CATALOG

Certificate Program Providing Technical Training in Cardiac Device Technology

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TABLE OF CONTENTS

Headings
Page

NOTICE OF NONDISCRIMINATORY POLICY AS TO STUDENTS

The Arrhythmia Technologies Institute, Inc., admits students of any race, color, national or ethnic origin to all rights, privileges, programs and activities generally accorded or made available to students at the school. It does not discriminate on the basis of race, color, national and ethnic origin in administration of its educational policies, admissions policies, and other school-administered programs.

HISTORY

The modern era of cardiac electrotherapy began with ventricular defibrillators as a resuscitative maneuver. In 1952, Morgagni-Adams-Stokes syndrome was shown to be held in check by electrical stimulation. In 1958, Furman, Robinson and Schwedel introduced transvenous pacing which permitted a simpler and safer pacing route. Sennings and Elmquist, also in 1958, surgically implanted the first permanent pacemaker. The Space Age technology utilized in cardiac electrotherapy has changed and improved rapidly. Many pacing systems are software-based with billions of programmable combinations.

Lead and sensor technology is evolving rapidly. The need for professionally trained technologists to aid the physician in managing and optimally utilizing these devices and the complex support equipment is apparent. Until now, training for cardiac devices could only be obtained on-the-job or through seminars usually sponsored by industry.

Arrhythmia Technologies Institute, Inc., was established in 1987 by individuals located at the Robert L. Batey Cardiology Center and L.W. Blake Hospital in Bradenton, Florida to provide comprehensive training in the field of cardiac device technology. The school relocated to Greenville, South Carolina in June 1997 to take advantage of an increased growth potential and more extensive clinical training sites.

AFFILIATE INSTITUTIONS

ATI utilizes facilities located in four affiliate hospitals and also has cooperation with other institutions to clinically train students. These facilities provide access to classrooms, libraries, surgery suites, follow-up laboratories, EP laboratories and other related areas for the Cardiac Device Technology program.

Greenville Hospital System
The Greenville Hospital System is the largest non-profit hospital system in the state with more than 1,000 beds and is a recognized teaching and research facility, with locations in Greenville, Simpsonville, Greer and Travelers Rest.

Spartanburg Regional Healthcare System
The Spartanburg System is composed of two hospitals. The largest of the two is the Spartanburg Regional Medical Center, a teaching and research hospital, with 588 beds. This hospital system serves over 100,000 patients a year.

Anderson Area Medical Center
The Anderson Healthcare System comprises a 587 bed acute-care facility with a new facility, which opened in 1998 providing additional outpatient care.

Mission St. Joseph's Health System

Located in beautiful Asheville, North Carolina, this facility serves Asheville and its surrounding communities.

Providence Hospital
Located in Columbia, South Carolina.

Self Regional HealthCare
Located in Greenwood, South Carolina.

PHYSICAL FACILITIES

The school facilities include over 4,600 square feet of classroom and office space. Teaching methods include classroom lectures and numerous visual aids (slides, overheads, videos, audiotapes, and computer programs), skill laboratories and clinical practicums. The school is equipped with a comprehensive array of pacemakers, defibrillators, and programmers, pacing systems analyzers and heart simulators for hands-on practice.

STATEMENT OF PURPOSE

Arrhythmia Technologies Institute (ATI) is dedicated solely to training individuals in the specialized profession of cardiac device technology. Historically, training in this field occurred on the job. Professionals who fill this position are often trained as nurses, cardiopulmonary technologists or physician's assistants and became involved in cardiac device therapy because of their interest and the need for someone to actuate clinical applications of cardiac device therapy. In most instances, the manufacturers' sales representatives have been the personnel involved in assisting with cardiac device implants, programming and troubleshooting. These tasks may be best performed by cardiac device technologists with hundreds of hours of dedicated training. A special competency exam is now available for individuals in the cardiac device profession.

Since a new profession is being created, this pioneering effort must be established with the foremost standards. The term technologist rather than technician is used because the person assisting the physician in the administration of cardiac device therapy must be solidly grounded in the theory of their technology. They must be able to relate professionally with all members of the healthcare team and by their expertise and professional conduct, gain acceptance within the medical community. A cardiac device technologist must be able to logically and analytically assess problems, set goals, assign priorities, make decisions and correlate all input into a rational format which may be used to guide clinical application of cardiac devices. Teamwork is an essential part of this concept as the results of many independent professionals must be blended together to provide the optimum care for each patient. Rather than function under close supervision with a rigid set of guidelines, the cardiac device technologist must be flexible, capable, innovative, confident and professional.

MISSION STATEMENT

Arrhythmia technologies have advanced tremendously in recent years. In order for patients to optimally benefit from these advances, clinicians need to be appropriately trained in these cardiac device technologies. ATI is a school that is dedicated to educating individuals for a career in arrhythmia and device management. The mission of Arrhythmia Technologies Institute is:

- To provide our students with instruction in relevant topics to include: cardiac anatomy, hemodynamics, electrophysiology, and pathology to enhance their ability to make optimal implantable device management decisions.

- To provide our students with instruction in related topics to include: pacemaker and implantable cardioverter defibrillator (ICD) rhythm interpretation, function, diagnostics interpretation, and troubleshooting to better enable them to clearly understand the relationships between the device technology and the clinical aspects for optimal patient care.

- To provide our students training in utilizing multiple pacing systems analyzers to be able to function knowledgeably at device implants.

- To provide our students detailed training on pacemaker and ICD programmers so that they are able to perform complicated programming sequences, data retrieval, and interpretation to make clinical assessments for optimal patient benefit.

- To provide our students academic and clinical instruction in electrophysiology to better prepare them for interaction in the EP lab environment.

- To provide continuing or custom education programs, addressing the points listed above, to individuals already functioning in the discipline of cardiac device technology.

PROGRAM OBJECTIVE

The objective of the school is to train students in the field of Cardiac Device Technology. The program in cardiac device technology consists of 8 months of didactic preparation interspersed with clinical practice and skills laboratories. Upon completion of the school program, the students will be able to operate follow-up programs and perform other duties associated with pacing, implantable tachycardia management devices and arrhythmia monitoring in the appropriate medical sector as well as assist at implant surgeries in hospitals. Industrial occupations such as clinical specialists, sales

representatives, education specialists, tachycardia field engineers or field clinical engineers would be within the expertise of the students.

LICENSING

Licensed by the Commission on Higher Education, 1122 Lady Street, Suite 300, Columbia, SC 29201, Telephone (803) 737-2260, www.che.sc.gov. Licensure indicates only that minimum standards have been met; it is not an endorsement or guarantee of quality. Licensure is not equivalent to or synonymous with accreditation by an accrediting agency recognized by the U.S. Department of Education.

OWNERSHIP/GOVERNING BODY

Arrhythmia Technologies Institute, Inc. is a non-profit corporation formed under the laws of the State of Florida and registered as such in the State of South Carolina. The governing body is the Board of Directors consisting of: Mark W. Sweesy, Richard C. Forney, and James Holland.

The corporation officers include the President/Treasurer Mark W. Sweesy and Vice President/Secretary James Holland.

PROGRAM DIRECTORS AND ADVISORS

Educational Director: Mark W. Sweesy, BS, RCPT
Testamur, NASPExAM/AP/EP
Member, NASPE
RCPT, Fairfax Hospital
BS, Geneva College, 1977

Technical Director: James Holland, MS
Testamur, NASPExAM/AP
Member, NASPE
MS, Nova University, 1983
BS, University of North Carolina, 1976

Clinical Coordinator: Kimberly Walters, BSN, CCDS
BSN, East TN State University

School Advisor: Richard C. Forney, PhD.
Testmur, NASPExAM/AP/EP
Member, NASPE
MS, Clemson University
PhD, Clemson University

Medical Advisor: Jay Gaucher, MD, FACC
Cardiologist with Carolina Cardiology Consultants
M.D. Medical College of Virginia

