

Respiratory Care

APRC 1996-1997

Section 1 of 1



**RESPIRATORY CARE PROGRAM
COLLEGE OF ALLIED HEALTH SCIENCES
FERRIS STATE UNIVERSITY**

**PROGRAM REVIEW REPORT
DECEMBER 17, 1996**

PROGRAM REVIEW PANEL

**Brenda K. Brown, M.A., R.R.T. (chair)
Daniel P. deRegnier, M.S., MT(ASCP)
Julian F. Easter, M.S., R.R.T.
Ann M. Flint, M.S., R.R.T.
Douglas Fonner, Ph.D.
Tracy Rousch, R.R.T.**

Table of Contents

	Purpose.....	Page 1
Section I:	Introduction.....	Page 1
Section II:	Curriculum Evaluation.....	Page 7
Section III:	Enrollment Trends.....	Page 10
Section IV:	Program Facilities and Equipment.....	Page 12
Section V:	Labor Market Analysis.....	Page 20
Section VI:	Productivity and Costs	Page 23
Section VII:	Student Perception Surveys.....	Page 25
Section VIII:	Faculty Perception Surveys.....	Page 32
Section IX:	NBRC Credentialing Exam Scores.....	Page 36
Section X:	Graduate Surveys.....	Page 38
Section XI:	Employer Surveys.....	Page 43
Section XII:	Advisory Committee Surveys.....	Page 48
Section XIII:	Conclusions.....	Page 51
Section XIV:	Recommendations.....	Page 54
Appendix A:	Program Review Panel Evaluation Form.....	Page 57
Appendix B:	Administrative Program Review.....	Page 61
	Report for 1995	
Appendix C:	Curricula Vita for Program Faculty and Department Head	
	Julian F. Easter, M.S., R.R.T.....	Page 62
	Brenda K. Brown, M.A., R.R.T.....	Page 65
	Ann M. Flint, M.S., R.R.T.....	Page 68

PURPOSE: To conduct the scheduled review of the Respiratory Care Program to evaluate the goals and outcomes thus establishing that the program and the University make informed decisions about curricular issues and resource allocations.

SECTION I: OVERVIEW OF THE PROGRAM

INTRODUCTION

The Respiratory Care Program is a two year program which leads to the awarding of an Associate in Applied Science degree. The program is structured within five consecutive academic semesters and a total of 69 semester hours of credit are required for program completion. One and a half semesters are committed to full-time clinical internships at one of eighteen affiliated hospitals located in Michigan.

The first year of the program is comprised of two and a half semesters on the Ferris State University campus. The second half of the first year summer semester is a six week, full time clinical internship. During this internship students rotate through hospitals located throughout the lower peninsula of Michigan practicing the procedures learned the semester beforehand. Students return to the Ferris campus for the fall semester of the second year. During this semester students take the more advanced diagnostic and critical care courses within the program. The Winter semester of the second year is an advanced clinical internship semester with students being assigned to an affiliated hospital.

CLINICAL AFFILIATE	LOCATION	INTERNSHIP
Blodgett Memorial Medical Center	Grand Rapids	Basic/Advanced
Bronson Methodist Hospital	Kalamazoo	Advanced
Butterworth Hospital	Grand Rapids	Advanced
Gerber Hospital	Fremont	Basic
Hurley Medical Center	Flint	Advanced
Mecosta County General Hospital	Big Rapids	Basic
Mercy Health Services North	Cadillac	Basic
Metropolitan Hospital	Grand Rapids	Basic/Advanced
Mid MI Regional Center	Midland	Basic/Advanced
Munson Medical Center	Traverse City	Basic/Advanced
Oakwood Hospital	Dearborn	Advanced
Port Huron Hospital	Port Huron	Basic/Advanced
Reed City Hospital	Reed City	Basic
Saginaw General Hospital	Saginaw	Advanced
Sparrow Health System	Lansing	Basic/Advanced
St. Lawrence Hospital	Lansing	Basic
St. Mary's Health Services	Grand Rapids	Basic/Advanced
St. Mary's Medical Center	Saginaw	Basic/Advanced

A Respiratory Care curriculum check sheet is included at the end of this section. Requirements for admission are a high school GPA of 2.5 and a "B" grade in algebra, biology, and chemistry. A college student transferring into the program must have a 2.0 GPA with "C" grades in algebra, biology and chemistry.

Aside from standard University requirements, respiratory care students are required to maintain a 2.00 cumulative average in professional courses in order to maintain program progression, enter into clinical internships and/or graduate from the program. Satisfactory completion of the program leads to eligibility to sit for the national credentialing examinations sponsored by the National Board for Respiratory Care.

MISSION AND GOALS

The primary mission of the Respiratory Care Program has always been to provide highly qualified and competent respiratory therapists to the health care system. Over the years, the program has evolved from having two internship sites in Grand Rapids, MI to having over twelve basic and advanced level sites throughout the state.

The program's basic competency goal is to assure that all graduates demonstrate upon graduation a competency level commensurate with that of an advanced respiratory care practitioner. The standards (cognitive, psychomotor, and affective) associated with the program's competency goal are:

1. Upon completion of the program, all students will demonstrate the ability to comprehend, apply, and evaluate information relevant to their roles as advanced respiratory care practitioners.
2. Upon completion of the program, all students will demonstrate technical proficiency in all skills necessary to fulfill their roles as advanced level respiratory care practitioners. (Psychomotor Domain)
3. Upon completion of the program, all students will demonstrate personal and professional behaviors consistent with those expected of advanced level respiratory care practitioners. (Affective Domain)

PROGRAM HISTORY

The Respiratory Care Program at Ferris State University began in 1972 in response to the demand for qualified respiratory therapists in western Michigan. At the time it was believed that it was the fourth program at the therapist level in this state. In the early years of the program, enrollments were high as a large number of on-the-job-trained therapists recognized the need for formal training.

The program is accredited by the Committee on Allied Health Education Programs (CAHEP). The Joint Review Committee for Respiratory Care Education (JRCRTE)

establishes accreditation requirements, conducts on-site accreditation visits and recommends accreditation actions to the CAHEP. FSU's Respiratory Care Program has undergone three accreditation visits since 1982. It has been granted full unqualified accreditation each time. In fact, in 1982 the program not only had no "Essential" violations cited, the on-site accreditation team could not identify any weaknesses. In 1986, no "Essential" violations were found and only two recommendations for program improvement were described. In 1992 the program once again was granted full accreditation status. This academic year the program is once again undergoing the accreditation process. To date the self study has been submitted to the JRCRTE and we are expecting our site visit to be scheduled for some time in the spring.

In 1992 a joint venture between the Nursing Program and Respiratory Care Program was instituted where a student within a three year time frame could complete their A.A.S. degree requirements in Respiratory Care and Nursing. They would then be eligible to sit for both sets of credentialing examinations. In May of 1996, four students completed this joint venture. This year four more students are in the last year of this sequencing. This has become a popular option for students on the Nursing programs waiting list.

IMPACT OF THE PROGRAM ON THE UNIVERSITY, THE STATE, AND THE NATION

Since the 1989 program review, three programs have closed in the state of Michigan. There are twelve associate degree programs statewide. Ten of these programs are sponsored by community colleges and only one by a private college. The Ferris program is the only one sponsored by a four year state supported educational institution. There are no B.S. level programs within the state of Michigan nor are there licensure requirements for practitioners within this state.

