programs of study, including the applicant's individual motivation and potential for success in training and subsequent employment.

Each applicant must successfully complete the Thurstone Test of Mental Alertness at the level required for the particular program. This general aptitude test is a part of the admissions interview, and guides the admissions representative in determining the student's ability to meet the requirements of the school's programs.

Applicants for admissions must have a High School Diploma or G.E.D.

Prospective students complete an application for enrollment which is reviewed by the Director. Applicants are notified whether they have been accepted within two weeks prior to the start date of the program and must sign an enrollment agreement with the school.

All students are required to submit their social security number for identification purposes.

All allied health students are required to submit a current certificate of good health.

No person shall be excluded from participation in National School of Technology or be subjected to any form of discrimination because of age, race, sex, handicap or national origin.

Students are expected to maintain the standards of the school in academic, professional and personal achievement.

Students who desire to become applicants for the most advanced education programs of the school are required to meet additional admissions requirements.

### CREDIT FOR PREVIOUS TRAINING

Credit for previous training may be granted upon receipt of an official transcript from an approved training facility. The amount of credit received will be determined by the Director and any necessary adjustments in the student's program will be made.

### TRANSFER OF COURSE CREDITS

Decisions concerning the acceptance of credits by any institution other than the granting institution are made at the sole discretion of the receiving institution. No representation is made whatsoever concerning the transferability of any credits to any institution.

Students considering continuing their education at, or transferring to other institutions must not assume that credits earned at this school will be accepted by the receiving institution. An institution's accreditation does not guarantee that credits earned at that institution will be accepted for transfer by any other institution. Students must contact the registrar of the receiving institution to determine what credits, if any, that institution will accept.

### ADMISSIONS REPRESENTATIVE

Each students shall be assigned a representative to aid the student during his or her professional and educational experience.

## APPLICATION PROCEDURES FOR INTERNATIONAL STUDENTS

National School of Technology is authorized by the Immigration and Naturalization Service (INS) to issue the I-20 form. When students apply to

### Academic Information Continued

NST from outside the United States, they must, in addition to submitting a School Application, submit the following material before an I-20 form can be issued.

- 1. EVIDENCE OF HIGH SCHOOL GRADUATION Transcript must be authentic and accompanied by a certified translation in English if necessary.
- 2. Authenticated transcripts from other colleges or universities attended. The transcript must contain the following:
  - A. Subjects studied
  - B. Dates attended
  - C. Grades awarded
  - D. Explanation of the Grading Scale
  - E. A statement at the end of each year stating that the student was promoted to the next level
- 3. EVIDENCE OF FINANCIAL SUPPORT -The international student is required by the Immigration and Naturalization Service to satisfy the local U.S. Consulate that he or she will not need to seek employment while attending school in the United States. The student must submit a current bank statement (within the last 6 months) or government sponsorship letter guaranteeing payment for tuition, fees, books, housing, personal expenses and, where appropriate, medical expenses. The amount of money guaranteed should be for a minimum equivalent of one year. Or, if the applicant is not considered financially independent, then the applicant is required to have a financially independent individual fill out an Affidavit of Support Form. This form can be obtained at the local immigration officer local consulate.
- 4. EVIDENCE OF ENGLISH PROFICIENCY -NST requires satisfactory evidence of mastery and command of the English language from all international students

- whose native language is not english. such evidence may be one of the following:
- A. Test of English as a Foreign Language (TOEFL)
- B. Notarized evaluation by an appropriate functionary of a U.S.
  Binational Cultural Center which evaluates the candidate's ability to undertake a college program of study taught entirely in English
- C. National School of Technology Entrance Placement Examination
- 5. PASSPORT If applying from outside the U.S., an international applicant must submit a copy of the front page of a valid passport showing applicant's picture and pertinent information. The passport must be valid for one year as of date of entry into the United States.
- 6. REGISTRATION FEE A \$150.00 (U.S.) registration fee must be submitted with the first application for admissions.

## IMPORTANT INTERNATIONAL VISA STUDENT INFORMATION

- I. International applicants are required to comply with all admissions requirements as stated in the catalog before they will be admitted to National School of Technology.
- II. Admitted students should arrive in the United States and Miami community approximately two weeks prior to the first term of enrollment. An academic calendar gives specific dates and activities. Early arrival is necessary so the student may locate housing, provide a local address to the school, participate in a new student orientation, English language reconfirmation testing, advisement and counseling assessment and registration into a program.

### Academic Information Continued

- III. The School does not provide or recommend housing, and two to three months rent in advance may be required for housing in the community. Students must have sufficient funds to cover all expenses while in the United States. Students without sufficient funds will not be permitted to register for a program until the required funds are available.
- IV. International students on visa are normally admitted to the United States for the entire time estimated by the School for the student to complete his or her approved program of study. International visa students must fulfill the following conditions:
  - a) Pursue a full course of study at the educational institution they are authorized to attend.
  - b) File with the Immigration Service an alien address report each January and immediately whenever the student changes address.
  - c) Not to transfer schools or work off campus without Immigration and Naturalization Service's permission.
  - d) Keep a current passport that is valid for at least six months into the future.
- V. All National School of Technology students are required to abide by the policies, regulations, and rules of the School, and the United States Department of Justice, Immigration and Naturalization Service.

### CLASS HOURS AND START DATES

Day class hours range from 8:00 a.m. to 1:00 p.m., Monday thru Friday.

Afternoon class hours range from 1:00 p.m. to 6:00 p.m., on scheduled class days.

Evening class hours range from 6:00 p.m. to 11:00 p.m., Monday thru Thursday.

See the Academic Calendar for start and completion date information.

An hour of instruction is equal to 50 minutes.

### **GRADING SYSTEM**

Α	93-100	Outstanding
В	85-92	Above Average
С	77-84	Satisfactory
D	70-76	Below Average
F	Below 70	Unacceptable

### CHANGES IN PROGRAMS AND TUITION CHARGES

The school reserves the right to teach subject areas in any order it deems necessary; to add to or delete from certain courses, programs, or areas of study as circumstances may require, and to make faculty changes. Changes in training curriculum shall not involve additional cost to currently enrolled students unless a new enrollment agreement is executed for an expanded program. Students are permitted to make one change at no additional charge. A change is defined as a withdrawal, a change of program of study, a leave of absence, a transfer from day to evening or evening to day class. Students making more than one change will be assessed a \$150 processing fee. Any change made during the first two weeks of school will not apply to this policy.

### WITHDRAWAL AND TERMINATION

The students shall have the option to withdraw from the school at any time by giving notice of intent to terminate enrollment to the school office. Should the student be under 18 years of age, notification must be accompanied by a letter from

### Academic Information Continued

the parent or guardian consenting to the withdrawal. The school reserves the right to discontinue the enrollment of any student whose academic performance, attendance, or conduct is, for any reason, unsatisfactory. Any student who is absent for a period of one week, without notification to the school and good cause, may be subject to termination at the Director's discretion. Any student found guilty of academic dishonesty will receive an immediate zero for that subject and will be expelled. Academic dishonesty includes, but is not limited to, cheating, copying, plagiarism or failure to report the same. In the case of a student's prolonged illness, accident, death in the family, or other circumstances that make it impractical to complete the course, the student may withdraw without damage to status and the school shall make a settlement which is reasonable and fair to both parties. One leave of absence may be granted to the student at the Director's discretion. A Financial Aid Exit Interview is required.

### INTERNSHIP OR PROJECT

An internship is required as part of all programs of study. Internship is on-the-job training, under the supervision of a skilled professional. Internship sites are arranged by the Education Department. Completion of a project may be required instead of an internship in certain programs. This is a requirement for graduation. All internships and practico are graded by the Education Department and are a part of the student's final average. Each student is required to demonstrate the ability to correctly perform all required competencies in the workplace in order to graduate and receive a diploma.

### STATEMENT OF APPLICATION TO UPPER DIVISION PROGRAMS

Students desiring admission to upper division programs must submit an application to the Admissions Screening Committee. The Admissions Screening Committee is comprised of a faculty member, the Campus Director, the Program Coordinator and/or Program Director/Clinical Coordinator of the program to which the student is making application. In order for the application to be favorably considered, the student must be recommended by the faculty and Program Coordinator and/or Director. These recommendations are based upon consideration of student performance in meeting the established criteria. These criteria are available to all students through their Program Coordinator or Director.

### DIAGNOSTIC CARDIAC SONOGRAPHER PROGRAM ADVANCEMENT CONDITIONS & CONSIDERATIONS

Students enrolled in the Diagnostic Cardiac Sonographer Program must satisfactorily complete the first block of didactic instruction prior to advancing to the clinical practicum. Students are required to meet academic, behavioral and practical requirements in this regard. Sonography clinical assignments are subject to the availability of sufficient clinical sites to accommodate the number of entering students. Priorities for determining clinical assignments are at the sole discretion of the program administration after considering any special circumstances and the availability of appropriate clinical resources. Students may occasionally be required to take a brief administrative leave while awaiting the availability of a clinical opening. Students requiring remediation must successfully complete a remediation plan based upon a schedule prepared by the program administration.

## FINANCIAL INFORMATION

### FINANCIAL AID PROGRAMS

To make training affordable, National School offers a variety of financial aid programs. Eligible students may apply for federal grants and loans including: Federal Pell Grants, Federal Supplemental Educational Opportunity Grants (FSEOG), Federal Subsidized and Unsubsidized Stafford Loans, and Federal Perkins Loans. Federal Parent Loans for Undergraduate Students (PLUS) may be available to parents of dependent students. Federal and State regulations determine who is an eligible student and the amount of financial aid for which they may be eligible.