Academic Advisor: Joseph Souza, MD, FACC
Electrophysiologist with Asheville Cardiology Associates

Clinical Advisor: David Rodak, MD, FACC
Electrophysiologist with Cardiology Consultants in Spartanburg

FACULTY

James Holland, MS, CCDS

Kimberly Walters, BSN, MBA, CCDS

Mark Sweesy, FHRS, CCDS, CEPS, RCES

Julie Price, CCDS

David Rodak, MD, FACC

Joseph Souza, MD, FACC

Terry Gromlovits, MS, ACNP

Additional faculty includes physicians, engineers, scientists, clinical managers, regional directors, and other professional personnel.

COURSE TUITION AND PAYMENT SCHEDULE

Tuition Cost: $24,500.00. Books & Materials are included.

Deposit: A $1,000.00 deposit is due upon mutual acceptance. $350.00 of the deposit is non-refundable. The remaining $650.00 is non-refundable after April 30th when books are purchased, however, the student may keep books and materials.

Balance Due: June 1st $23,500.00

Total Cost: $24,500.00

Living expenses are additional costs and are not included in the tuition. These costs are the responsibility of the student. Financial aid is not available through ATI. Please note that ATI is not an accredited school.

A motorized means of transportation will be required. Clinical training will take place off-site from the main campus at several other facilities. There will, therefore, be additional personal costs related to traveling (e.g., fuel costs, car maintenance, insurance, etc.) to these clinical sites for training and is required as part of the school program.

There may also be seminars or meetings dealing with cardiac device technology, which the student may wish to attend outside of the school. The student must pay these costs; however, these extracurricular activities are not required as part of the program.

REFUND POLICY

Should a student withdraw or be dismissed from the program for any reason, all refunds will be made according to the following schedule:

1. Tuition will be refunded, minus fees ATI has already incurred for books, materials, health screenings, radiology badges, etc., if the student withdraws within 72 hours (excluding weekends and holidays) after signing the enrollment agreement.

2. Withdrawal after attendance has begun but prior to sixty percent (60%) completion of the program will result in a Pro Rata refund. The refund will be computed from the last day of attendance, rounded downward to the nearest ten percent of that period, less any unpaid charges owed for the period of enrollment for which the student has been charged, and less a $100 withdrawal administrative fee. The student may keep all books and supplies provided by the school to date.

   The portion of the period of enrollment for which charges will be determined is computed by dividing the number of clock hours comprising the period of enrollment for which the student has been charged into the number of clock hours remaining to be completed by the student as of the last recorded day of attendance by the student.

3. Withdrawal after completing sixty percent (60%) of the program will result in no refund. The student may keep all books and supplies provided by the school to date.

4. Effective termination date: the termination date for refund computation purposes is the last date of actual attendance by the student.

5. Refunds will be made within forty (40) days of the effective termination date.

HEALTH INSURANCE AND MEDICAL RECORDS MANDATORY

Students are required to carry their own health insurance for interaction in the clinical portions of the program. This insurance is not available through the school and is not covered by tuition costs. Proof of health insurance will be required prior to coming to school. Prior to class starting dates, students must provide proof of healthcare status to include TB (by PPD test within the past year), rubella and rubeola, mumps, varicella (chicken pox), and tetanus (or tetanus booster within the last 10 years). If shot records are not available for rubella, rubeola, mumps or varicella we will need copy of results

from a titer being drawn. *As students will be working in the health care field and typically work for companies that require drug screening, students may be asked to submit to a drug screening test during the course of the school year if one was not submitted as part of the application process.* This list may be updated periodically to reflect affiliated hospital requirements for clinical training. It is recommended that students also get vaccinated against hepatitis (three shots over a six-month period.

ADMISSION REQUIREMENTS

1. The number of qualified students to be accepted into the school will be determined annually by the Board of Directors.

2. Students, to be qualified, must hold a baccalaureate degree or have suitable experience in a related field such as nursing, medicine, electronics or engineering with an associate's degree.

3. Students will be accepted by the school only after their application, essay, college transcripts, current curriculum vitae or resume and two letters of reference (professional individuals) have been evaluated as satisfactory. The student must also interview with a school official coinciding with an on-site visit of the school facilities. Application materials are accepted year round.

The school may refuse admission to any student who does not meet all of the above requirements. The standards required for continuing in the program shall be clearly stated and made available to the student. The school reserves the right to choose among qualified applicants.

Application Requirements:

1. Application
2. Essay
3. Resume or Curriculum Vitae
4. Two letters of reference
5. College transcript

STUDENT APPLICATION PROCEDURE

Individuals interested in attending the Arrhythmia Technologies Institute, Inc. should view our web site www.ATISCHOOL.org to get the necessary information including an application, and any updated information concerning the next class. Students should submit a completed application packet consisting of an application, essay, an updated resume or curriculum vitae, at least two letters of professional recommendation and official college transcripts. The admissions committee will evaluate application materials,

and interviews will be by invitation only. The application process is open year round for the class beginning in September.

POLICY ON GRANTING CREDIT OR ADVANCED STANDING

There is no credit granted or advanced standing for any previous training or education.

POLICY ON TRANSFER OF CREDIT

The school makes no claim or guarantee that credit earned from this program will transfer to any other program or institution.

CLASS STARTING AND ENDING DATES

The school year begins in September each year and ends the third week of April. The class schedule is Monday through Friday from 8:30 am-4:00 pm. Specific class schedules are variable due to the clinical training, guest speakers and interviews which may begin earlier or run later than the stated 8:30-4:00 times.

HOLIDAYS

School will not be held: Labor Day, Thanksgiving (Wednesday, Thursday and Friday), a Fall Break in October (TBD), and two-weeks for Christmas Break (which includes Christmas Day and New Year's Day). Additional holidays may be declared at the discretion of a Program Director. Also, each student has two personal days that can be taken when needed with appropriate supervisor approval.

TYPICAL CLASS SIZE

Typical class size for the Cardiac Device Technology program is 40-48 students.

CARDIAC DEVICE TECHNOLOGY
COURSE CURRICULUM

I. Classroom lectures

The lectures include anatomy and physiology of the cardiovascular system, ECG rhythm interpretation, cardiac device technology and technical applications of cardiac pacing therapy.

12-Lead Electrocardiography

This course is an extension of the Electrocardiography course and is designed to introduce the student to the theory and interpretation of 12-lead ECGs. The students will be expected to be able to interpret and diagnose ECGs of patient case studies and apply this knowledge clinically.

Advanced paced rhythms

ECG rhythms resulting from advanced pacemaker modes such as DDIR, DDDR, DVIR, VVIR, AAIR and others are presented and practiced. Much of this course is the interpretation of paced ECG's.

Antitachycardia pacing therapy

The theory and principles of antitachycardia pacing are examined and discussed. This includes the mechanisms of tachycardias, ATP therapy, patient management and the operation of available antitachycardia devices.

Arrhythmic devices patient education

This class will present the principles of learning and learning concepts, patient assessment, psychosocial considerations, teaching plans and educational materials so that students may better educate and interact with individuals that are receiving a cardiac device or already have one implanted.

Atrial Fibrillation

This course discussed the types of atrial fibrillation, its mortality, and morbidity, as well as accepted and experimental treatments.

Basic electrophysiology (EP)

An introduction to electrophysiology is presented. Terminology, EP testing procedures, and the concepts of brady- and tachy-arrhythmias are discussed. The specifics of electrophysiology testing in relation to bradycardias and tachycardias are examined and discussed. Particular attention is paid to tachycardia diagnosis and treatment as it relates to pacemakers, antitachycardia devices and implantable defibrillators.

Basic paced rhythms

ECG rhythms resulting from simple and basic pacing modes such as AAI, VVI, AOO, VOO, AAT, VVT are presented and practiced. Much of this course is the interpretation of paced ECG's.

Basic pharmacology

The important types of cardiac medications are discussed particularly in relation to cardiac pacing, implantable defibrillators, and major cardiovascular effects on patients.

Business and marketing of cardiac device technology

The business aspects of cardiac device technology will be introduced and taught. Particularly, business ethics, marketing oneself to an employer, business practices related to this field, how to conduct oneself in relation to healthcare providers, and other pertinent topics will be examined and discussed.

Business aspects of cardiac device technology

Industry personnel will visit and discuss their company specifically and the industry in general. They will be relating opportunities in the industry and how their company is involved in the cardiac device business. Former students will discuss “life in the real world” working with industry.

Cardiac anatomy & physiology

The anatomy of the heart and pertinent surrounding structures are taught. The physiology of the cardiac system is discussed as it relates to the pacing system and includes the myocardial cell, action potential and biochemistry of cell depolarization among others. The normal hemodynamics of the cardiovascular system are examined and discussed including cardiac output and the many factors affecting it. An introduction to cardiac pathology includes many disease processes of the cardiovascular system with the relationship to cardiac pacing.

Cardiac life support

Concepts related to BLS, ACLS, advanced defibrillation & cardioversion, and rescue pacing are presented and discussed. This class is taken in conjunction with CPR class.

Cardiac pathology

This course examines disease processes which affect the cardiovascular systems and includes lectures and discussions concerning atherosclerosis, ischemic heart disease, myocardial infarctions, valvular heart disease, heart failure, cardiac arrhythmias, hypertension and others.

Clinical electrophysiology

A more advanced treatment of the topic of electrophysiology is presented. Actual patient case studies will be discussed in detail related to initial patient assessment, clinical evaluation, and indications & contraindications for EP studies. Practical application of material taught in Basic EP will be applied here.

Computer applications in pacing & defibrillation

The importance of computer technology is presented and some basic computer skills are taught. Database management of follow-up information is discussed and demonstrated through the use of a customized patient follow-up database program.

Congestive Heart Failure

This course includes heart failure terminology, pathophysiology, mechanisms of cardiac resynchronization, implant procedures and device follow-up in the CHF patient.

CPR

This course is offered to train students in cardiopulmonary resuscitation and includes CPR simulated training with infant, child and adult mannequins. The new automatic external defibrillators (AEDs) are discussed.

Dual chamber rhythms

ECG rhythms resulting from dual chamber pacing modes such as DDD, VDD, DVI, DDI and DOO are presented and practiced. Much of this course is dedicated to interpretation of paced ECG's.

Electrocardiography

The course of electrocardiography will include normal ECGs as well as the recognition and diagnosis of brady- and tachy-arrhythmias. ECGs to include sinus, atrial, junctional and ventricular rhythms are presented and practiced. Much of this course is dedicated to the interpretation of non-paced ECGs.

Emergency and temporary pacing

Various methods used in temporary pacing are presented. The types of available temporary pacemakers, associated hardware and circumstances for utilization is discussed. Unusual emergency pacing systems are presented and discussed including transesophageal pacing and transthoracic pacing.

Fundamentals of Electronics

Electrical concepts are presented including: Ohm's Law, field strength, stimulation thresholds, basic and derived quantities, units of measure, relationships, circuit and signal components, electronic subsystems, voltage, current and resistance, energy and power, and circuits.

Hardware and cardiac device/medical terminology

Students will gain a working knowledge of the terminology unique to the medical profession and specifically to cardiac devices. The accompanying hardware including generators leads, programmers, and accessories will be demonstrated, discussed and explained.

Hemodynamics of pacing

The use of specific pacemaker modes is reviewed as it relates to optimal cardiac hemodynamics.

History of cardiac stimulation

The history of cardiac stimulation is reviewed and then focused on relevant historical events concerning cardiac device systems.

ICHD code

The Intersociety Commission for Heart Disease Resources codes for the various designations of pacemakers and defibrillators are reviewed and discussed.

Implantable cardioverter defibrillators

The theory, indications, considerations, complications, troubleshooting, device interactions, and operations of various implantable cardioverter defibrillators (ICDs) are introduced. The newest "tiered therapy" devices and ICD technology are discussed. Included in this class is a historical review of the history of the ICD implant methods to include thoracotomy, abdominal approaches and use of patch electrodes.

Indications

The standard accepted indications for pacemaker and ICD implantation are presented and discussed. Also introduced are the more controversial and newer indications for devices.

Interviewing and Business Skills

This course combines both lecture and mock interviews and business sessions to improve student skills in these areas. Video taping of mock interviews may be utilized.

Invasive EP testing

Baseline assumptions & assessments for EP testing are presented and the evaluation of tachycardias is discussed. An overview of the EP lab, equipment and procedures will be discussed.

Medical jurisprudence

Liability, patient rights, legal risks, and the Safe Medical Devices Act of 1990 are presented and discussed in regards to cardiac device technology.

Pacemaker follow-up

Topics such as DRGs and pacing, EMI and magnet use, EOS indicators, complications, and myostimulation and myosensing are introduced and discussed. Clinical application of learned principles is expected. Topics relevant to cardiac device follow-up such as recalls & advisories, management of malfunctions, clinical investigations, exercise with pacing and setting up a follow-up lab are introduced and discussed.

The choices between single and dual chamber pacemakers are examined. Why do patients receive a particular device? Why would some devices be inappropriate? What device may be more appropriate? Why a certain defibrillator? These questions and more are discussed to better understand the choices of cardiac devices available to patients and physicians.

Pacemaker implantation

All aspects of cardiac pacemaker implantation procedures are presented. This includes pre-implant considerations, operating room and catheterization laboratory procedures, sterile environments, testing of lead position, pacing systems analyzer testing

procedures, ECG monitoring, adaptors and connectors, education of patients and troubleshooting for complications. Clinical applications of learned principles are expected.

Pacemaker radiology

The basics of radiographic identification for the cardiac anatomy are presented. This knowledge is utilized to identify specific pacing devices, lead placement, polarity, integrity of the device system and potential complications such as lead dislodgment, lead fractures, connector pin problems, and others

Pacemaker timing cycles

The timing cycles for the most common modes of pacing including VVI, DDD, and DDDR are introduced, discussed and practiced. Clinical application of learned principles is expected.

Pacing systems analyzer concepts

The concepts for the utilization of a pacing systems analyzer are introduced and discussed. Various features of a typical PSA are examined. Measurements and testing procedures utilized in a pacemaker implant with a PSA are discussed. Clinical application of learned principles is expected.

Patient Assessment

This course is designed to help students make a proper assessment of patients with cardiac devices. The material will include taking a patient history, performing a cardiac physical exam and diagnostic evaluation of the findings.

Pediatric Electrophysiology and Considerations

The concepts related to the subspecialty of pediatrics and cardiac device technology will be examined. Congenital anomalies that may result in an indications for a pacemaker or ICD implant as well as the management of devices in the pediatric patient will be discussed.

Programming concepts

Students are introduced to the concepts of programming single and dual chamber pacemakers and ICDs. The basic principles of programmers are introduced and individual programmers from various manufacturers are examined and discussed. This course is presented in conjunction with a laboratory.

Pulse generator specifications

Specific single and dual chamber pacemakers as well as ICDs are introduced. Specifications such as rate, mode, output and sensitivity settings are discussed along with any unique functions and features for that pacemaker. Pacing products from the various manufacturers are presented and compared. Specific features such as measured telemetry, diagnostics, programmability, sensor technology, connector compatibility, size and many others are examined. Much of this class will be presented by the cardiac device industry representatives.

Rate modulated pacing

The concepts of rate modulated pacing are introduced. All of the sensor technology is presented and examined in detail. The advantages and disadvantages of each sensor used in rate modulated pacing are discussed.

Recalls, regulatory terminology, and product performance

Recall and regulatory terminology is discussed, as well as how to handle a recall or advisory in the clinical arena.

Regulatory & cost issues

DRGs, registry, EP, ICDs, USA health care systems, Canadian healthcare, discharge planning, updated regulations, and managed care are topics to be presented and discussed in this course.

Research requirements with implanted devices

Reporting mechanisms, adverse secondary effects, clinical phases, MDS Act of 1990, IDE, components of IDE, reporting responsibilities, pre-market notification & application, and post-market surveillance are all topics to be presented and discussed in this course.

Safety

Infection control, radiation safety, electrical safety, drug interactions, device interactions, and EMI are presented and discussed in relation to the hospital and clinical environment. These lectures will typically be conducted on-site at our affiliate hospitals.

Technical aspects of cardiac device technology

The various design components of pacing leads, pacemakers, and ICDs are presented by industry personnel such as field engineers and technical specialists. New technology is discussed, particularly, as it relates to new products.

Tilt table testing (EP)

This course will introduce the topic and rationale of tilt table testing in the EP laboratory. The indications & contraindications, pathophysiology of neurally mediated syncope, tilt table procedures, treatment plan and evaluation as well as patient education will be presented and discussed.

Troubleshooting paced rhythms

Specific paced ECG's are examined and discussed pertaining to pacer and lead malfunctions, sensing and capture problems, pseudomalfunctions, ECG misinterpretation and others. Troubleshooting procedures and options are discussed. Practical examples from the clinical setting are utilized.

Upper rate response

All aspects related to upper rate behavior of pacemakers are presented and examined in detail. This includes multi-block, Wenckebach, fallback, rate smoothing, and mode

switching features. Advantages and disadvantages will be discussed. Clinical application of learned principles is expected.

II. Skills Laboratories and Clinical Experience

These two learning approaches coincide with specific classes to provide an opportunity for hands-on experience in a simulated or closely supervised environment.

Electrophysiology laboratory

Students observe and participate in the EP lab. The clinical experience will include cardiac device implants, catheter ablations, and EP studies.

Follow-up laboratory

Students are exposed to the follow-up of patients with implanted single and dual chamber pacemakers including rate modulation devices. Clinical experience involves observation and, later, participation. This course is the practical application of “Follow-up concepts.”

Journal Club and clinical case studies

Students read, interpret and present reports from current medical literature. Later, as they become more involved in actual clinical scenarios, they present pertinent patient case studies for discussion with the class.

Pacing systems analyzer laboratory

Students are exposed to the pacing systems analyzer and its functions. Many hours are designated on different manufacturer’s PSAs in conjunction with a heart simulator. Eventually, the student participates in the implantation surgeries and utilizes the skills learned for the PSA. Much of this class will be dedicated to student practice to attain necessary skills.

Programming concepts laboratory

Students are provided the opportunity to learn and practice with a variety of device programmers for the various single and dual chamber pacemakers as well as the ICDs. Many demonstration cardiac devices including the rate modulated pacemakers are utilized to provide a wide range of devices with each programmer. Much of this class will be dedicated to student practice to attain adequate skills.

Pulse generator specifications lab

Students examine the specifications of various single and dual chamber pacemakers and implantable defibrillators by studying the various manufacturers' manuals. Students will provide oral reports on their studies.

III. Clinical Practicum

The student experiences on-the-job training in the hospital and clinical setting including cardiac device implant surgeries, cardiac device follow-up and the electrophysiology lab.

TOTAL: 1,000 clock hours

GRADING

Students will be graded on a Pass/Fail basis for many of the courses, particularly, those dealing with the clinical aspects of cardiac device technology. The grade will be based on the instructor's evaluation of the student's ability to follow instructions, quality of work and demonstration of proficiency in a particular area of study.

The academic courses will be graded according to the following schedule:

A - 90-100%	B - 80-89%	C - 70-79%
D - 60-69%	F - 59% or below	

Progress reports are available in November, February and April.

Clinical evaluations will occur frequently with the appropriate supervisors of the student in those areas of clinical training. Written evaluations will become a part of the student's permanent record.

A failed test (score less than 70%) in a course will be repeated at the discretion of the instructor.

GRADUATION REQUIREMENTS

A Certificate of Completion in Cardiac Device Technology is presented when the student:

1. Successfully completes the required program of Cardiac Device Technology (including passing a comprehensive final), and

2. Fulfills all monetary obligations to the school.

STUDENT SERVICES

1. Student Records

Student records are permanently retained by the school and are available to students upon individual request. Student records will be provided to potential employers only with the student's approval.

2. Student Placement

Students are assisted with job placement and furnished with names and addresses of employment possibilities. Inquiries made to the school from potential employers will be posted on the bulletin board, copies distributed to the students or verbally announced to the students. The school will assist the students with employment to the best of its

ability. The school cannot guarantee that enrollment in this program or graduation from this program will result in employment.

RULES AND REGULATIONS

1. Attendance

Students are expected to be at the school during regular school hours. Missing class without prior approval from the appropriate instructor is considered an unexcused absence. After one unexcused absence, the student is counseled by a Program Director and placed on probation. Should the student have another unexcused absence while on probation, the student will be counseled by a Program Director and, at the director's discretion, may be dismissed from the program.

2. Tardiness

A student arriving after attendance has been taken is considered late and will be marked absent unless the instructor considers the reason legitimate. All class time missed in excess of fifteen (15) minutes must be made up by the student prior to graduation.

3. Makeup Work

Students are expected to make up work missed due to absences, tardiness, and clinical training. Tests to be made up will be taken at the earliest possible convenience of the instructor but no later than one week after the original test date. Reports or homework assignments will be due the first day the student returns to school.

4. Conduct

Students are expected to conduct themselves in a professional manner at all times. Inappropriate language, possession of alcohol or unprescribed drugs, and disrespectful behavior are considered unsatisfactory behavior and are grounds for dismissal. A student whose conduct is detrimental to the school, staff or other students will be dismissed from the program. Theft of property from the school, affiliated institutions or other students is grounds for immediate dismissal. Patient information and confidentiality is mandatory and breach of this trust is cause for immediate dismissal. Cheating on a test is cause for immediate dismissal.

Appropriate dress is required for school attendance. Blue jeans, T-shirts, shorts, tank tops, halter tops, etc., are not permitted. Students should present a professional appearance at all times while in school.

5. Probation

A student who does not adhere to the attendance policy will be placed on probation for thirty (30) days. Should the student have an unexcused absence while on probation, they will be counseled by a Program Director. At the discretion of a Program Director, the student may be dismissed from the program.

6. Training Interruptions and Dismissal

A student is not dismissed from the program for failure to learn the required skills. A student who has not successfully completed the examinations at the end of each course is encouraged to attend additional tutoring sessions. A retest on the class material is permitted within a reasonable period of time as determined by the instructor. If the student fails the retest, they will be counseled by a Program Director as to the advisability of continuing in the program since a Certificate of Completion may not be awarded due to inadequate skills.

7. Leaves of Absence

A student may be granted a leave of absence, limited to 60 days, by a Program Director. A request for the leave of absence must be in writing with the expected date of return specified. If the student does not return to the school program within 60 days, the student will be dismissed from the program and a refund granted according to the Refund Policy.

8. Reentry

A student who has withdrawn or been dismissed from the program and desires to reenter the program must notify the school and follow the admission procedures. A student who was dismissed from the program for any reason must interview with a Program Director and show cause why he/she should be reinstated. The decision of the Program Director is final.

9. Withdrawal from the School Program

A student may withdraw from the school program at any time by notifying the school in writing of this decision. The student's enrollment agreement will then be terminated and a refund will be granted according to the Refund Policy.

10. Student Complaints

Student complaints should be brought to the attention of the President of ATI. He will then discuss the complaint(s) with the appropriate parties and a suitable resolution will be sought. A written record of the disposition of the complaint will be kept on file by the school.

If the complaint cannot be resolved at the school level through its complaint procedure, students may file a complaint with the South Carolina Commission on Higher Education. The complaint form is available via the following link:
link.http://www.che.sc.gov/CHE_Docs/AcademicAffairs/License/Complaint_procedures_and_form.pdf.

A formal hearing will be initiated involving all involved parties with a final discussion and resolution.