There are approximately 295 therapist level programs at the associate degree level nationwide. While there are thirty-three B.S. level programs, the A.S. entry level remains the principal educational level for the profession.

FSU graduates are still primarily employed in acute care hospitals. Respiratory care practitioners are involved in the diagnosis, management and continuing care of patients with diseases and disorders of the cardiopulmonary system. They have exclusive responsibility for the care and monitoring of patients requiring sophisticated and technical management of cardiac and ventilatory functions. The patients they care for range from premature infants to geriatric patients.

The starting salaries of respiratory therapists are surprisingly high for associate degree graduates. FSU respiratory care program graduates have typically been found in the upper ten percent of the University's graduates salary ranges. A recent survey found that the range of starting salaries of respiratory care program graduates was \$22,000 - \$28,000.

EXPECTATIONS

The health care industry has been experiencing some interesting changes the last few years. Shorter hospital stays and an increase in the amount of patient care being given on an outpatient basis has provided many new job arenas for the respiratory care practitioner. Physician offices, clinics, sub-acute care facilities, long-term care facilities and home care companies are a few of the areas respiratory care practitioners of the future will find alternative employment opportunities besides the hospital setting. Job opportunities will still be plentiful and available for those individuals looking for full or part time employment in the field of Respiratory Care in the future.

Some of our graduates will continue their educational endeavors and obtain B.S. degrees in Health Care Systems Administration, Applied Biology or Allied Health Teacher Education programs as is currently occurring.

PLANS FOR IMPROVEMENT

Our plans for improvement include writing a new proposal for a B.S. degree in Respiratory Care. To date two other B.S. degree program proposals have been written by the Respiratory Care program faculty. Both B.S. proposals were approved by FSU but never funded. By design this degree would allow articulation of community college A.A. or A.A.S. degree graduates into the program. The Respiratory Care Program would continue to run the A.A.S. portion of the program to act as a student feeder for the B.S. degree.

The program will continue to change faculty teaching assignments every few years to keep faculty current in most areas of Respiratory Care. This fall semester the program took its second step in this process by switching the teaching assignments of the clinical coordinator and the current on-campus faculty member.

We anticipate linking ourselves through the computer to our clinical affiliates around the state. This should improve the communication between the students, clinical affiliates and the faculty of Ferris State University. Additionally, this is another mechanism for teaching students located in a variety of locations away from the FSU campus.

The RESP 119 Structured Learning Assistance course has been so successful the past two years that we are currently talking with the tutoring center to see if we can obtain the funding to incorporate that course format into other RESP courses besides RESP 119.

We are planning to continue the strong recruitment and retention efforts the program is currently making to maintain student enrollment numbers up and improve the productivity of faculty.

We are also planning to continue incorporating state of the art computer technology into the Respiratory Care curriculum so that graduates will leave FSU with a basic level of

computer literacy. Basic computer literacy is now a necessity for persons working in the highly technological environment of the health care setting.

We are also continuing to upgrade the equipment utilized by students in the hands on laboratory that is a vital component of the various procedures courses taught in the Respiratory Care Program. Staff downsizing at our clinical affiliates has created the expectation that our students will enter their internships with basic procedural competency levels. Staffing levels permit students to refine the skills they already possess under supervision but, not the direct teaching of many new skills. With this situation at hand the FSU Respiratory Care Laboratory must maintain relatively current and operational equipment for students to practice the skills they are learning and perform their procedural competency evaluations on.

This winter semester a survey of the major equipment used by each clinical affiliate will be performed by the clinical coordinator to ensure the most current equipment and procedures are being taught in the respiratory care program.

FERRIS STATE UNIVERSITY
COLLEGE OF ALLIED HEALTH SCIENCES
RESPIRATORY CARE PROGRAM
ASSOCIATE IN APPLIED SCIENCE DEGREE

FIRST YEAR

SECOND YEAR

1st Semester

1st Semester

*MATH 110 Fundamentals of Algebra	0	_____
BIOL 108 Medical Microbiology	3	_____
ENGL 150 English 1	3	_____
MRIS 102 Medical Vocabulary	1	_____
RESP 119 Cardiopulmonary A & P	4	_____
Cultural Enrichment Elective	<u>3</u>	_____
	14	

RESP 251 Cardiopulmonary Diag.	3	_____
RESP 261 Ventilator Mechanics	3	_____
ENGL 250 English 2	3	_____
RESP 266 Neonatal/Pediatric Vent.	3	_____
**Social Awareness Elective	<u>3</u>	_____
	15	

2nd Semester

2nd Semester

BIOL 205 Human Anat. & Phys.	5	_____
CHEM 114 Intro. to General Chem.	4	_____
RESP 141 Resp. Care Procedures	5	_____
RESP 160 Disease 1	<u>2</u>	_____
	16	

RESP 293 Clinical Practicum 2	10	_____
RESP 281 Seminar	<u>2</u>	_____
	12	

Summer Semester

RESP 156 Cardiopulmonary Pharm.	2	_____
RESP 170 Disease 2	2	_____
RESP 151 Resp. Care Procedures 2	4	_____
RESP 193 Clinical Practicum 1	<u>4</u>	_____
	12	

69 CREDITS REQUIRED FOR GRADUATION

- * MATH 110 or proficiency must be demonstrated prior to graduation
- ** Social Foundation Elective recommended for students pursuing a bachelor's degree

Not Official
 (For Record Keeping Purposes Only)

SECTION II: CURRICULUM EVALUATION

The evaluation of the curriculum was accomplished by guided discussion at Respiratory Care Program faculty meetings and the analysis of the data gained from the student, graduate, employer and advisory committee surveys.

BIOLOGY AND CHEMISTRY COURSES

The faculty were satisfied with the two Biology courses (BIOL 205 Human Anatomy and Physiology and BIOL 108 Medical Microbiology) that students currently take. It was felt that the contents of each course met the current needs of the Respiratory Care Program.

GENERAL EDUCATION COURSES

Respiratory Care students are required to take one Social Awareness and one Cultural Enrichment Elective course. Historically, faculty have recommended during intrusive counseling sessions that students take HUMN 220 & 320 (Ethics in Health Care and Biomedical Issues), PSYC 150 (Introduction to Psychology) and SOCY 121 (Introduction to Sociology) as their Social Awareness and Cultural Enrichment Awareness electives. Many of our students continue their education past the A.A.S. degree level and pursue B.S. degrees in Health Care Systems Administration, Applied Biology or Allied Health Teacher Education. The courses typically recommended by faculty apply to the requirements of the advanced degrees.

MATHEMATICS

Prior to graduation RESP students must demonstrate proficiency in MATH 110 (Fundamentals of Algebra) either by taking the course or through a proficiency examination. This course seems to provide adequate preparation of students for all the math utilized in the various respiratory care courses.

MEDICAL TERMINOLOGY

MRIS 102 (Introduction to Medical Vocabulary) is a one credit course which teaches basic medical terminology any health care professional needs in communicating in the written or oral form within any health care setting. This course currently meets the needs of the respiratory care student.

ENGLISH

Students complete ENGL 150 (English 1) and ENGL 250 (English 2) as part of the respiratory care curriculum. Faculty discussion has suggested that ENGL 211 (Industrial and Career Writing) might be a more relevant course than ENGL 250 for future career tasks a graduate might be required to perform. The ENGL 250 course requires students to

perform research and then write a lengthy research paper. ENGL 211 has students writing memos, policies and procedures which our graduates are being required to do earlier in their careers than in the past. The faculty are continuing to evaluate the suggested English course change and probably won't make any changes until after the JRCRTE accreditation site visit in the spring.

RESPIRATORY CARE COURSES

Evaluation of respiratory care course syllabi revealed course objectives follow the national credentialing examination matrices and the Joint Review Committee on Respiratory Therapy Education standards fairly well. Approximately one-half of the on-campus respiratory care courses include a lecture and a laboratory component. Each laboratory section is four hours in length and is limited to no more than eight students. This design provides for a lot of one-on-one and hands-on instruction between instructor and students. In doing so, instruction can be adapted to meet most student learning styles and special needs.

During the review process the following items were noted and discussed for action following the accreditation visit in the spring. Students, faculty and clinical adjunct instructors for a couple of years have stated that they thought students could benefit from an enhancement of the Cardiopulmonary Pharmacology course. Currently, the Cardiopulmonary Pharmacology course (RESP 156) is a two credit course. All communities of interest agree that increasing the course to three credit hours would improve the students' understanding of the pharmacologic agents students administer during their clinical internships and into their future careers.

In the second session of the summer semester students take a second disease course (RESP 170) along with the RESP 193 (Clinical Practicum 1). The RESP 170 course is now taught in the correspondence course format as students are off campus at various locations around the state doing their clinical internships. The faculty feel the two courses should be combined and the credit hour assignment of the RESP 193 course should increase from 4 credit hours to 6 credit hours.

During the final semester of the program students take RESP 293 (Clinical Practicum 2) and a seminar course RESP 281. These courses are taken concurrently and the material from one course overlaps into the other course and vice versa. The faculty are also contemplating combining the material from the seminar course into the material of the RESP 293 Clinical Practicum course and increasing the credit assignment of RESP 293 from 10 to 12 credits, picking up the 2 credits from the seminar course consolidation.

Some faculty discussion recently revolved around the consolidation of the adult and neonatal/pediatric ventilation material into one course entitled mechanical ventilation. The extra credits available from this consolidation could be utilized to increase the credit hour assignment of the current disease (RESP 160) or other RESP courses.

Preliminary discussions with the tutoring center regarding the inclusion of the structured learning format into other professional respiratory care courses has already begun. Improved student performance in on campus respiratory care coursework and on national credentialing examinations is the goal for this inclusion.

The procedural evaluations of students for basic and advanced respiratory care competencies are performed in four on campus courses (RESP 141,151,261,266) and during the two clinical internship courses (RESP 193 and 293). The procedural evaluations done in the laboratory prior to the clinical experience continue to be one of our students greatest assets in the hospital setting. We to some extent compete with 6 other community colleges for slots for student internships at various clinical affiliates. Community colleges currently are paying between \$.50 and \$1.50 per hour per student to each clinical affiliate for the education of their students. FSU does not nor has it ever paid for an internship experience of it's students. We have been able to continue this non-payment to affiliates because our students are more clinically prepared in the laboratory on campus than are the students coming from the community colleges. The less didactic instruction clinical instructors have to do in a time of staff restructuring and downsizing the happier and more productive the clinical staff is. FSU students have not required didactic education in the clinical settings. We feel students are in the hospital to refine the skills they learned in the laboratory and observe procedures done by other members of the healthcare team.

SECTION III: ENROLLMENT TRENDS OVER THE PAST FIVE YEARS

The data for the enrollment /graduate trends was ascertained from the Administrative Review of the Respiratory Care Program. Enrollment in the Respiratory Care Program reached a low in 1991. Intensive recruitment and retention efforts on the part of CAHS and the program faculty have increased both enrollment and graduation rates since the 1991 Respiratory Care Program review. The RESP program faculty and administration expect the increased enrollment trend to continue in the future.

	1991	1992	1993	1994	1995
Enrollment on-campus total*	25	47	48	46(a)	32(a)
Freshman			6	9	6
Sophomore			17	13	9
Junior			12	12	8
Senior			13	12	9
Pre-respiratory care			25	34	37

* Use official count (7-day count for semesters, 5-day count for quarters).

(a) Under-reported since number of students are simultaneously enrolled in HCSA, Pre-Nursing or Nursing.

In addition to increasing enrollment in the program, faculty have worked hard to improve retention rates. Historically the program had the highest attrition rate during the first semester of the program. Surveys indicated numerous reasons primarily revolving around adapting to campus life at a four year university and students not having adequate knowledge about the field of respiratory care.

The university has addressed the problem by including the Freshman Experience Seminar, called UNIV 290 in the 1994-95 academic year, and FSUS 100/101 in the 1995-96 academic year. These classes have aided not only the traditional college freshman but also the non-traditional college student.

The program requires all applicants to the program and Pre-RESP students to do an eight hour hospital visitation and be advised by the program director. This introduction to the field of respiratory care is further reinforced by having the first year students do four to five clinical observations during the first respiratory care procedures course offered in the winter semester.

All students in the program are required to see their advisor a minimum of two to three times per semester excluding the clinical phase for intrusive counseling sessions. These intrusive counseling sessions last approximately fifteen minutes to a half hour and promote one-on-one faculty student interactions in a private setting. Many student situations have been successfully resolved in this fashion improving retention and graduation rates.

Last year the program, through a university obtained grant, incorporated the structured learning assistance format into the RESP 119 course (Cardiopulmonary Anatomy and Physiology). This requires students whose current course average is below a "C" to attend mandatory tutoring workshops. After one year, the program had the lowest attrition rate of any SLA university course.

Incoming RESP and Pre-RESP students are highly encouraged to actively participate in the activities of the Respiratory Care Student Organization. Through participation in club activities Pre, first and second year RESP students interact together creating a sense of community amongst the various groups.

Graduates

	1991-2	1992-3	1993-4	1994-5	1995-6
Respiratory Care	13	11	24	27	24

We expect a decline in the number of graduates in 1997 (down to 17) due to several students leaving the program for medical reasons, and also due to several not liking the duties they were required to perform as a Respiratory Therapist. Three years ago, in the first Respiratory Care Procedures course (RESP 141) six four-hour observations of respiratory therapists in action in various health care settings were required. This introduction to job related tasks was designed to give students an idea of just what a Respiratory Therapist did in the course of an average shift of an average day. It was hoped that this would assist students early on in deciding if they had chosen the curriculum that was right for them. For the first two years of this observation project our objective was met. For some unknown reason this past year was very unique in that students got a couple of weeks into the first clinical practicum and then decided they did not like direct care of ill patients. We intend to continue the clinical observations in the RESP 141 course. A couple of the students who had withdrawn due to illness have indicated a desire to re-enter the curriculum at the point they left in this upcoming year.

SECTION IV: EVALUATION OF FACILITIES AND EQUIPMENT

The laboratory facilities of the respiratory care program at Ferris State University are located on the third floor of the Victor F. Spathelf Center for Allied Health Sciences (VFS). VFS 324 occupies a space of 37 feet by 78 feet, and can accommodate 30-40 students comfortably. It is used for instruction of all respiratory care procedures and lectures. A movable partition can close off the two halves of the room, creating two separate laboratory/classroom spaces. When open, the rooms can be used as one large, integrated laboratory.

In the room, there are several cabinets which hold disposable and non-disposable respiratory care supplies. There is a separate closet with shelving to accommodate more supplies. There are gas outlets (which carry compressed air at 50 psi) and suction (vacuum) outlets in the walls.

Classroom instruction takes place mostly in this classroom in the VFS building, with some classes being taught in other nearby lecture rooms as necessary. A computer laboratory, containing more than 20 IBM-compatible (some equipped with "Windows 95") computers is located within the VFS building, available for student use approximately 56 hour per week. It can be scheduled for instructional use and testing as needed, although most commonly it is used for self-directed computer simulations, quizzes and tutorials. Through the mainframe, students can access the Internet, the medical databases (such as Medline and CINAHL), e-mail (each student has an e-mail address), and many other network resources (word processing, databases, and so on).

The office of the respiratory care program director/department head is located on the fourth floor of the VFS building. Some student and program records are kept in this office. The offices of the program faculty are located on the third and fourth floors of the VFS building. Each office is self-contained, and provides space for small meetings and confidential student advising. Each faculty member has a program owned 486 computer connected to the network and desk jet printer on their desk for their use.

Within the laboratory of the respiratory care program is found most of the equipment needed to introduce students to the common procedures used in respiratory care today. There are, for example, enough adult ventilators for each student to work on his/her own ventilator in the course where ventilator concepts are taught. Students spend many unhurried hours practicing and learning at their own pace. The laboratory has typically been open for student practice from 7:00 a.m. to 5:00 p.m. on Monday through Friday. Several evenings a week the laboratory is open until 8:00 or 9:00 p.m. for tutoring or procedural evaluations. The evening laboratory sessions have been staffed by a student tutor or a part-time faculty member. The laboratory/classroom available to the program is modern, well lighted and presents an instructionally sound environment for student education.

A small supply room housing the various medical gas cylinders used by the program is located on the first floor of the VFS building off of the loading dock.

A list of major items of equipment available for student use is attached. Also attached are lists of library resources available in the in the respiratory care lab, and lists of computer tutorials, simulations and videotapes available for instructional purposes. All of the texts required and recommended by the program are shelved in the respiratory care section of the Health Sciences Library.

Respiratory Care Program Capital Equipment Inventory

Equipment	Brand	Model #	No.
Ventilator	Puritan-Bennett	MA-1	2
Ventilator	Puritan-Bennett	7200	1
Ventilator	Bennett	AP-4	1
Ventilator	Siemens-Eléma	Servo-900c	1
Ventilator	Sechrist	IV - 100 B w/monitors	2
Ventilator	Bird	6400	1
Ventilator	Bird	Mark 2	1
Ventilator	Bird	Mark 6	1
Ventilator	Bird	Mark 7	5
Ventilator	Bird	Mark 10	1
Ventilator	Bird	Mark 14	1
Ventilator	Bear	Bear 3	1
Ventilator	Bear	Bear 2	1
Ventilator	Bear	BP 200	2
Ventilator	Bourns	BP 200 w/ monitor	1
Ventilator	Monaghan 700		1
Low pressure alarms	Ventronics	Model 5520	3
Low pressure alarms	Healthdyne		2
CPAP machine	Respironics Inc.	Sleep Easy II	2
Adult Test Lung	MI instruments		4
Infant/Adult Test Lung	MI Instruments		1
Lung Model	Drager		1
Infant lung simulator	Bourns	LS-130	1
Infant Lung/Airway Simulator			1
Infant Intubation Model			1
Adult Intubation Model	MPL		2
Adult Intubation Model			1
Thorax cut-away lung model			1
Resusci-Annies			2
Arterial Training Arm			2
Lung Model	MPL		3
Resusi-Head			1
Cabbage Patch Kid			1
Heart Model			1
Infant/fetal models			2
Compressor	Timeter	Airdyne 2000	1
Oxygen Concentrator	DeVO2		1
Oxygen Concentrator	DeVilbiss		1
Portable LOX	Healthdyne		1
Oxygen Analyzer	Beckman		4
Oxygen Analyzer	Mira		2
Oxygen Analyzer	Ohio		5

Equipment	Brand	Model #	No.
Spirometer	Wright		3
Spirometer	Bear	VM- 90	1
Spirometer	Bourns	LS-75	1
Spirometer	Flowmate		1
Spirometer	Ohio	827	1
Volume monitor	Ohmeda		1
NIF/MIP manometer			4
Peak Flowmeter	Wright		1
PFT Function Lab	SRL-Medical		1
PFT machine	Dataloop		1
9-liter spirometer	Collins		1
Super syringes	Collins		2
Spirocare	Marion		3
Computer	Packard Bell		1
Computer	Zenith		1
Computer	NEC		1
Computer	Tenex	(faculty offices)	3
Printer	Epson		1
Printer	Hewlett-Packard DeskJet	(faculty offices)	3
Overhead projector			1
File Cabinet		4 drawer	2
File Cabinet		2 drawer	1
Cart			7
Beds			2
Bed side table			2
B/P	wall		2
B/P	rolling stand		2
Percusser	G-5 Electronic	K-3	1
Neo/Ped humidifiers			5
Nebulizer	DeVilbiss	Ultrasonic Neb	1
Oxygen Tent	Ohio High Humidity	Pediatric Aerosol Tent	1
Isolette	Airshields		2
Light board	(x-ray light)		1
Pulse Oximeter	Nellcor		2
Teaching Stethoscopes	Littman		2
Stethoscope	Littman		2
Portable EKG monitor	Tektronix		1
Electrocardograph	Burdick	12-lead	1
Simulator	Dynatech Nevada	Med Sim 300	1
Simulator	Dynatech Nevada	Med Sim 23A	1
Oscilloscope	Johnnie Walker		1
EKG Printer	Johnnie Walker		1
Apnea Monitor	Healthdyne		2
Apnea Monitor	Electronic Medical, Inc.		1

RESPIRATORY CARE PROGRAM RESOURCES			
Video Tape Name	Location		
"1995 Briefing"	VFS 410		
AARC "Issues facing Respiratory Care-1992"	VFS 410		
AARC "Issues facing Respiratory Care-1993"	VFS 410		
Adult Star Ventilator for the Nineties	VFS 410		
Aerochamber Instructional Video	VFS 410		
Aerosol Cloud Enhancer (ACE)	VFS 410		
AMBU CPR Training tape	VFS 410		
Bloodborne Pathogens	VFS 410		
Breeze Ventilator	VFS 410		
Chronic Obstructive Pulmonary Disease	VFS 410		
Companion 2801 Volume Ventilator	VFS 410		
DALE	VFS 410		
Delivery of Virazole by the SPAG-2 Generator	VFS 410		
Exosurf-neonatal for Intratracheal Suspension	VFS 410		
Ferris State: A Career Commitment	VFS 410		
Flutter: Mucus Clearance Device	VFS 410		
HEPA-Tech 3010	VFS 410		
HIV and the Health Care Worker	VFS 410		
How to use and care for your Maxair Autohaler	VFS 410		
How to Use Your Ventolin Rotahaler	VFS 410		
Infant Star Ventilator	VFS 410		
Introduction to the PB 7200 ac Ventilator	VFS 410		
Issues facing Respiratory Care 1994	VFS 410		
Lee Memorial Hospital Career Opportunities	VFS 410		
Linear Tonometers Inc.	VFS 410		
MMCA/Misty OX Multifit System Hospital In-Service	VFS 410		
Monaghan PFM Sales Video	VFS 410		
Nellcor N-10 Pulse Oximeter Training Video	VFS 410		
Optihaler	VFS 410		
P/N L1253 V.I.P. Bird Ventilator	VFS 410		
Prefil Adjustable Electronic Aerosol Heater	VFS 410		
REM Star Choice Advantage	VFS 410		
Resistex Expiratory Resistance Exerciser	VFS 410		
Respiratory Therapy and Radiologic Technology	VFS 410		
Respiratory Therapy Conference "New Approaches to the Treatment of Asthma"	VFS 410		
Respiratory Therapy Conference "Sleep Disorders"	VFS 410		
Serevent	VFS 410		
Starting your Pulmozyme Therapy	VFS 410		
Survanta Administration Instructions	VFS 410		
Theory and Application of Neonatal Ventilation	VFS 410		
Trach Care	VFS 410		
Ventilator Inservice Video	VFS 410		
Video Symposium Series Back in Control	VFS 410		
VIP Bird Ventilator	VFS 410		
VIP Bird-Infant Pediatric Ventilator and Partner Volume Monitor	VFS 410		
VT 17 "Pressure Support Ventilation"	VFS 410		

COMPUTER PROGRAMS

VFS 405

<u>Simulation</u>	<u>Serial:</u>	<u>SIM#</u>	<u>MedEd</u>
Acker, Randy	21212969	212	MedEd
Anderson, Allie	21207969	207	MedEd
Chapman, Terri	21204969	204	MedEd
Chase, Gary	21219969	219	MedEd
Farley, Nelson	21203969	203	MedEd
Fields, Herb	21206969	206	MedEd
Gilson, Al	21214969	214	MedEd
Grant, Carrie	21205969	205	MedEd
Hill, Megan	21213969	213	MedEd
Hinds, Jena	21224969	224	MedEd
King, Travis	21215019	215	MedEd
Landon, Jeff	21220969	220	MedEd
Larsen, Andrew	21209969	209	MedEd
Martin, Doris	21202019	202	MedEd
McMillian, James	21221969	221	MedEd
Miller, Martha	21223969	223	MedEd
Morris, Bruce	21208969	208	MedEd
Norwood, Katy	21218969	218	MedEd
O'Brien, Mitch	21210969	210	MedEd
Pinkerton	21201969	201	MedEd
Pinkerton	21201969	201	MedEd
Stanton, Mark	21217969	217	MedEd
Taylor, Steven	21211969	211	MedEd
Tillan, Rob	21222969	222	MedEd
Vaughn, Vincent	21216969	216	MedEd
<u>Tutorials</u>	<u>Serial:</u>	<u>Company</u>	
Auto-Peep: Measurement and Management	18263-3	Medi-Sim	
Lung Cancer	18265-x	Medi-Sim	
Neuromuscular Disorders of the Brain and Spinal Cord	18261-7	Medi-Sim	
Permissive Hypercapnia	18262-5	Medi-Sim	
Pneumonia	18189-0	Medi-Sim	
Ventilator-Induced Lung Injury	18259-5	Medi-Sim	
CAHS Network			
<u>Respiratory Care Tutorials</u>			
ABG			
EKG I and II			
Hemodynamic Monitoring I and II			
Loop			
PB 7200AE			
Servo 900 C			
<u>Testing Simulations</u>			
Burn			
Drug			
Head			
Neuro			
Smoke			

CASSETTE TAPES			
Heart Sounds and Murmurs	B. Erickson	VFS 410	
Lung Sounds 2nd Edition	R.L. Wilkins	VFS 410	
LIBRARY RESOURCES			
RESPIRATORY CARE LAB (VFS 324)			
		Quantity	
Anatomy and physiology texts		2	
Arterial blood gas/fluid balance/acid-base balance texts		15	
Cardiology texts		16	
Chest physiotherapy texts		2	
Equipment texts		7	
General respiratory care texts		11	
Intubation/airway management texts		1	
Medical dictionary		2	
Microbiology texts		4	
Neonatal/pediatric texts		5	
Pathology texts		20	
Pharmacology texts		4	
Physician's Desk Reference			
Practice exam texts		7	
Radiology texts		5	
Ventilator manuals for all the program's ventilators			

Health Science Library Periodical Collection

Academic Medicine
American Journal of Cardiology
American Journal of Clinical Pathology
American Journal of Diseases of Children
American Journal of Epidemiology
American Journal of Forensic Medicine and Pathology
American Journal of Hospital Pharmacy
American Journal of Medicine
American Journal of Nursing
American Journal of Pharmaceutical Education
American Journal of Physiology
American Journal of Public Health
American Journal of Respiratory and Critical Care Medicine
American Journal of the Medical Sciences
American Nurse
American Review of Respiratory Disease
Anesthesia and Analgesia
Anesthesiology
Annals of Internal Medicine
Annals of Pharmacotherapy
Archives of Internal Medicine
Archives of Neurology
Archives of Pediatrics and Adolescent Medicine
Bioethics Quarterly
Biomedical Products
Blood
British Journal of Clinical Pharmacology
British Medical Journal
Canadian Journal of Public Health
Canadian Medical Association Journal
Canadian Nurse
Cancer Research
Cancer Treatment Reports
Chemical and Pharmaceutical Bulletin
Circulation
Cleveland Clinic Journal of Medicine
Cleveland Clinic Quarterly
Clin-Alert
Clinical Chemistry
Clinical Drug Investigation
Clinical Laboratory Science
Clinical Pharmacokinetics
Clinical Pharmacology and Therapeutics
Computers in Nursing
Controlled Clinical Trials
Critical Care Nursing Quarterly
Critical Care Quarterly
Current Topics in Microbiology and Immunology
Diagnostic Medicine
Drug Investigation
Drug Topics
Drugged
Electroencephalography and Clinical Neurophysiology
Emergency Medicine
European Journal of Clinical Pharmacology
European Journal of Respiratory Diseases
Experimental Brain Research
Hospital Progress
Hospital Topics
Hospitals
Hospitals and Health Networks
Immunology
Journal of the American Medical Association
Journal of the American Osteopathic Association
Joint Commission on Accreditation of Hospitals
Journal of Allergy
Journal of Allergy and Clinical Immunology
Journal of Allied Health
Journal of Applied Physiology
Journal of Bacteriology
Journal of Bioethics
Journal of Continuing Education in Nursing
Journal of Health, Politics, Policy and Law
Journal of Immunology
Journal of Infectious Diseases
Journal of Medical Education
Journal of Medical Ethics
Journal of Neurology
Journal of Nursing Care
Journal of Nursing Education
Journal of Pediatrics
Journal of Physiology
Journal of Professional Nursing
Journal of Respiratory Disease
Journal of the American Medical Association
Journal of Virology
Lancet
Medical Care
Medical Care Review
Metabolism Clinical and Experimental
Michigan Health and Hospitals
Michigan Hospitals
Michigan Medicine
Michigan Nurse
Morbidity and Mortality Weekly Report
Neurobiology of Disease
Neurology
New England Journal of Medicine
Nurse Educator
Nurse Practitioner
Nursing
Nursing and Health Care
Nursing Clinics of North America
Nursing Research
Pediatric Clinics of North America
Pediatrics
Public Health Nursing
R N
Research in Nursing and Health
Respiratory Care
Respiratory Management
Respiratory Technology
Seminars in Respiratory and Critical Medicine
Seminars in Respiratory Medicine

SECTION V: LABOR MARKET ANALYSIS

This report is based on data gathered in late 1996. Sources of information included the Michigan Occupational Information Service, US Bureau of Labor Statistics, and US Census Bureau. Additional sources of information included surveys of hospital-based respiratory care managers in Michigan and job postings in respiratory care journals.

EMPLOYMENT AND OUTLOOK

The Michigan Occupational Information Service, Bureau of Labor Statistics, and US Census Bureau all report that job opportunities are expected to remain good for respiratory therapists for the future. Employment of respiratory therapists is expected to increase much faster than the average for all occupations through the year 2005 because of substantial growth of the middle-aged and elderly population, a development that will heighten the incidence of cardiopulmonary disease.

The elderly are the most common sufferers from respiratory ailments and cardiopulmonary diseases such as pneumonia, chronic bronchitis, emphysema, and heart disease. As their numbers increase, these agencies report that the need for respiratory therapists will increase as well. In addition, advances in treating victims of heart attacks, accident victims, and premature infants (many of whom may be dependent on a ventilator during part of their treatment) will require the services of respiratory care practitioners. Rapid growth in the number of patients with AIDS also will boost demand because lung disease often accompanies AIDS.

The US Bureau of Labor Statistics reports that very rapid growth is expected in home health agencies, equipment rental companies, and firms that provide respiratory care on a contract basis. Because of increasing sophistication of therapeutic procedures for heart and lung disorders and new and improved equipment, opportunities are best for highly trained graduates of accredited programs. Additionally, opportunities are expected to be especially favorable for respiratory therapists having cardiopulmonary care skills and experience working with infants.

About 72,600 respiratory therapists were employed nationally in 1994. The United States Census Bureau reports that respiratory therapy is projected to be one of the 35 fastest growing occupations in the United States. From 1992 to the year 2005, the need for respiratory therapists is expected to increase by 41.4% to 49.9%.

In an attempt to directly demonstrate the national demand for respiratory therapists, ads were gathered from two of the biggest respiratory therapist job listings. First, job postings from *RC Advance*, a weekly publication, were gathered for a period of six months (March through August 1996). The average number of ads was 147 per issue, with a low of 139 and a high of 157. The previous Respiratory Care Program Review Committee reported that the *RC Advance* had an average of 113 ads per week from September to November 1991.

Ads were also obtained from the *AARC Times*, a monthly publication. The *AARC Times* had an average of 7 ads per month, with a low of 5 and a high of 8. Although this compares unfavorably with an average of 31 per month reported in the previous Respiratory Care Program Review Report, the *AARC Times* has experienced a sharp decline in ads since *RC Advance* came on the scene (the *Advance* gets faster results).

The Michigan Occupational Information Service reports that there were approximately 2,850 respiratory care personnel employed in Michigan in 1992. Most respiratory therapists are employed in hospitals. Others worked in nursing homes, clinics, university health centers, and various health services. The industry distribution for respiratory therapists is as follows:

Industry	% Employed
Hospitals, Public and Private	93.2
Offices and Other Health Practitioners	1.8
Health and Allied Services	1.3
Home Health Care Services	1.1
Other	2.6

An average of 110 annual openings is expected in Michigan through the year 2005, with 70 due to growth and 40 due to replacement of those who retire or leave the labor force for other reasons. Some additional openings will occur as workers change occupations. By the year 2005 the number of respiratory therapists is expected to increase by 32.4% in the state of Michigan.

Twenty hospital-based respiratory care managers (two in each of the 10 state districts), were surveyed to directly determine the demand for respiratory therapists in Michigan. Fifteen of these managers reported hiring respiratory therapists last year, and eleven of these reported filling full-time positions. This is in contrast to recent years, during which part-time hiring was the norm. Only one manager reported losing respiratory care positions this year, though many did in past years as a result of restructuring. Additionally, thirty percent of these RC departments currently have approved positions unfilled because they cannot find personnel to fill them. In recent years many hospitals underwent restructuring during which they froze or decreased the number of respiratory care positions. This appears to be over, because hiring is clearly on the increase.

EARNINGS AND ADVANCEMENT

Earnings for respiratory therapists vary depending on their experience, education, and certification, and the type, size, and geographic location of the employer.

The US Bureau of Labor Statistics reports that the national median annual earnings for respiratory therapists who worked year round full time in 1994 were \$30,212. The middle

50 percent earned between \$24,544 and \$34,996. The lowest 10 percent earned less than \$18,200; the top 10 percent, more than \$43,420.

The Michigan Occupational Information Service reports that the national average annual salary (1995) of respiratory therapists employed by hospitals and related institutions was \$31,500, with the middle range being \$28,000 to \$33,000. Registered respiratory therapists (with AMA accredited training) employed by the federal government had starting salaries of \$26,786 per year in 1996. The salaries of these federal government workers may be higher in some urban areas.

On the basis of a study done by the University of Texas, the US Bureau of Labor Statistics reports that the median annual salary, based on a 40-hour week and excluding shift and area differentials, for respiratory therapists in hospitals and medical centers was about \$30,888 in October 1994. The average minimum annual salary was \$25,978 and the average maximum was \$38,233.

The earnings reported for respiratory therapists in Michigan compare favorably to the national earnings. Respiratory therapists in Michigan earned average annual incomes of between \$22,656 and \$28,572 (1995).

In Michigan hospitals, the annual salaries (mid 1995) of respiratory therapists were:

	Average Minimum	Average Maximum
Statewide	\$25,480	\$33,800
Southeast	\$27,144	\$36,442
Southwest	\$25,667	\$33,693
West Central	\$24,066	\$32,323
Upper Peninsula	\$22,942	\$31,366

Michigan Occupational Service reports that respiratory therapists usually receive hospitalization and life insurance; paid vacation; sick leave; disability insurance; pension plans; tuition assistance; uniforms; and parking. Benefits are usually paid for, at least in part, by the employer. Additionally, respiratory therapists may also receive cost-of-living allowances. Additionally, workers who are nationally registered or certified advance more rapidly than do those without these credentials.

SECTION VI : PROGRAM PRODUCTIVITY COSTS

The productivity and costs data below is derived from documentation provided by the Office of Institutional Studies and is the most current data available. Data from 1992-93 was based on academic quarters while 1993-94 data was based on the semester system, so a comparison of data between 1992-93 and 1993-94 is not done, as the data is not comparable. As the enrollment and retention rates of the respiratory care program increase so does the number of student credit hours generated.

We as a program have been concerned that all respiratory care students are not included in the data generated below. Many of our students are dual degree students pursuing B.S. or Nursing degrees in conjunction with their respiratory care degrees. These students are not usually recognized in the computation of respiratory care data even though they take our courses and utilize our resources because they are recognized as B.S. degree or later program students.

Student Credit Hours

Year	Summer	Fall	Winter	F and W
1993-4	0	372.00	526.00	898.00
1994-5	340	401.00	492.00	893.00

Student Credit Hours/ FTEF

Year	Summer	Fall	Winter	F and W
1993-4	0	335.14	526.00	425.59
1994-5	2,207.79	401.00	492.00	446.50

Personnel

	1991	1992	1993	1994	1995
Tenure Track FTE	2	2	2	2	2
Overload/Supplemental FTEF	0.1	0.1	0.11	0	N/A
Adjunct/Clinical FTEF (unpaid)	50	50	50	50	50

The program has maintained two full-time faculty members and a program director since 1978. The increase in full-time faculty occurring in 1978 was required to bring the program into compliance with accepted accreditation requirements. Part-time faculty are utilized for clinical instruction and in the laboratory assessment and instruction of clinical students.

The combined professional experience of the faculty is 51 years of which more than two-thirds is in education. All full-time faculty have graduate degrees. To varying extents all have been involved in local, state and national professional associations.

The program has been very fortunate to have approximately 50 unpaid adjunct clinical

instructors working with our students each semester. This is significant in light of the fact that all of the community colleges in Michigan that have respiratory care programs pay anywhere between \$.50 and \$1.50 per hour per student to have a student in a clinical site at a hospital. We have been able to compete for clinical sites by preparing a more highly qualified student ready to assume some respiratory care duties after a brief orientation to the hospital and unit. Whereas the community college programs require clinical adjunct faculty (staff) to provide a great deal of didactic and clinical instruction of each student they send to a hospital .

Financial

Expenditures*	FY92	FY93	FY94	FY95
Supply & Expense	\$8,092	\$11,725	\$9,535	\$9,352
Equipment		1,140		500
Gifts and Grants	1,052	1,074	947	594

*Use end of fiscal year expenditures.

As a profession whose responsibilities are associated with sophisticated life support and monitoring equipment, there is a clear need to provide student exposure and procedural competence in a wide range of medical instrumentation. The program has employed a number of strategies to assure a comprehensive laboratory environment. In order to assure the availability of relatively current technology to students, the program has used a mixture of purchase, rental and loan arrangements.

In order to reduce institutional costs, the program has opted to rely more on the short term (monthly) rental of ventilators than the purchase of them. When they are purchased the program has uniformly purchased demonstration units which are less expensive than new units. In addition, the program has secured the donation of some ventilators and other equipment from hospitals it affiliates with when the hospitals are upgrading their equipment. On occasion the program has been loaned equipment from clinical affiliates for a short time frame when it was not needed for patient care. The capital equipment which is purchased by the program is carefully selected and limited to that which is considered "standard" or easily updated by the replacement of microprocessor chips.

The Respiratory Care Program supply and expense budget has stayed relatively static since the 1991 program review process. The program has maintained the high quality of instruction through the utilization of borrowed or donated equipment and supplies and funding through the Vocational Education grants and alumni contributions. Annually, the program receives a contribution of \$200.00 from the family of a graduate which is matched by the Ford Motor Company.

Review of instructional supply needs of the program suggests the need to continue to expand the availability of instructional and testing computer software for student use. The current equipment request list is comprised of two hospital beds along with minor disposable and permanent pieces of equipment.

SECTION VII: STUDENT PERCEPTIONS OF THE PROGRAM

During the ninth week of the Fall semester of 1996, a student perception of the program survey was given to both first and second year students. The assessment was completed during class time and collected by a faculty member. The questionnaire was completed and returned by 39 of the current 40 students in the program.

The total responses for each question in the instrument were combined for both groups of students. The cumulative totals are provided within this section. Not all students responded to all questions or made comments. In fact most students did not take the opportunity to comment. The comments are separated according to first and second year status in the program.

The areas where student displeasure was noted were related to clinical experiences, instructional material costs and the teaching of obsolete equipment in the area of mechanical ventilation.

Students (5) expressed displeasure with the coordination of their six week summer clinical internship and with faculty interactions. Due to the extended medical leave of the clinical coordinator the program director and several part-time faculty handled the clinical internship experiences last year.

The faculty of the program have always tried to be very cognizant of the cost of textbooks and materials purchased by students. Textbooks have been selected that could be utilized in more than one respiratory care course in an effort to reduce student costs.

Second year students commented in several questions that there were not pleased with having to learn and work with obsolete mechanical ventilators that often malfunctioned when there were state of the art mechanical ventilators available to them to work on in the laboratory.

The occasional low ratings by students in some areas were clearly minority opinions in most cases. In a majority of questioned areas, particularly relating to knowledge of instructors, availability of help, courses and objectives and interesting instruction the ratings were acceptable or better.

It would appear that there was minor concern on the part of the second year students with placement assistance. Typically the information related to resume writing and placement assistance is usually given during the last three weeks of Fall Semester and then throughout the Winter Semester prior to graduation. Most of the placement assistance is accomplished by faculty sharing job opportunities that are directly telephoned or written to them. The surveying of students prior to the distribution of this information yielded the responses of concern.

Those areas relating to professional courses and related non-professional courses were rated highly.

First year students utilized the “Don’t Know” response in answering questions about which they would not have had much information in the first nine weeks of the program.

STUDENT PERCEPTIONS OF FERRIS STATE UNIVERSITY RESPIRATORY CARE PROGRAM

INSTRUCTIONS: Rate each item using the following guide:

- E = EXCELLENT** means nearly ideal, top 5 to 10%;
- G = GOOD** is a strong rating, top one-third;
- A = ACCEPTABLE** is average, the middle-third;
- BE = BELOW EXPECTATIONS** is only fair, bottom one-third;
- P = POOR** is seriously inadequate, bottom 5 to 10%;
- DK = Don't know**

A comment column has been provided if you wish to explain your rating.

Please Rate Each Item Below	E	G	A	BE	P	DK	Comments
1. Courses in the Respiratory Care Program are: Available and conveniently located.	17	18	1	2	1		
Based on realistic prerequisites.	11	16	7	1			
2. Written objectives for courses in the program: Are available to students.	20	16	2		1		
Describe what will be covered in the course.	13	13	6	2			
3. Teaching methods, procedures and course content: Meet your occupational needs, interests, and objectives.	15	10	7	1	2	3	
Provide practice for developing job skills.	11	18	2	0	0	4	
4. Related courses (such as English, Mathematics, Medical Terminology, etc.) are: Pertinent to occupational instruction.	15	13	9	1	0	1	
Current and meaningful to you.	11	11	11	2	0		
5. Work Experience (internship) is: Readily available at convenient locations.	9	5	5	1	2	17	
Coordinated with faculty.	5	4	7	3	2	17	
Considered by you to be a valuable introduction to the respiratory care field.	12	8	4	3	0	10	
6. Career planning information or assistance: Meets your needs and interests.	3	13	9	1	2	11	
Helps you make career decisions and choices.	4	12	6	1	2	12	
7. Placement services are available to: Help you find employment opportunities.	2	7	5	0	1	22	
Prepare you to apply for a job.	2	7	6	1	3		
8. Instructors in the program: Know the subject matter and occupational requirements.	24	12	2				
Are available to provide help when you need it.	23	12	3				
Provide instruction so it is interesting and understandable.	20	11	4	1	2		

Please Rate Each Item Below	E	G	A	BE	P	DK	Comments
9. Instructional support services (such as tutoring, library resources) are: Available to meet your needs and interests.	12	17	7	2	0	1	
Available to all students on an equal basis.	14	12	7	1	0	2	
10. Instructional equipment is: Current and representative of industry.	5	11	5	1	1	15	
In sufficient quantity to avoid long delays in use.	3	10	6	0	0	17	
Current and in good condition.	4	4	8	3	0	16	
11. Instructional materials (e.g., textbooks and reference books) are: Available and conveniently located for use as needed.	17	17	2	1	1	0	
Current and meaningful to the subject.	16	16	5	0	0	0	
Not biased toward "traditional" sex roles.	17	18	1		1		
Available at reasonable costs.	7	9	12	3	3	3	

FIRST YEAR STUDENT COMMENTS FROM THE PERCEPTIONS SURVEY

1. Courses in the Respiratory Care Program are:

Available and conveniently located.

Many time conflicts with other classes

Based on realistic prerequisites

Please make MORE clear what is transferable so that we aren't disappointed when in the program and have to retake a class. Better communication.

4. Related courses (such as English, Mathematics, Medical Terminology, etc.) are:

Pertinent to occupational instruction.

Medical Terminology is the exception, very useful class

SECOND YEAR STUDENT COMMENTS FROM THE PERCEPTIONS SURVEY

2. Written objectives for courses in the program:

Are available to students.

Depending on the instructor(summer?)

Describe what will be covered in the course

Need to work on pharmacology class

3. Teaching methods, procedures and course content: **Meet your occupational needs, interests, and objectives.**

A book list of other authors should be made available besides course book

Fine tuning needed in certain areas of class

Teaching methods could use a little work in some classes

If we are to use all the ventilators, they should all work properly and have all the equipment to put together

Except for our Pharmacology class, in which the teacher didn't teach. We taught ourselves

Methods and procedures taught are great because of the laboratory usage

Second year very poor and boring (except Neonatal Ventilation)

MA-1 ventilator Why?

Provide practice for developing job skills.

Not enough emergency teaching

4. Related courses (such as English, Mathematics, Medical Terminology, etc.) are:

Pertinent to occupational instruction.

English 250 works good with the program to learn more on a specific subject in your field

Current and meaningful to you.

Too much time is spent on obsolete equipment

5. Work experience (internship) is:

Readily available at convenient locations.

No, there is not much to pick from, and I think this program expects it's students to drive way too far, we do have lives besides school.

Locations not convenient for all! Closest is Grand Rapids then Lansing
(no organization for car pooling)

Coordinated with faculty

Who ever the clinical coordinator is should be willing to work with the students and be there for us, should return our phone calls and should show up at the sites

Summer clinical- No faculty around

Need more coordination with faculty

Considered to you to be a valuable introduction to the respiratory care field.

Summer internship in my opinion is over-extended 40 hours a week is an over-kill for as much/little as we know

A good confidence booster

6. Career planning information or assistance:

Meets your needs and interests.

Have not gotten into career planning per say as of yet

Helps you make career decisions and choices.

Instructors are available for discussing

7. Placement services are available to:

Help you find employment opportunities.

?Where

Prepare you to apply for a job.

Cannot comment haven't seen or done either

Not yet

8. Instructors in the program:

Know the subject matter and occupational requirements.

When Julian Easter taught us, he did not know the subject matter or occupational requirements as a result we as a class are deficient in the areas taught

Some did some didn't, could use a little work

Some better than others

Some instruction could be a little more structured

Department head should not instruct

Depends on the instructor teaching the course

They know it

Are available to provide help when you need it.

Some better than others

Depends on the instructor teaching the course
Yes I guess so

Provide instruction so it is interesting and understandable.

Certain subjects need fine tuning

Some teachers

Department head should not instruct

Depends on the instructor teaching the course

Except for Brenda Brown classes (all the time hers are interesting, the others need vast help, Chemistry was more entertaining)

9. Instructional support services (such as tutoring, library resources) are:

Available to meet your needs and interests.

Not comfortable with FSU library

Should have more people who know more about the computers in the Health Science Library and are willing to help the students know where everything is located

I think there should be more structured learning assistance courses as you go on in the program

There are no tutors

10. Instructional equipment is:

Current and representative of industry.

Many things outdated - MA-1 why?

Some outdated

Please update vents

In sufficient quantity to avoid long delays in use.

No

Current and in good condition

MA-1 ventilators have air leaks

Again, we do have a lot of new equipment, but way too much time is spent on equipment that no hospitals use anymore

11. Instructional material (e.g., textbooks and reference books) are:

Available and conveniently located for use as needed.

More step by step instruction on usage, not just do it

Current and meaningful to the subject.

Dislike Neo text/Equipment book

Available at reasonable costs.

Would like lower costs

Are a little high but is expected

Could be a little cheaper

SECTION VIII: FACULTY PERCEPTIONS SURVEY

The Respiratory Care Program faculty including the program director were given a perceptions survey structured like the PROE survey utilized during the 1991 Program Review. The survey was completed in October and November of 1996 and the data was compiled by a faculty member outside of the Respiratory Care Program.

The survey instrument and data are attached. The comments from each question are provided below along with the programs strengths and areas of need as perceived by the faculty.

Comments:

1. Feedback is sought, but often not responded to (or appropriately done).
2. Most RESP courses have objectives.
Some courses have no objectives or they are not followed well.
3. Sometimes such data is well used, sometimes not.
4. JRCRTE Standards are used in most planning, but not used effectively in evaluation.
5. We have always performed graduate and employer surveys six months after graduation. I am not certain that this feedback is effectively used. I have not seen the data.
6. These classes seem to meet the needs of the students.
7. Clinical sites are becoming less readily available.
- 8.
9. Bias appears to occur, although it does not appear to be discriminatory in the sense mentioned (gender, race, etc.)
10. We utilize intrusive counseling 2-3 times per semester with first and second year students. Some students have complained of not meeting enough with their advisors or being improperly advised.
11. The faculty does most of this because of off campus internship prior to graduation. Some students have trouble getting access to such services while on clinical. Overall, these services seem to be good.

12. Vocational education, alumni and affiliate donations along with rented equipment helps us keep current. Some equipment is out of date and money is often tight (for repairs and updating), but equipment donations and lots of work keep it going. Computer programs are rapidly becoming out of date.
13. The advisory committee has not met for five years. The people who are (in theory) on the committee seem excellent.
14. We graduate some very good students.

Respiratory Care Program Strengths

1. Strong commitment of faculty to the program (instruction, advising)
2. