VANDERBILT UNIVERSITY MEDICAL CENTER
PROGRAMS IN ALLIED HEALTH
CARDIOVASCULAR PERFUSION TECHNOLOGY

GENERAL INFORMATION

Vanderbilt University Medical Center provides a twenty-four month training program that prepares the graduates for professional positions as clinical cardiovascular perfusionists in open heart surgery programs. The students receive instruction in areas of anatomy and physiology, pharmacology, pathology, and cardiovascular perfusion technology.

The program meets the criteria established by the American Board of Cardiovascular Perfusion (ABCP) and is accredited by the Council on Accreditation of Allied Health Education Programs.
Since its inception in 1979 the program has been directed by Vanderbilt University's Department of Cardiac and Thoracic Surgery. The curriculum is coordinated and supervised by the following program officials:

Medical Director/Advisor	Davis C. Drinkwater, Jr., M.D. Professor of Surgery
Research Director	Richard N. Pierson, III, M.D. Assistant Professor of Surgery
Program Director	Kevin Collins, B.S.N., C.C.P.
Perfusion Instructors	Todd Bender, B.S., C.C.P Michael Vinas, M.A., C.C.P.

Satisfactory completion of courses and clinical perfusion experience will merit a certificate of completion. Students graduating from the program are candidates for certification by the ABCP. Course credits earned are not transferable to other divisions, schools or colleges of Vanderbilt University.

ADMISSION REQUIREMENTS

Satisfactory completion of a bachelor of arts (B.A.) or bachelor of sciences (B.S.) degree from an accredited college or university is a minimum requirement. Applicants' previous college level courses must include one year (three quarters or two semesters) of chemistry and one year of physics. Completed applications must be received by February 1st. Student selection will be completed by March 31st. Admission is based on a combination of professional credentials, level of work experience, scholastic background, reference evaluations and personal interviews.

The completed application will include:

1) Application and $50 non-refundable application fee
2) References from three individuals who are familiar with the applicant's qualifications
3) Official transcripts from all universities and colleges attended
4) A list of courses in progress or scheduled for completion before the admission date

ACADEMIC PROGRAM

The following is a listing of courses and their respective semesters. No course substitutions, CLEP or special study will be granted.

FIRST SEMESTER (July through December)

HRS.	COURSE	COURSE TITLE
3	BIO 501	Cardiopulmonary/Renal Anatomy, Physiology
3	PHM 501	Pharmacology for Cardiovascular Perfusionists
6	CVP 501	Cardiovascular Perfusion Technology I
10	CVP 510	Clinical Cardiovascular Perfusion I/Wet Lab I
3	PATHO 501	Cardiopulmonary/Renal Pathophysiology
3	RES 501	Cardiovascular Perfusion Research I/Animal Lab I
28		

SECOND SEMESTER (January through June)

HRS.	COURSE	COURSE TITLE
6	CVP 502	Cardiovascular Perfusion Technology II
12	CVP 520	Clinical Cardiovascular Perfusion II/Wet Lab II
3	RES 502	Cardiovascular Perfusion Research II/Animal Lab II
21		

THIRD SEMESTER (July through December)

HRS.	COURSE	COURSE TITLE
24	CVP 530	Clinical Cardiovascular Perfusion III
4	RES 503	Cardiovascular Perfusion Research III/Animal Lab III
28		

FOURTH SEMESTER (January through June)

HRS.	COURSE	COURSE TITLE
24	CVP 540	Clinical Cardiovascular Perfusion IV
4	RES 504	Cardiovascular Perfusion Research IV/Animal Lab IV
—	SBR	Seminar For Board Review
28		

COURSE DESCRIPTIONS

BIO 501 Cardiopulmonary/renal anatomy, physiology

This is a correlated overview of the structure and function of the human body with an emphasis on the cardiovascular, pulmonary , and renal systems, including congenital embryology and development.

PHM 501 Pharmacology for Cardiovascular Perfusionists

The course includes lectures on pharmacokinetics, drug therapy, and intervention with agents affecting the cardiopulmonary, renal and immunologic systems.

CVP 501 Cardiovascular Perfusion Technology I

The course includes orientation, indoctrination to the hospital environment and the perfusion profession. Medical malpractice, liability and ethics are discussed. The course covers the theories, techniques and equipment used for extracorporeal circulation, including catastrophic events and safeguards. The lectures coincide with wet lab experience.

PATHO 501 Cardiopulmonary/renal pathophysiology

This course is the study of pathologic conditions affecting the human body with particular emphasis on the cardiopulmonary and renal systems, including acquired and congenital abnormalities.

RES 501 Cardiovascular Perfusion Research I/Animal Lab I

This course includes basic research design, evaluation and reporting, the critical analysis of research publications,and the introduction to animal laboratory research.

CVP 502 Cardiovascular Perfusion Technology II

This course concentrates on cardiac assist devices, organ preservation, transplantation, special procedures, and infant/pediatric extracorporeal circulation.

RES 502 Cardiovascular Perfusion Research II/Animal Lab II

This course is a continuation of the research topics and activities presented in RES 501 with greater participation by the students in clinical animal research.

RES 503 Cardiovascular Perfusion Research III/Animal Lab III

In this course the student utilizes the knowledge and techniques acquired in RES 501 and RES 502 to perform a review of pertinent literature and write a paper suitable for publication or to serve as co-author of a research paper, while participation in clinical animal research continues.

RES 504 Cardiovascular Perfusion Research IV/Animal Lab IV

This course is a continuation of the research topics and activities presented in RES 503.

CVP 510 Clinical Cardiovascular Perfusion I/Wet Lab I

The course is a practical/wet laboratory experience designed to reinforce the principles presented in lecture. Topics will include basic pump set up, circuit designs, catastrophic events, etc. This course is given in preparation for introduction to the clinical setting.

CVP 520 Clinical Cardiovascular Perfusion II (Level 1)/wet lab II

The course is a practical clinical experience designed to reinforce the principles presented in lecture. At this stage the student is performing extracorporeal circulation techniques under the direct supervision of a clinical cardiovascular perfusionist. The wet lab focuses on cardiac assist devices, special procedures, organ preservation and transplantation.

CVP 530 Clinical Cardiovascular Perfusion III (Level II)

The course is a practical clinical experience designed to reinforce the principles presented in lecture. At this stage the student is performing advanced extracorporeal circulation techniques under the direct supervision of a clinical cardiovascular perfusionist and is preparing for infant/pediatric extracorporeal circulation.

CVP 540 Clinical Cardiovascular Perfusion IV (Level III)

The course is a practical clinical experience designed to reinforce the principles presented in lecture. The student is performing advanced extracorporeal circulation techniques under the direct supervision of a clinical cardiovascular perfusionist and is involved in complex infant/pediatric extracorporeal circulation procedures. Special case presentations and mentor activities to the first year students are a focus of this course.

FEES AND REQUIREMENTS

Program Fee: Tuition for the twenty-four month program is $7500.00, with $2500.00 due in July, January and the following July, respectively.

Books: Students will be required to purchase textbooks from a list provided during program orientation. The textbooks are estimated to cost $300-$500.

Health Insurance: Students must be covered by health insurance during their training. Vanderbilt student insurance is available.

Rules and Regulations: A student handbook of rules, regulations and the appeal process is provided during orientation and is considered mandatory reading.

Students are responsible for their own transportation costs, housing, meals, and associated educational/ personal expenses.

Fore more information, write or call:

Program Director
Department of Cardiac and Thoracic Surgery
The Vanderbilt Clinic Suite 2986
Nashville, TN 37232-5734
Office: (615) 322-0064
Fax: (615) 343-9194

In compliance with federal law, including the provisions of Title IX of the Education Amendments of 1972 and sections 503 and 504 of the Rehabilitation Act of 1973, Vanderbilt University does not discriminate on the basis of race, sex, religion, color, national origin, age, handicap, or military service in its administration of education policies, programs, or activities; its admissions policies; scholarship and loan programs; athletic or other University-administered programs; or employment. Inquiries or complaints should be directed to:

Opportunity Development Officer
Building E, West Side Row
P.O. Box 1809, Station B
Nashville, TN 37235
Telephone (615) 322-4705

Vanderbilt University reserves the right to alter course requirements and/or tuition fees without advance notice.

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TELEPHONE DIRECTORY

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VUMC-Vanderbilt University Medical Center

322-3672	Animal Research Laboratory (MCN)
322-0602	Blood Bank
322-0956	Cardiac Cath Laboratory
322-0064	Cardiac and Thoracic Surgery
322-0601	Chemistry
322-2090	Operating Room
4-6889	OR #8
4-6890	OR #9
322-5000	Operator
322-2608	Paging Operator
343-5005	Perfusionist Room; Surgery

VAMC-Veterans Administration Medical Center

327-4751	Operator
811-5263	Cardiac Cath Laboratory
5961	
811-6088	OR #8 (Cardiac Surgical Suite)
811-5709	Sceduling
811-5355	SICU
811-5704	Surgical Lounge
5705	

VANDERBILT UNIVERSITY MEDICAL CENTER
PROGRAM IN CARDIOVASCULAR PERFUSION

Clinical Evaluation Form

Date:___/___/___ Hospital:_____

Student:_____ Case No:_____

Instructor:_____

Surgeon:_____

Patient No:_____ Adult____ Ped:____

Procedure:_____

	Failure	Poor	Needs to Improve	Good	Very Good	Excellent	N/A
PUMP SETUP	0	1	2	3	4	5	
transducers, sterile conditions, appropriate components and cannulae							
PATIENT HISTORY	0	1	2	3	4	5	
medications, cath report, allergies, laboratory results							
PUMP SHEET	0	1	2	3	4	5	
flow, dilution, and heparin calculations							
PREBYPASS	0	1	2	3	4	5	
hooking up lines, recirculation, setting balance, pump head occlusions							
NITIATION OF CPB	0	1	2	3	4	5	
CHARTING	0	1	2	3	4	5	
completeness, accuracy, neatness							
CONTROL OF VENT. & PUMP SUCKER	0	1	2	3	4	5	
CONDUCT OF PERFUSION	0	1	2	3	4	5	
fluid balance, maintained appropriate flow and pressure							
BLOOD GAS CONTROL	0	1	2	3	4	5	
maintained appropriate acid/base status, PO2, and PCO2							
TEMP. REGULATION	0	1	2	3	4	5	
cooled, maintained appropriate temperature, rewarmed adequately							
TERMINATE OF CPB	0	1	2	3	4	5	
times, turned off pump, clamped arterial line, ready for resumption of CPB							
POST CPB	0	1	2	3	4	5	
clean-up, restocking							
OVERALL	0	1	2	3	4	5	
punctual, good attitude, organized, good communication, knowlege of procedure							
SAFETY FACTOR	0	1	2	3	4	5	