### APPLYING FOR FINANCIAL ASSISTANCE

Students wishing to apply for financial aid through National School of Technology must submit the following forms:

- · NST Financial Aid Application
- Free Application for Federal Student Aid (FAFSA)
- Copies of the student's and/or spouse's and/or parent's tax return(s) for the previous tax year
- Documentation of citizenship
- Students may be required to provide additional documents to complete their financial aid application(s)

The Student Financial Services Office will notify the student if further documentation is needed. Financial Aid will not be awarded to any student who has not formally enrolled in the school.

### SCHOLARSHIP PROGRAM

To further assist students financially, National School has developed the Martin Knobel Scholarship program designed to help qualifying students. Awards are determined by the administration and granted throughout the academic year. To qualify, students must meet the following criteria:

- (1) Demonstration of above average academic achievement at NST
- (2) Completion of a minimum of 75% of the enrolled program
- (3) Demonstration of financial need as defined by the school administration

## STUDENT FINANCIAL SERVICES HOURS OF OPERATION

To make training affordable, National School students may apply for financial assistance in the Student Financial Services Offices.

#### Office hours are as follows:

Monday thru Thursday 8:00 a.m. to 8:00 p.m.

Friday 8:00 a.m. to 4:00 p.m.

### **TUITION AND FEES**

Tuition and fees vary according to the length of the program. For a listing of specific tuition charges refer to the schedule in the back section of the catalog. Tuition and fees are the responsibility of each student, and arrangements for payment must be made before the first day of class.

### Financial Information Continued

## TEXTBOOKS, UNIFORMS AND SUPPLIES

All textbooks and handout materials are included in the fees. Medical students, with the exception of Surgical Technologists, are issued stethoscopes. Supplies, diskettes, coding forms, uniforms, hose and shoes are not included, and cost between \$25.00 to \$50.00.

### VETERANS ADMINISTRATION

Veterans planning to attend National School of Technology should contact the VA Certifying Official at the Student Financial Services Office prior to beginning the program. VA students must apply for federal student aid and/or make payment arrangements with the Business Office. National School of Technology is not responsible for any VA benefits and cannot approve or guarantee any amount that veterans will receive.

Some programs may not qualify for veterans benefits due to recent updates of curriculum.

### SATISFACTORY PROGRESS STATEMENT

Satisfactory progress is necessary in order to maintain eligibility for Title IV financial assistance programs, as well as to remain in school. Satisfactory progress is defined by the following criteria:

- (1) A grade average of 77 percent
- (2) An attendance average of 80 percent per block
- (3) Satisfactory performance of all required competencies
- (4) Meeting the specified conditions for incompletes, withdrawals, repetitions and remedial work

If a student falls below the criteria listed above, consultation with a school official will be scheduled. The student will also receive written notice, placing the student on probationary status for one block of instruction, during which the Title IV funds may be disbursed. At the end of the probationary period, if the student has not satisfied the specified requirements, financial assistance checks will be withheld. The student will be provided the opportunity to repeat failed courses prior to termination from the program. Students meeting the specified requirement at the end of the probationary period will be removed from probationary status.

Students may appeal probation decisions to the Campus Director, in writing, within three days.

Students whose training has been interrupted for academic reasons may be reinstated with the following class by making application directly to the registrar. Students who have been administratively withdrawn from a program may apply for reinstatement by making written application to the campus director in accordance with the appeals process described in the catalog section entitled Rules and Regulations. The administration will review these applications and render a final decision.

## INCOMPLETES, WITHDRAWALS, REPETITIONS, REMEDIAL WORK

Students with course incompletes, withdrawals, repetitions, and those doing remedial work are eligible to continue receiving financial aid if the following criteria are met:

- (1) The student is otherwise making satisfactory progress
- (2) The time required to make up and complete course work is within the program time frame.

Students with incomplete courses will receive written notice and are required to make up any incomplete assignments or examinations within two weeks of such notice in order to receive credit.

### Financial Information Continued

Students withdrawing from a course prior to the midpoint of an instructional block will not receive a grade for the course. Grades assigned for repeated courses will replace the unsatisfactory grades for the same courses previously attempted.

### *MAXIMUM TIME FRAME*

To remain eligible for federal funds, financial aid students must complete their program within a specified time frame. All programs must be completed within 1.5 times the normal duration of clock hours.

Evaluation for satisfactory progress will take place at the end of each block of instruction.

### REFUND POLICY

- 1. All monies paid by an applicant will be refunded if requested within three days after signing an enrollment agreement and making an initial payment.
- 2. Each student is accepted with the understanding that he or she has registered for an entire program of study. If a student is not accepted, all advance monies will be refunded.
- 3. If a student is accepted and then withdraws from the program, for any reason, before the class convenes, all monies shall be refunded, except as prescribed by school policy and in no case shall more than \$150 be retained by the school.
- 4. Students who have not visited the school facility prior to enrollment will have the opportunity to withdraw without penalty within three days following either attendance at a regularly scheduled orientation or following a tour of the school facilities and inspection of the equipment.

5. Refunds to the students attending the institution for the first time, or for subsequent periods of enrollment. The school shall make a pro-rata refund of tuition, fees, and other charges to a student who withdraws or otherwise fails to complete the period of enrollment.

A prorata refund is required if the student has completed 60% or less of the program. The prorata refund is equal to the portion of the period of enrollment for which the student has been charged that remains on the last day of attendance by the student. The refund is rounded downward to the nearest 10% of that withdrawal fee of \$100.

The "portion of the period of enrollment for which the student has been charged that remains" shall be determined as follows: by dividing the total number of clock hours comprising the period of enrollment for which the student has been charged by the number of hours remaining to be completed as of the last day of recorded attendance.

- 6. If the student completes more than 60% of the program, the student shall not receive any refund, and is obligated for the full tuition, fees, and other charges.
- 7. Refunds are made within sixty (60) days of the date that the student cancels or fails to appear on or before the first day of class. Any monies due the student shall be refunded within sixty (60) days from the last date of attendance.

<u>Termination Date.</u> The termination date for refund computation purposes is the last date of actual attendance by the student. The School will refund all monies due whether or not the student provided notice of cancellation or withdrawal.

<u>Special Cases.</u> In case of prolonged illness or accident, death in the family, or other circumstances that make it impractical to complete the program, the School shall make a settlement which is reasonable and fair to both parties.

## COURSE DESCRIPTIONS

#### **BA 100 KEYBOARDING**

### **50 HOURS**

Students will be taught by touch, the location of all of the alphabetic keys on the keyboard, proper posture and reaching techniques, and will practice rhythm for more accurate and faster keyboarding. NOTE: Students must achieve a minimum keyboarding speed of 35 wpm to graduate.

#### BA 100 BUSINESS MATHEMATICS 50 HOURS

Students learn to use their math abilities in business related fields such as bank reconciliations, payroll computation, sales commissions, markup, simple interest, promissory notes and taxes.

### BA 120 COMPUTER CONCEPTS 50 HOURS

An introduction to computer hardware and software and their use in a business environment. Students are also introduced to word processing.

#### **BA 200 INTRODUCTION TO BUSINESS**

### **50 HOURS**

An introduction to the practices and duties that are performed in the business environment. Included is common terminology used in business.

### BA 210 ENGLISH USAGE AND COMPOSITION 50 HOURS

Students will prepare letters, memos, reports and other business documents using original thought.

### BA 200 WORD PERFECT 50 HOURS

In this lab/lecture course, students will learn to create and manage documents on the microcomputer. The course will introduce the student to word processing fundamentals.

### BA 300 PRINCIPLES OF MANAGEMENT, ADVERTISING & MARKETING 50 HOURS

Emphasis is placed upon aspects of management such as planning, organization, staffing, leading and controlling. The needs for sound management philosophy are identified. Also included is an introduction to the role of advertising and marketing as a sales and communications tool for business. Advertising and marketing methods, techniques and media are examined.

### BA 310 PRINCIPLES OF ACCOUNTING I

### **50 HOURS**

This course includes the basic structure of accounting, opening a set of books, journal entries, trial balances, financial statements, and closing the books of a business.

#### BA 320 ADVANCED LOTUS 1 2 3 50 HOURS

In this lab/lecture course, students will use advanced spreadsheet processing. Students will learn various Lotus functions, macros, and advanced graphing and database techniques.

### BA 410 BUSINESS COMMUNICATIONS/ ENGLISH II 100 HOURS

A study of communication, both orally and in writing. Organization of material, logical thought, and effective presentation are stressed.

### **BA 420 ADVANCED WORD PERFECT 50 HOURS**

In this advanced lab/lecture class, students will learn the word processing commands that will permit them to become power users.

#### **BA 500 BUSINESS LAW**

**50 HOURS** 

An introductory course that enables students to examine and better understand the legal framework that surrounds routine business activities.

### BA 510 PRINCIPLES OF ACCOUNTING II 50 HOURS

A continuation of PRINCIPLES OF ACCOUNTING I. The student will learn how to process payroll, perform inventory accounting and the accounting function for a simulated business.

## BA 520 COMPUTERIZED ACCOUNTING 50 HOURS

Students will learn how to process the general ledger, accounts payable and receivable ledgers, and prepare financial statements and reports on a microcomputer.

### BA 600 INTERNSHIP OR PROJECT 150 HOURS

The students will complete the internship in business and computer applications by working at a facility and/or completing an additional project in the computer lab.

### CS 1110 INTRODUCTION TO CROSS-SECTIONAL ECHO ANATOMY 15 HOURS

A study of the parts of the heart as seen in different echocardiographic views using parasternal, apical, subcostal, and suprasternal windows.

### CS 1112 INTRODUCTION TO NORMAL 2-DIMENSIONAL EXAMINATION 15 HOURS

A discussion of the technique in getting the different echocardiographic views of the heart with emphasis on getting the appropriate plane, achieving transducer control, and eliminating artifacts.

### CS 1114 TWO DIMENSIONAL LAB 45 HOURS

Practice on normal 2-dimensional examination.

## CS 1116 INTRODUCTION TO NORMAL M-MODE EXAMINATION 15 HOURS

An orientation to M-mode recording with emphasis on the motion pattern of the different parts of the heart seen. Discussion of the technique of performing the exam and the M-mode measurements. Lab time to practice on M-mode examination is included.

### CS 1118 INTRODUCTION TO CONVENTIONAL DOPPLER EXAMINATION 15 HOURS

A review of blood flow across the different valves of the heart as seen from different echo views. An explanation of the doppler technique of examination and the uses of the different doppler modes and interpretation of the doppler spectral display.

### **CS 1120 CONVENTIONAL DOPPLER LAB**

**45 HOURS** 

Practice on Conventional Doppler examination.

### CS 1122 INTRODUCTION TO COLOR FLOW MAPPING & PRINCIPLES 15 HOURS

A review of color flow physics. A demonstration of the technique and uses of color flow doppler. Included are interpretations of the color flow display. Lab time to practice on color flow examinations is included.

### CS 1124 ECHOCARDIOGRAPHIC PATHOLOGY 75 HOURS

A study of cardiac diseases with emphasis on echocardiographic findings.

#### CS 1126 NON-INVASIVE LAB II 60 HOURS

An orientation to the echocardiographic controls. A demonstration of the technique of performing a complete echocardiographic examination including 2D, M-mode, doppler and color flow. Case studies in echo pathology are also discussed.

#### CS 1220 SONOGRAPHY CLINICALS 810 HOURS

### CS 1250 SPECIAL PROJECTS AND SEMINARS 90 HOURS

### CV 1106 MEDICAL TERMINOLOGY 15 HOURS

The use of abbreviations and symbols used in typical medical reports. Prefixes, suffixes and root words that make up the structure of medical language are also studied.

## CV 1110 CELLULAR BASIS OF ANATOMY & PHYSIOLOGY 15 HOURS

An introduction to the medical field with a review of the responsibilities of a cardiovascular technologist, including ethical considerations. Study of the cell, its organelles and functions. Detailed discussion of cell membrane structure and its transport systems, and the role it plays in the generation of action potential.

### CV 1112 MUSCULOSKELETAL SYSTEM

15 HOURS

A presentation of the overall skeletal plan with particular attention to anatomical landmarks relevant to echocardiographic and vascular studies. Ultramicroscopic anatomy of a muscle is discussed with a description of excitation-contraction coupling and its relationship to the nervous system.

#### **CV 1114 NERVOUS SYSTEM**

30 HOURS

A study of the organization and structures in the nervous system, the function of each component, and its blood supply. Includes discussion of the most common derangement involving the system.

### CV 1116 RESPIRATORY SYSTEM 15 HOURS

A study of the anatomical landmarks of the respiratory system, chemistry of oxygen and carbon dioxide transport, and breathing patterns.

#### CV 1118 GASTROINTESTINAL SYSTEM

**45 HOURS** 

Covers the general anatomical features of the gastrointestinal system. The anatomical and physiological characteristics of the stomach, small intestines, large intestines, liver, gallbladder and pancreas are described.

#### CV 1120 GENITOURINARY SYSTEM 15 HOURS

A study of the gross anatomy and histological organization of the urinary system, and the male and female reproductive system. Renal physiology and its role, as well as hemodynamic compensatory mechanisms are emphasized. Related pathologies are also discussed.

#### CV 1122 ENDOCRINE SYSTEM 15 HOURS

A study of hormones, their origin and function with respect to the human body.

#### CV 1124 REPRODUCTIVE SYSTEM 15 HOURS

A study of the anatomy and physiology of the female and male reproductive system.

### CV 1126 CARDIAC ANATOMY & PHYSIOLOGY 60 HOURS

The gross and microscopic anatomy of the heart are presented. The relationship of propagation of electrical impulse propogation to the electrocardiographic recording and cardiac cycle are discussed, as well as the compensatory mechanisms of the heart and congestive heart failure.

### CV 1128 VASCULAR ANATOMY & PHYSIOLOGY 45 HOURS

The composition of blood and its various functions are described. A presentation of the anatomical distribution of major arteries and veins. Included are discussions of the hemodynamic principles that regulate blood flow and the compensatory mechanisms for the control of flow, including the etiology and development of hypotention and hypertension.

### CV 1130 CARDIOPULMONARY RESUSCITATION

**15 HOURS** 

A study of emergency management of a victim of cardiac arrest and first aid for an obstructed airway. Certification requirements are determined by the American Heart Association and include resuscitation procedures for adults and infants.

### CV 1210 COMPUTATIONAL SCIENCES 15 HOURS

A review of basic mathematics, algebra, physics, and statistics. Basic computer knowledge and keyboarding skills are introduced, as well as basic economic skills such as budgeting, interest computations, loans and personal financial management.

#### CV 1212 MEDICAL PHYSICS 15 HOURS

A review of basic physics principles and their application to medical technology.

#### CV 1213 CLINICAL LABORATORY PROCEDURES 60 HOURS

Routine blood tests (hematocrit and hemoglobin), are discussed including their findings and interpretation. Urinalysis is presented with emphasis on the collection of specimens, as well as their physical and chemical examination. Procedures for obtaining different cultures are presented. A study and practice of injections as well as skin puncture procedures and venipunctures. Also included are vital signs and physical measurements, taking the medical history and the routine physical exam.

### CV 1214 NORMAL ECG & NORMAL VARIANTS 45 HOURS

A study of the physical principles and electrical activity of the heart. These are correlated with the findings in the ECG and cardiac cycle.

#### CV 1216 VECTORIAL ANALYSIS 15 HOURS

A discussion of the principles of vectorcardiography, its similarities and differences from the ECG, and different lead placement. Normal and abnormal ECG results are also covered.

## CV 1218 HYPERTROPHIES & INTERVENTRICULAR CONDUCTION DISTURBANCES 15 HOURS

A study of the relationship between cardiac enlargement and interventricular conduction disturbances, as well as their manifestation on the ECG.

## CV 1220 ISCHEMIA, INJURY, & INFARCTION 15 HOURS

A correlation of hemodynamic abnormalities in the coronary circulation with electromechanical dysfunction of the heart and its ECG manifestations. Includes conduction abnormalities secondary to coronary flow aberration.

## CV 1224 ARRHYTHMIA RECOGNITION & MANAGEMENT 75 HOURS

A study of the different arrhythmias, the mechanism of generation, and technique of interpretation. Includes daily practice reading ECG's and discussion on the management of the cardiac arrest patient.

### CV 1226 PACEMAKER RHYTHMS 15 HOURS

Deals with identification of the presence of a pacemaker in a cardiogram, learning the different types of pacemakers and their uses, and recognizing malfunctions.

### CV 1228 CARDIOVASCULAR PHARMACOLOGY 15 HOURS

A review of the most commonly used drugs in arrhythmia management, their actions, side effects and effects on the ECG. Other cardiovascular drugs are also discussed.

#### CV 1230 BASIC MEDICAL SKILLS 15 HOURS

A demonstration of the steps involved in patient setup for a standard 12 lead ECG. Proper electrode identification and placement for an artifact-free ECG production. Correct mounting and recording of pertinent patient information is practiced.

#### CV 1310 GRADED EXERCISE TESTING

**15 HOURS** 

Covers the physiology of exercise and the normal ECG changes accompanying exercise. A discussion of the different modalities and protocols used, reasons for terminating a test and contraindications for the test.

### CV 1312 AMBULATORY MONITORING 15 HOURS

A presentation of Holter scanning and its application in cardiology. Different types of recording and scanning techniques, lead placements and attachments, and sources of artifacts are discussed.

#### CV 1314 STRESS & HOLTER LAB 30 HOURS

A demonstration of the steps involved in preparing a patient for holter monitoring, stress testing and vascular studies. Proper electrode placement for artifact free recording in included. Students practice performing actual EST and Holter techniques.

#### CV 1316 CARDIAC PATHOLOGY 180 HOURS

A study of cardiovascular diseases, their etiologies, anatomical abnormalities, signs and symptoms and hemodynamic changes.

### CV 1318 INTRODUCTION TO VASCULAR DISEASES 30 HOURS

A review of circulatory hemodynamics followed by a study of different arterial and venous disorders, including their etiology, symptoms and physical manifestation.

### CV 1320 PSYCHOLOGY OF PATIENT CARE 15 HOURS

A study of personality formation, the stress of illness, patient fear, and public relations in a health care setting.

## CV 1322 PROFESSIONALISM & MEDICAL ETHICS 15 HOURS

An insight into the morality and ethics that direct today's medical professionals. Beginning with the Hippocratic Oath to discussing the AMA principles on medical ethics, students will understand the conduct and professionalism that is expected and required in the medical community.

#### CV 1410 BUSINESS & MEDICINE 10 HOURS

A study of the impact of economics on health care, including the history of medical economics and current trends in health care delivery. Included are discussions on specialized versus multi-skilled health care. A familiarization with the prospective payment system and utilization review is included. Students contrast various funding programs such as Medicare, Medicaid, managed care, and private indemnity insurance.

## CV 1412 RECORDS MANAGEMENT SYSTEMS & PROCEDURES 50 HOURS

The study of business communications with an introduction to computers. An insight to medical records management and insurance billing is provided.

## CV 1414 STERILIZATION & INFECTION CONTROL 15 HOURS

A study of the classification of microorganisms. An introduction to principles, techniques, and equipment used for sterilization in a medical office. Categories of isolation and universal precautions related to HIV (AIDS) transmission are presented.

### CV 1422 ADVANCED CONCEPTS IN CARDIAC TECHNOLOGY 35 HOURS

A clinical application of various diagnostic modalities including signaled averaged ECG's, persantine and thallium stress testing and other related procedures, with simulated demonstrations of each.

### CV 1424 INTRODUCTION TO VASCULAR STUDIES 30 HOURS

An introduction to the different arterial and venous diagnostic techniques, physical principles involved, testing protocols, and current diagnostic equipment.

#### CV 1426 NON-INVASIVE VASCULAR LAB 30 HOURS

Practice sessions in performing arterial and venous studies.

### CV 1428 PHYSICS OF ULTRASOUND 30 HOURS

An introduction to the fundamental concepts of sound wave physics. Includes discussion of instrumentation including transducer types, beam focusing, causes of artifacts, and other control settings.

### CV 1450 INTERNSHIP OR PROJECT 300 HOURS

A demonstration of ECG, Holter and Stress competencies in the workplace with patients, or completion of an assigned project.

## IC 1110 ORIENTATION TO THE CARDIAC CATHETERIZATION LAB 25 HOURS

A broad introduction to the principles of the field of invasive cardiology and the environment of the cardiac catheterization laboratory which will be reinforced and reviewed throughout the entire program. A description of the role of the cardiac cath lab and its personnel and an overview of the purpose and function of the equipment. This course also includes assessment of the cardiac patient; general patient care skills, as well as further study in the methods of quality patient care including communication skills, critical thinking, aseptic techniques, drug

administration, vascular access and patient emergencies; pre and post cath care, prevention of potential complications associated with vascular interventions; universal precautions and other occupational safety guidelines, operating room procedures role clarification; as well as care and handling of equipment included a study of calibration, proper operation, troubleshooting and maintenance of cath lab equipment. Legal aspects of documentation and the need for complete and accurate notations are emphasized.

### IC 1112 INTRODUCTION TO CARDIOVASCULAR LAB PROCEDURES I 60 HOURS

A survey of the theory and applications of hemodynamics and angiography designed to give students an understanding of diagnostic catheterization procedures and their medical and surgical applications. An overview of adult and pediatric procedures and techniques, cardiovascular catheters, and the differences in their sizing design, construction and the resulting changes in handling characteristics including pushability, flexibility, torque and tractability. An introduction to the responsibilities of the technologist in aseptic techniques including the scrub and circulating environment. The monitoring techniques required to safely perform cardiac catheterization.

### IC 1114 CONCEPTS OF HEMODYNAMIC MONITORING 75 HOURS

The principles and theory of cardiovascular hemodynamics. The acquisitions of accurate hemodynamic data and the performance of hemodynamic calculation. A thorough understanding of pressure pulses including jugular venous pulse pressures, cardiac isovolume, porotions, phono-cardiographic listening posts and heart sounds, in relation to the regulation of blood flow through the cardiac, systemic, and pulmonary circulatory systems.

### IC 1116 HEMODYNAMIC MONITORING LAB I 50 HOURS

This course provides students with an opportunity to acquire a limited classroom orientation to hemodynamic monitoring equipment as well as its use in relationship to cardiac catheterization procedures. The role of the computer in the monitoring of the intracardiac and hemodynamic parameters during catheterization is presented.

### IC 1118 ADULT CARDIAC PATHOPHYSIOLOGY 10 HOURS

A study of the adult cardiac disease process and related pathology and physiology. Ischemic heart disease, hypertensive heart disease, pulmonary physiology, cardiovascular repercussions of diabetes mellitus, pulmonary hypertension as it relates to various disease processes and left ventricular and aortic aneurysms, arteriosclerosis, and congestive heart failure, will be studied from the perspective of the cardiac invasive laboratory.

### IC 1120 CARDIOVASCULAR PHARMACOLOGY 20 HOURS

A clinical approach to the classification of the most common therapeutic agents employed in the invasive cardiovascular setting. Included is the pathophysiologic basis for the use of specific medications, their generic and trade names, indications, contraindications, precautions, adverse reactions, dosage and administration. Mechanism of drug actions are reviewed. Selected drug groups and dosage calculations are presented in relation to IV therapy, anti-arrhythmics, betablockers, calcium channel blockers, vasopressors, vasodilators, thrombolytics, analgesics, local anesthetics, anticoagulants, and contrast media.

## IC 1122 ACID-BASE PHYSIOLOGY & TECHNIQUES

25 HOURS

A review of acid-base theory, including the chemistry of acid-base balance, metabolic and respiratory acid-base balance. Guidelines and the clinical approach to interpretation of normal and abnormal blood gasses, gas laws and quality control utilized in the blood gas laboratory.

#### **IC 1124 ANGIOGRAPHY CINE REVIEW**

**25 HOURS** 

A study of how x-rays are utilized in the cardiovascular suite, including a review of cardiovascular radiographic anatomy, leading to a critique of Cine-angiograms. A survey of special equipment employed in the Angiographic suite including fluoro, cine-filming, cut-film changers, digital subtractions and video recorders. In addition, identification of major abnormalities from chest X-rays, which might impact on the completion of a cardiac catheterization procedure.

### IC 1126 CASE PRESENTATIONS IN CARDIOVASCULAR TECHNOLOGY I

**10 HOURS** 

The student is expected to research a subject in the medical literature and write a paper with an annotated bibliography. The subject research must be connected with the cardiovascular system and cardiac catheterization procedures.

## IC 1210 SPECIAL DIAGNOSTIC PROCEDURES 15 HOURS

A continuation of the investigation of special invasive diagnostic and imaging procedures consisting of cerebral angiography, vascular angiography, cardiovascular imaging, digital vascular imaging and basic principles of M.R.I.

## IC 1212 INTERVENTIONAL CARDIAC PROCEDURES 60 HOURS

Percutaneous Transluminal Coronary Angioplasty - An in depth study of coronary angioplasty. After completion of these studies, the student will have a comprehensive working knowledge of products, techniques, and equipment currently used in this field. Class schedule includes teacher lecture, discussion, guest lectures, video tapes, and observation.

## IC 1214 APPLIED ELECTROPHYSIOLOGIC STUDIES (EPS) 25 HOURS

Cardiac arrythmias, including slow rhythms, rapid rhythms, Wolff Parkinson White, conduction delays, bundle branch blocks, AV node block, R.F. Ablations, leading towards a comprehensive working knowledge of products, techniques, and equipment currently used. Included are basic measurements and how they relate to physiology.

## IC 1216 INTRODUCTION TO PACEMAKERS & AUTOMATIC IMPLANTABLE CARDIAC DEFIBRILLATORS (AICD) 10 HOURS

A review of the electrophysiological properties of the heart as applied to patient monitoring and pacemakers. Automatic, implantables and cardiac defribrilators are covered as well.

## IC 1218 ORIENTATION TO NEONATAL & PEDIATRIC CARDIOVASCULAR PROCEDURES 10 HOURS

An overview of anatomy, physiology, and pharmacology of embryonic circulation as they apply to the neonatal and pediatric patient population. Embryology of the heart, formation of congenital defects, associated physiologic abnormalities and their diagnostic implications are also presented. Special techniques utilized during pediatric catheterization are discussed including: Umbilical vessels, catheterization transeptal techniques, valvulotomies and septostomies. Care of pediatric patients with cardiovascular diseases of neonatal, infants, and children are discussed including Tetralogy of Fallot, pallative and surgical corrective procedures, PDA, shunts, and shunt flow directions for normals and anomolies. Equipment and therapeutic techniques used in treating these diseases are covered as well as catheterization procedures for the neonatal and pediatric populations.

#### IC 1220 CARDIOVASCULAR LAB PROCEDURES II

45 HOURS

The disease process in relation to Intravascular Ultrasound, valvuloplasties, angioplasties, stents, foils, circulatory assist devices, L Vat and R Vat, Judkins techniques vs. Sones, lasers, open heart surgery procedures, atherectomy and insertion of pacemaker.

### IC 1222 HEMODYNAMICS & CARDIOVASCULAR PATHOPHYSIOLOGY 75 HOURS

Anatomical findings of the cardiovascular system and human pathophysiology in relation to hemodynamics and ECG. Understanding arterial and venous blood gasses and blood as it relates to cardiac catheterization. Pressure wave form analysis and measurement, and hemodynamic calculations of Fick cardiac outputs, valves areas, ejection fractions, shunts and resistances. Identification of abnormal values and their implications integrated with the further acquisition and analysis of hemodynamic data via arterial and venous blood gasses, acid-base balances, electrocardiograms, pressures and saturation in the cardiovascular system and during cardiac catheterization. Correlation of pathologic results of acquired heart disease with the associated physiologic changes and hemodynamic consequences commonly seen during cardiac catheterization.

### IC 1224 HEMODYNAMIC MONITORING LAB II 50 HOURS

Through limited practical classroom experience, the student will learn the insertion and monitoring techniques of the Intra-Aortic Balloon Pump, as well as issues of pathologies and the hemodynamics of shock and as intervention with various circulatory assist devices. Topics included area: right and left hemodynamics, shunts, pressures, waveforms (i.e., A wave, R. Ventricular pressure waveform) and simultaneous pressure recordings as utilized to evaluate mitral stenosis [simultaneous left atrial (LA) or pulmonary capillary wedge pressure (PCWP) and left ventricular pressure)] and aortic stenosis [simultaneous left ventricular (LV) and left atrial (LA) pressures].

### IC 1226 CASE PRESENTATIONS IN CARDIOVASCULAR TECHNOLOGY II

10 HOURS

The student is expected to research a subject in the medical literature and write a paper with an annotated bibliography. The subject research must be connected with the cardiovascular system and cardiac catheterization procedures. Students are expected to include in their case presentation those advanced subjects studied in the term.

## IC 1310 CLINICAL PRACTICUM, SPECIAL PROJECTS & SEMINARS 600 HOURS

Students are placed in a medical facility where there is an opportunity to observe, assist, learn and perform in a practical setting. Special related projects are assigned and seminars are scheduled on a regular basis.

### **MA 110 HUMAN BIO-ORGANIZATION**

15 HOURS

A general overview of human development including cells, tissues, organs, body systems and homeostasis. Anatomical position, planes, and orientation terminology is introduced.

## MA 112 BODY STRUCTURE, MOVEMENT & FUNCTION 75 HOURS

A description and practice discussion of the musculoskeletal, digestive, urogenital, and endocrine systems. The gross anatomy and related physiology of each system including medical and surgical terminology is included.

### **MA 114 SPECIALIZED SENSE ORGANS**

10 HOURS

A study of the five primary senses and related organs including the skin, eye, ear, olfactory and gustatory cells.

### MA 120 THE CARDIOVASCULAR SYSTEM-ELECTROCARDIOGRAPHY 60 HOURS

A study of the heart, blood vessels, and the composition of blood, including the cardiac cycle, pulmonary and systemic circulation, the lymphatic system and related pathology. An introduction to the basic skills of recording the ECG using single and multi-channel electrocardiographs.

### MA 122 THE RESPIRATORY SYSTEM 15 HOURS

A study of the respiratory system including the nose, pharynx, larynx, trachea, bronchi, lungs, and thorax. The chemistry of oxygen and carbon dioxide transport, respiratory control, and normal and abnormal breathing is included.

#### **MA 124 THE NERVOUS SYTEM**

15 HOURS

The study of neurons, the nerve impulse, reflexes, spinal cord, brain, meninges, autonomic nervous system, and diseases of the nervous system.

## MA 126 CPR CERTIFICATION - EMERGENCY CARDIAC CARE 10 HOURS

A study of emergency management for the sudden death victim and first aid for choking. Certification requirements are determined by the American Heart Association and include procedures for adults, children, and infants.

### MA 130 PSYCHOLOGY OF PATIENT CARE -LEGAL & ETHICAL ISSUES 25 HOURS

A study of personality formation, the stress of illness, patient fear, and public relations in the medical office, including standards of conduct and medical practice acts. The Code of Ethics of the Registered Medical Assistant is discussed.

### MA 132 MEDICAL OFFICE MANAGEMENT PROCEDURES 105 HOURS

The study of Front Office duties including types of medical practices and specialties, telephone techniques, appointment scheduling, pegboard accounting, maintaining medical records, filing systems, medical reports, correspondence, and coding health insurance claims.

#### **MA 140 COMPUTER FUNDAMENTALS**

**30 HOURS** 

An overview of the history and concepts of computers. Central processing unit, input-output devices, floppy disks, hard disks, disks operating systems, and elements of data processing are introduced.

## MA 142 MEDICAL OFFICE MANAGEMENT SOFTWARE 10 HOURS

An introduction to the operation of multi-faceted programs designed to create and maintain an electronic office environment for medical office practices.

## MA 144 COMPUTER APPLICATIONS FOR OFFICE PRACTICE 60 HOURS

A series of projects designed to train the student to use medical software to create patient files, schedule appointments, generate ledgers and billing statements, collection notices, insurance claim forms, and practice analysis reports.

## MA 150 KEYBOARDING SKILLS/DATA ENTRY 35 HOURS

Additional training to upgrade keyboarding skills; understanding the role of data entry within a medical practice; speed and accuracy exercises with periodic evaluations to develop acceptable performance standards for future employment.

## MA 152 RULES FOR MEDICAL WORD PROCESSING & TERMINOLOGY 20 HOURS

A review of capitalization, use of numbers, punctuation, abbreviations and symbols used in typical medical reports. Prefixes, combining forms, and suffixes which make up the structure of medical language are also studied. Fundamentals of medical word processing are introduced.

#### MA 154 BASIC MEDICAL REPORTS 15 HOURS

An examination of the seven basic reports, including the History and Physical, Radiology Report, Operative Report, Pathology Report, Request for Consultation, and Discharge Summary.

## MA 156 MEDICAL WORD PROCESSING LAB 30 HOURS

A series of projects designed to develop experience in processing medical reports from progress notes and other medical records.

## MA 160 INFECTION CONTROL & 10 HOURS

A study of the classifications of microorganisms (bacteria, viruses, fungi, rickettsiae). An introduction to principles, techniques, and equipment used for sterilization in a medical office. Categories of isolation and universal precautions related to HIV (AIDS) transmission are presented.

#### MA 162 CLINICAL ASSISTING SKILLS 50 HOURS

Practical discussions and the performance of patient care procedures including vital signs and physical measurements, medical instruments, examination trays, patient preparation, positioning and draping, and the complete physical examination sequence.

#### MA 166 NUTRITION & DIET THERAPY

10 HOURS

A study of food groups, complete and simple nutrients, special diet programs and modifications used in the treatment of common disorders.

## MA 170 ORGANIZATION OF THE CLINICAL LABORATORY 15 HOURS

An introduction into the various departments of the medical reference laboratory, safety guidelines, use of the microscope, quality assurance, and an identification of various pieces of standard equipment, glassware and supplies, and the metric system.

#### MA 171 PHARMACOLOGY & DRUG THERAPY 30 HOURS

The study of injections, use of syringes and needles, the study of drugs and solutions, toxic effects of drug abuse, legal regulations and standard inventory, dosage, prescriptions, and emergency drugs.

#### MA 172 PHLEBOTOMY TECHNIQUES 35 HOURS

Skin puncture procedures, injection, and venipuncture using the syringe and evacuated tube system. Capillary tubes, microtainers, and color-coded collection tubes are introduced.

#### MA 174 HEMATOLOGY 35 HOURS

The study of blood composition and the formation and development of blood cells. Methods and practice in the complete blood count (CBC), differential, sedimentation rate, blood typing, and coagulation studies are introduced.

#### MA 180 CLINICAL CHEMISTRY 25 HOURS

Routine blood tests (serum cholesterol, glucose, uric acid) are introduced, including findings and interpretation, normal values and reference to the periodic table.

#### **MA 182 URINALYSIS**

35 HOURS

A review of the anatomy and physiology of the urinary system in detail; collection of specimens, physical, chemical, and microscopic examinations; confirmatory tests, urine culture, normal values and interpretation of findings.

#### MA 184 SEROLOGY TESTING 5 HOURS

Group A Strep screening using kit methods with quality assurance controls. Further detail on specific serological test including infectious monocleouses and serilogical pregnancy testing.

#### **MA 186 MICROBIOLOGY**

20 HOURS

Micro-organism identification and classification of bacteria specimen collection using sterile techniques, culture plating, sensitivity plating, sensitivity testing, urine urichek, streaking agar plates, collection of throat cultures, wet mount chemical fixatives, and request forms for cytology and histology.

#### MA 208 INTERNSHIP OR PROJECT 300 HOURS

Students are placed in a medical facility where there is an opportunity to observe, assist, learn and perform in an on-the-job setting. Internship is mandatory and must be completed satisfactorily before a diploma is issued. The student's supervisor confirms the student's attendance and submits evaluations of performance to the Program Coordinator. A special project may be completed in lieu of internship at the Program Coordinator's discretion.

#### MW 6110 ANATOMY & PHYSIOLOGY 75 HOURS

A study of the structure and function of the human body with special emphasis on the female pelvis and organs of reproduction.

#### **MW 6115 PRACTICE MANAGEMENT I 20 HOURS**

An introduction to operating a business. How to set up an account with laboratories and how to fill out insurance and Medicaid forms is also discussed. The student midwife learns how to obtain relationships with consulting physicians and how to relay information to medical personnel.

#### MW 6120 BASIC NURSING SKILLS 40 HOURS

Theory and performance of basic health care skills relevant to midwifery are presented. Topics include vital signs, aseptic technique, preparation and administration of medications, bladder catheterization, finger and heel sticks, venipuncture, enemas, charting, medical terminology and abbreviations, and the surgical environment.

## MW 6125 LACTATION/BREAST FEEDING 15 HOURS

The advantages and disadvantages of breastfeeding are discussed. The different problems that might occur with the client and infant are presented, including how to solve each problem. Breastfeeding counseling, pre and post birth, is also discussed.

## MW 6150 CLINICAL LAB: BIRTH OBSERVATION PRACTICUM I 450 HOURS

Clinical hours are acquired by observing and participating in the different clinical settings. Emphasis is on practice management (office management) and prenatal care.

## MW 6210 ANATOMY & PHYSIOLOGY OF THE REPRODUCTIVE CYCLE 35 HOURS

This course will cover the menstrual cycle, conception, pregnancy, puerperium, lactation, fertility, menopause and miscarriage.

## MW 6215 HUMAN GROWTH & DEVELOPMENT 20 HOURS

Covers stages of human growth and development with an emphasis on sibling and adjustment to new birth.

#### MW 6220 FETAL GROWTH & DEVELOPMENT/ EMBRYOLOGY 20 HOURS

Genetics, genetic testing, teratogenics, the embryo, and the fetus. This course is designed to familiarize the student with the terminology association with embryological development.

## MW 6225 LABORATORY & DIAGNOSTIC TESTING 25 HOURS

Students learn how to perform and/or interpret tests that are relevant to midwifery care. Included are reasons for referral and how to relay the results of the test to the client in a manner they will understand.

#### MW 6230 NUTRITION FOR THE CHILDBEARING & LACTATING WOMAN 15 HOURS

The importance of good nutrition during pregnancy and lactation. Emphasis is on preventing and correcting problems through good nutrition. Techniques for evaluating and counseling the nutritional requirements for the client are taught.

#### MW 6235 PRACTICE MANAGEMENT II

20 HOURS

A continuation of Practice Management I.

#### MW 6240 BIRTH REVIEW I 15 HOURS

A review of those births most recently attended or observed by the student midwife. All aspects of birth will be reviewed and evaluated, allowing those at all levels to participate in discussion.

#### MW 6310 APPLIED PSYCHOLOGY 20 HOURS

Approaches to counseling, interviewing skills, the use of public and private resources, as well as public health resources and professional ethics are discussed.

#### MW 6315 EPIDEMIOLOGY 25 HOURS

A study of the spread of disease including modes of transmission and aseptic practices.

#### MW 6317 AIDS 5 HOURS

An overview of Acquired Immunodeficiency Disease Syndrome (AIDS), including routes of transmission, prevention, universal precautions and clinical management. Also included are the legal aspects associated with testing, confidentiality, and treatment.

#### **MW 6320 BASIC NUTRITION**

25 HOURS

Basic components of human nutrition are introduced. How human growth and development are affected during the prenatal and infant stages and beyond by nutrition. Physiological and cultural aspects are also covered.

#### MW 6325 CHILDBIRTH EDUCATION 20 HOURS

A preparation of the student midwife to be an educator to clients. The education is specific to out of hospital settings. Organizing classes, teaching aids, devising a client manual and speaking in front of a group, course content, development and delivery are included topics.

#### MW 6330 BIRTH REVIEW II

15 HOURS

A continuation of Birth Review I.

## MW 6335 PRACTICE MANAGEMENT III 20 HOURS

A continuation of Practice Management II.

#### MW 6340 LOSS & GRIEVING 20 HOURS

An understanding of the grieving process and relevant coping techniques. The effects on the midwife and her family are discussed.

## MW 6345 RELIGIOUS & CULTURAL DIVERSITIES

10 HOURS

A discussion of the sensitivity and understanding needed to care for the different cultures and religious families living in the United States.

## MW 6410 NORMAL ANTEPARTUM KNOWLEDGE & SKILLS I 45 HOURS

The discomforts of pregnancy, signs and changes of pregnancy components of the prenatal visit, physical evaluation, charting health history, assessing information gathered, and recognizing deviations from the norm. Emphasis is on prevention of complications and disease.

## MW 6415 LEGAL & ETHICAL ASPECTS OF MIDWIFERY 25 HOURS

Current laws regulating the practice of midwifery, how they have evolved, and their implications today. Ethical practice, malpractice, and liability are discussed.

#### **MW 6420 APPLIED PHARMACOLOGY 25 HOURS**

The use, preparation and effects of drugs related to pregnancy, labor, birth and postpartum, and the neonate, are presented.

## MW 6425 NORMAL LABOR, DELIVERY & POSTPARTUM I 25 HOURS

Physiology of normal labor, birth and postpartum are discussed.

## MW 6430 HEALTH CARE COMMUNICATIONS 15 HOURS

Communication skills with clients and other health care professionals are introduced. Emphasis is on communicating in a sensitive, open manner as to inspire trust.

#### MW 6435 BIRTH REVIEW III

15 HOURS

A continuation of Birth Review II.

## MW 6450 CLINICAL LAB: BIRTH OBSERVATION PRACTICUM II 450 HOURS

Clinical hours are acquired by observing and participating in various clinical settings. Emphasis is on labor, delivery, postpartum and the neonate.

#### MW 6510 NORMAL ANTEPARTUM KNOWLEDGE & SKILLS II 45 HOURS

Management skills for normal antepartum care are provided. Emphasis is on preventing complications and disease.

## MW 6515 NORMAL LABOR, DELIVERY & POSTPARTUM II 25 HOURS

The physiology and management of normal labor is presented. Emphasis is on accumulating management skills to attend normal labor, birth and postpartum; and skill in identifying deviations from the norm.

#### MW 6520 COMPLICATIONS OF PREGNANCY BIRTH, POSTPARTUM & THE NEWBORN I 20 HOURS

Incidence and etiology of complications are discussed with emphasis on gaining skills at identifying deviations from the norm. Indications for physician/hospital referral as well as the role of the midwife as patient advocate are discussed.

#### MW 6525 BIRTH REVIEW IV

10 HOURS

A continuation of Birth Review III.

#### **MW 6530 PARENTING**

10 HOURS

Midwife parenting skills are developed for counseling clients as well as for the midwife's own utilization.

#### MW 6535 THE NEONATE 25 HOURS

Basic embryo/fetal development and basic anatomy and physiology of the neonate are presented, as well as physical identification of neonatal complications.

## MW 6540 COLLABORATIVE MANAGEMENT 15 HOURS

Collaborative management knowledge and skills are covered with emphasis on establishing a relationship with the physician and providing collaborative management for a woman who is not at low-risk.

## MW 6610 WELL-WOMAN NATURAL FAMILY PLANNING 20 HOURS

Skills are provided for counseling families on methods of birth control including cervical cap and diaphragm fitting

#### **MW 6615 SUTURING**

15 HOURS

Discussions of suturing techniques for first degree tears and episiotomy repair.

#### MW 6620 WELL-WOMAN GYNECOLOGY

25 HOURS

A study of methods to perform basic gynecological exams, cultures, and tests and identify abnormalities and make an appropriate referral.

#### MW 6625 BIRTH REVIEW V

A continuation of Birth Review IV.

#### MW 6630 COMPLICATIONS OF PREGNANCY, BIRTH, POSTPARTUM & THE NEWBORN II 25 HOURS

**65 HOURS** 

Further study in the incidence and etiology of complications with emphasis on gaining skills at identifying and managing deviations from the norm. Additional indications for physician/hospital referral as well as the role of the midwife as patient advocate in included.

## MW 6750 CLINICAL LAB: BIRTH OBSERVATION & PRACTICUM III 225 HOURS

Clinical hours are acquired by observing and participating in various clinical settings. Emphasis is on complications and client transfer/transport.

## MW 6755 CLINICAL LAB: BIRTH OBSERVATION & PRACTICUM IV 225 HOURS

Clinical hours are acquired by observing and participating in various clinical settings. Emphasis is on home birth.

## MW 6760 CLINICAL LAB: BIRTH OBSERVATION & PRACTICUM V 225 HOURS

Clinical hours are acquired by observing and participating in various clinical settings. Emphasis is on Birth Centers.

## MW 6765 CLINICAL LAB: BIRTH OBSERVATION & PRACTICUM VI 225 HOURS

Clinical hours are acquired by observing and participating in various clinical settings. Emphasis is on selected topics: professional activities.

#### RT 0190 FUNDAMENTALS OF RADIOLOGY, TERMINOLOGY & MATHEMATICS 35 HOURS

An introduction to radiant energy, the properties of x-ray radiation and the clinical language of x-ray technology; formulas and calculations for problem solving and the biological effects of radiation on patients.

#### RT 0192 RADIATION PHYSICS & ELECTRONICS 20 HOURS

A study of exposure factors, the circuitry of x-ray machines, and related accessories used to maintain patient and operator safety and to improve the quality of the radiograph.

## RT 0194 RADIOGRAPHIC TECHNIQUE & PRODUCTION 35 HOURS

A practical discussion and demonstration of patient positioning, film processing, quality assurance procedures, and basic pathology related to diagnostic radiography in the physician's office.

#### RT 0196 BASIC X-RAY MACHINE OPERATOR CERTIFICATION EXAMINATION REVIEW 10 HOURS

A comprehensive outline of testing procedures, technical information, and a critique of the student's skills related to correct patient preparation, and trouble-shooting during radiographic procedures.

#### ST 1110 MEDICAL TERMINOLOGY 15 HOURS

The use of abbreviations and symbols used in typical medical reports. Prefixes, suffixes and root words that make up the structure of medical language are also studied.

## ST 1112 HUMAN BODY ORGANIZATION, CELLS, TISSUES & ORGANS 15 HOURS

A study of the cell, its organelles and functions. Detailed discussion of cell membrane structure and its transport systems, and the role it plays in the generation of action potential.

#### ST 1114 INTEGUMENTARY SYSTEM 15 HOURS

A study of the body's first line of defense and its structures to ward off disease and infections.

#### ST 1116 SKELETAL SYSTEM 20 HOURS

A study of the body's framework and its functions.

#### ST 1118 MUSCULAR SYSTEM 20 HOURS

A study of the different muscles of the body and their functions.

## ST 1120 NERVOUS SYSTEM & SPECIAL SENSES 15 HOURS

A study of the organization and structures in the nervous system.

#### ST 1122 CIRCULATORY SYSTEM 20 HOURS

A study of the arteries and veins with a comprehensive understanding of the different changes that take place throughout the system.

#### ST 1124 LYMPHATIC SYSTEM 15 HOURS

A study of the body's filtration system.

#### ST 1126 RESPIRATORY SYSTEM 15 HOURS

A study of different parts of the respiratory system with understanding of the chemistry of oxygen and carbon dioxide transport and breathing patterns.

#### ST 1128 DIGESTIVE SYSTEM 20 HOURS

A complete study of the anatomy and functions of the gastrointestinal system.

## ST 1130 GENITOURINARY & REPRODUCTIVE SYSTEM 15 HOURS

A study of the gross anatomy and histological organization of the urinary system, and the male and female reproductive systems.

#### ST 1132 ENDOCRINE SYSTEM 15 HOURS

The study of hormones, their origin and function with respect to the human body.

#### ST 1210 MICROBIOLOGY 40 HOURS

An introduction to micro-organism identification and classification of bacteria. Also included are procedures for specimen collection using sterile techniques, culture plating, sensitivity plating, sensitivity testing, urine urichek, streaking agar plates, collection of throat cultures, and wet mount chemical fixatives.

#### ST 1212 PATIENT PSYCHOLOGY

**15 HOURS** 

Behavioral changes are discussed with emphasis on those associated with disease and addictions.

## ST 1214 LEGAL ASPECTS OF MEDICINE & PROFESSIONAL ETHICS 20 HOURS

An insight into the morality and ethics that direct today's medical professionals. Beginning with the Hippocratic Oath, students will discuss the AMA principles on medical ethics, and understand the conduct and professionalism that is expected and required in the medical community.

## ST 1216 MATHEMATICS FUNDAMENTALS & METRIC SYSTEM 30 HOURS

Basic mathematics applications are reviewed with calculations of dosages to include conversion from standard to metric systems and visa versa.

#### ST 1218 PHARMACOLOGY

**40 HOURS** 

The study of injections, use of syringes and needles, drugs and solutions, toxic effects of drugs, legal regulations and standard inventory, dosage, prescriptions and emergency drugs.

#### ST 1220 CARDIOPULMONARY RESUSCITATION 15 HOURS

A study of emergency management for the sudden death victim and first aid for choking. Certification requirements are determined by the American Heart Association and include procedures for adults, children, and infants.

#### ST 1222 COMPUTER CONCEPTS 40 HOURS

An overview of the history and concepts of computers. Central processing unit, input-output devices, floppy disks, hard disks, disk operating systems, and elements of data processing are introduced.

## ST 1310 INTRODUCTION TO SURGICAL TECHNOLOGY 40 HOURS

A study of the organization and management of different health care facilities with emphasis on the job descriptions, communication and the work environment, including equipment that is standard in each operating room suite.

## ST 1312 SURGICAL TECHNIQUES & 40 HOURS

A study of basic instrumentation used in surgery. Proper techniques are presented in such areas as scrubbing, gowning, gloving, as well as sterile techniques such as prepping, basic set-ups and invasive procedures.

## ST 1314 SURGICAL SPECIALTIES I - GENERAL, OB/GYN, PLASTICS & ORTHOPEDICS

**40 HOURS** 

A study of the different procedures pertaining to each specialty including additional instrumentation and equipment for each procedure.

## ST 1316 SURGICAL SPECIALTIES II OPHTHALMOLOGY, ENT & UROLOGY

**40 HOURS** 

A study of the different procedures pertaining to each specialty including additional instrumentation and equipment for each procedure.

#### ST 1318 SURGICAL SPECIALTIES III -CARDIOVASCULAR, THORACIC & NEURO 40 HOURS

A study of the different procedures pertaining to each specialty including additional instrumentation and equipment for each procedure.

#### ST 1410 INTERNSHIP

600 HOURS

Students are placed in a medical facility where there is an opportunity to observe, assist, learn and perform in a practical setting. Internship is an essential component of the program where theoretical and practical skills are integrated.

## US 1110 PHYSICS OF ULTRASOUND & INSTRUMENTATION 70 HOURS

Introduction to the fundamental physical principles and instrumentation of ultrasound. Topics include: units, measurement and formulas used in diagnostic ultrasound and how production of ultrasound waves interact with tissues and organs in the human anatomy to create a diagnostic image. Imaging instrumentation of static and real time modes, as well as doppler instrumentation with continuous wave pulsed and duplex with color flow, are used to produce the image. Quality control is taught for the safety consideration of the ultrasound exam. This course prepares the student to take the ARDMS Physics Registry Examination.

## US 1112 CROSS SECTIONAL & SAGITTAL ANATOMY 60 HOURS

An introduction to cross sectional and sagittal anatomy for the purpose of understanding the ultrasound image. There is major emphasis on the detailed review of sectional anatomy and ultrasound image correlation. Other correlative imaging modalities to cross section anatomy as CT and MRI are described.

#### US 1114 LIVER, GALL BLADDER, PANCREAS, BILIARY SYSTEM. & SPLEEN 100 HOURS

This includes the liver with the biliary system, gall bladder, pancreas and spleen. The emphasis is placed on normal as well as abnormal anatomy, physiology, laboratory tests, pathology, congenital abnormalities and embryonic development. The students will learn ultrasound techniques, patient preparation and positions and understand clinical problems.

#### US 1116 RENAL SYSTEM & ADRENAL GLAND/ RETROPERITONEUM 70 HOURS

This includes the renal system and adrenal glands as well as retroperitonial anatomy. Emphasis is on normal anatomy, physiology, laboratory data, embryology, pathology, structure and congenital anomalies. The student will learn patient positioning and understand the normal texture and patterns through ultrasound techniques, as well as develop an understanding of clinical problems.

#### **US 1210 VASCULAR SYSTEM**

**70 HOURS** 

A study of vascular system functions and anatomical composition of the major vessels. Emphasis is on normal anatomy and physiology pathology as well as structural and congenital anomalies. The student learns proper patient positioning and techniques used to understand clinical problems that may arise in the clinical session.

## US 1212 THYROID & PARATHYROID GLANDS 30 HOURS

A study of the thyroid and parathyroid glands' anatomy and functions under both normal and abnormal conditions. Topics of investigation include: anatomy, physiology, and pathologies of thyroid and parathyroid glands. Emphasis is placed on the ultrasonographic findings and interpretation of the study.

#### US 1214 MAMMARY GLAND

15 HOURS

A study of mammary gland anatomy and physiology under both normal and abnormal conditions. Topics of investigation include cross-sectional anatomy, physiology and pathology of the mammary gland. Emphasis is placed on ultrasound evaluation and interpretation of study.

## US 1216 SCROTUM & PROSTATE GLAND 30 HOURS

Gross anatomy of the scrotum with emphasis on evaluation by ultrasonography.

# US 1218 OVERVIEW OF OBSTETRICS ULTRASOUND MEASUREMENTS, BIOPHYSICAL PROFILE & MULTIPLE FETUSES 100 HOURS

An overview of obstetric ultrasound measurements, biophysical profile, multiple fetuses. Topics of investigation include proper techniques used in measurements, biophysical profile, multiple gestations with emphasis on ultrasound physics.

#### US 1220 INCOMPETENT CERVIX, PLACENTA, DOPPLER ASSESSMENT OF PREGNANCY, & INSTRUMENTATION IN OBSTETRICS 55 HOURS

Study of the placenta, the incompetent cervix, instrumentation in obstetrics, and doppler assessment of pregnancy.

## US 1310 FIRST TRIMESTER, FETAL ANATOMY & COMMON DEFECTS 90 HOURS

Covers normal and abnormal fetal growth and measurements, as well as biophysical profiles. Also covers fetal anatomy, including chest and abdomen, urogenital tract, fetal heart, abdominal wall defects, chromosome abnormalities, and fetal death.

## US 1312 FETAL DEVELOPMENT & CARDIOVASCULAR MALFORMATIONS 50 HOURS

A study of fetal development and cardiovascular malformations. Topics of investigation include: embryology, anatomy, and fetal circulation, with emphasis on cardiopathologies.

## US 1314 ANATOMY OF THE FEMALE PELVIS & SCANNING TECHNIQUE 30 HOURS

A study of anatomy of the female pelvis and scanning techniques. Topics of investigation include: cross anatomy of the female pelvis and reproductive physiology with emphasis in scanning techniques and protocols.

### US 1316 PELVIC INFLAMMATORY DISEASES 30 HOURS

A study of Pelvic Inflammatory Diseases. Topics of investigation include environmental factors, pathogens, and complications, with emphasis on ultrasound findings.

## US 1318 CONGENITAL ANOMALIES OF THE FEMALE GENITAL TRACT/BENIGN DISEASES OF THE VAGINA 40 HOURS

A study of congenital anomalies of the female genital tract and benign diseases of the vagina. Emphasis is placed on ultrasonographic findings and interpretations.

#### US 1320 MALIGNANT DISEASES OF THE UTERUS & CERVIX/BENIGN MASSES, MALIGNANT MASSES OF THE OVARIES, FALLOPIAN TUBES & BROAD LIGAMENTS 60 HOURS

A study of malignant diseases of the uterus and cervix as well as benign masses of the ovaries, fallopian tubes and broad ligaments. Topics of investigation include: Pathologies of the uterus, cervix, fallopian tubes, ovaries and broad ligaments, with emphasis on ultrasound findings.

#### US 1430 INTERNSHIP

#### **300 HOURS**

Students are placed in a medical facility where there is an opportunity to observe, assist, learn and perform in an on-the-job setting. Internship is mandatory and must be completed satisfactorily before a diploma is issued. The student's supervisor will confirm the student's attendance and will submit evaluations to the Program Director.

## US 5120 SPECIAL PROJECTS & SEMINARS IN SONOGRAPHY 90 HOURS

#### US 5130 CLINICAL PRACTICUM 810 HOURS

Students are placed in a medical facility where there is an opportunity to observe, assist, learn and perform in an on-the-job setting. Clinical Practicum is mandatory and must be completed satisfactorily before a diploma is issued. The student's supervisor will confirm the student's attendance and will submit evaluations to the Program Director.

## NATIONAL SCHOOL OF TECHNOLOGY

#### MAIN CAMPUS - NORTH MIAMI BEACH

Administration Arthur Ortiz, B.S
BRANCH CAMPUS - HIALEAH
Administration  Robert Wurst, B.S
EDUCATIONAL COORDINATORS/DIRECTORS  Diego Duque, R.D.M.S., R.D.C.S., R.V.T., C.C.V.T Program Director
Diagnostic Cardiac Sonographer Program Mary Faiola, M.B.A., A.R.R.T. Charletta Lerman, R.M.A. Julie Orloff, C.M.A. Associate Program Coordinator - Medical Assistant Program Roy Neal, R.N. Program Coordinator - Surgical Division Gilbert Delgado, M.D. Program Coordinator - Cardiology Division Carlos Diaz, M.D. Associate Program Coordinator - Cardiology Division Carlos Diaz, M.D. Associate Program Coordinator - Cardiology Division Carlos Diaz, M.D. Associate Program Coordinator - Cardiology Division Carlos Diaz, M.D. Associate Program Coordinator - Midwifery Division Patti Starkman, L.M. Program Director - Midwifery Division Carlos Diaz, M.D. Administrative Director of Clinical Education Rosemary Blanks, R.T., M.S. Administrative Director of Clinical Education

## NORTH MIAMI BEACH CAMPUS FACULTY

Brenda Gordon, C.M.A., R.M.A., M.L.T. Joseph Cian, B.A. Sergio Saavedra, M.D. Julie Orloff, C.M.A. Sylvia Melchiorre, C.M.A. Iose Cabrerra, B.A. Dean Colson, E.M.T. Clyde McCrackine, A.S. Russell Battiata Marlene Montenegro, B.A. Christopher Ali, M.B.A. Clinton Bompart, M.B.A. Jack Murciano, M.D. Kathleen Bazelais, C.C.V.T. Mary Lou Pfeiffer, R.T., B.A. Anastase Lavassas, B.S., R.T. Federico Miethe, M.D. Mario Bazan, M.D.

#### HIALEAH CAMPUS FACULTY

Carlos Diaz, M.D. Mary Lou Pfeiffer, R.T., B.A. Kathleen Bazelais, C.C.V.T. Ronald Gonzalez, A.S., C.C.T. Grisseel Cruz-Espaillat, M.D. Diego Duque, R.D.M.Ś., R.D.C.S., R.V.T., C.C.V.T. Mario Miro, M.D. Stewart Sockol, B.S., R.D.M.S. (Asst. Lab Instructor) Mohamed Saryeldin, M.D. Luis Santamaria, M.D. Charletta Lerman, R.M.A Lou Schleicher, C.H.T. Adrian Katwaroo, M.D., E.M.T. Mario Bazan, M.D. Carolina Martinez, M.D. Dean Colson, E.M.T.

(The medical degrees of the above faculty were obtained in foreign countries and therefore not formally recognized by the AMA)

Mary Lou Pfeiffer, R.T., B.A. . . . . . Director of Student Outplacement/Continuing Education

# NATIONAL SCHOOL OF TECHNOLOGY

#### **BOARD OF DIRECTORS**

Martin Knobel, B.Ed., M.S.	٠											Chairman & Secretary
Mark Knobel, B.A												. President & Vice-Chairman
Rosa M. Iverson												Senior Corporate Vice President
Arthur Ortiz, B.S				٠					1	Vio	ce	President of Campus Operations
Leo Orsino, Ph.D					,							Board Member

#### **ADMINISTRATION**

Martin Knobel, B.Ed., M.S
Rickie Knobel
Mark Knobel, B.A
Rosa M. Iverson Senior Corporate Vice President
Arthur Ortiz, B.S Vice President of Campus Operations
Dan Frazier, B.S
Joan Levenson, A.A Corporate Director, Personnel Mgmt./Business Office
Amelia Holaway, B.S Corporate Director, Student Financial Services
Daisy Debs Assistant Corporate Director, Student Financial Services
Cheryl Hunter
Carmen Freire, B.S
Frayda Parnes
Manuela Rodriguez Assistant Corporate Director, Admissions
Paul Catania Corporate Director, Management Information Systems

#### **TUITION & FEES**

PROGRAM	ENTRANCE EXAM SCORE	PROGRAM HOURS	MONTHS (D & E)	TUITION	LAB & BOOKS FEE	REG. FEE	TOTAL
SURGICAL TECHNOLOGIST	47	1,200	12	8,300	500	150	8,950
CARDIOVASCULAR TECHNOLOGIST	47	1,500	15-19	12,785	265	150	13,200
INVASIVE CARDIOVASCULAR TECHNOLOGIST	57	1,200	12	8,400	400	150	8,950
DIAGNOSTIC CARDIAC SONOGRAPHER	57	1,200	12	7,600	200	150	7,950
ULTRASOUND TECHNOLOGIST	57	1,200	12-15	9,135	685	150	9,970
DIAGNOSTIC MEDICAL SONOGRAPHER	57	2,400	24-27	12,915	885	150	13,950
MEDICAL ASSISTANT	28	900	9-12	5,145	190	150	5,485
MEDICAL ASSISTANT TECHNICIAN	28	1,200	12-15	7,815	265	150	8,230
MIDWIFERY	47	2,700	34	18,865	715	150	19,730
BUSINESS ADMINISTRATION	32	900	12	5,325	425	150	5,900

## **ACADEMIC CALENDAR**

#### MEDICAL ASSISTANT PROGRAM

(N. Miami Beach & Hialeah Campuses)

Day	<u>Evening</u>
05/01/95 - 01/29/96	04/10/95 - 03/11/96
06/26/95 - 04/01/96	06/19/95 - 05/20/96
08/28/95 - 05/24/96	09/05/95 - 08/01/96
10/23/95 - 07/26/96	11/13/95 - 10/10/96

#### MEDICAL ASSISTANT TECHNICIAN PROGRAM

(N. Miami Beach & Hialeah Campuses)

<u>Day</u>	Evening
05/01/95 - 04/29/96	04/10/95 - 06/24/96
06/26/95 - 06/24/96	06/19/95 - 09/09/96
08/28/95 - 08/26/96	09/05/95 - 11/18/96
10/23/95 - 10/21/96	11/13/95 - 02/10/97

#### SURGICAL TECHNOLOGIST PROGRAM

(N. Miami Beach & Hialeah Campuses)

<u>Day</u> 05/01/95 - 04/29/96 06/26/95 - 06/24/96 08/28/95 - 08/26/96 10/23/95 - 10/21/96

#### CARDIOVASCULAR TECHNOLOGIST PROGRAM

(N. Miami Beach & Hialeah Campuses)

Day	Evening
04/17/95 - 07/15/96	04/03/95 - 10/07/96
07/17/95 - 10/07/96	07/24/95 - 02/03/97
10/09/95 - 01/13/97	11/06/95 - 05/19/97

#### INVASIVE CARDIOVASCULAR TECHNOLOGIST PROGRAM

(Hialeah Campus)

<u>Day</u> 04/17/95 - 04/14/96 10/09/95 - 10/07/96

#### DIAGNOSTIC CARDIAC SONOGRAPHER PROGRAM

(Hialeah Campus)

<u>Day</u> 04/17/95 - 04/14/96 07/17/95 - 07/15/96 10/09/95 - 10/07/96

#### ULTRASOUND TECHNOLOGIST PROGRAM

(Hialeah Campus)

Day	Evening
04/17/95 - 04/14/96	04/03/95 - 06/17/96
07/17/95 - 07/15/96	07/24/95 - 10/07/96
10/09/95 - 10/07/96	11/06/95 - 02/03/97

#### **BUSINESS ADMINISTRATION PROGRAM**

(N. Miami Beach Campus)

Day	<b>Evening</b>
05/01/95 - 04/29/96	05/01/95 - 04/29/96
06/26/95 - 06/24/96	06/26/95 - 06/24/96
08/28/95 - 08/26/96	08/28/95 - 08/26/96
10/23/95 - 10/21/96	10/23/95 - 10/21/96

# **NOTES**

# NOTES

# NOTES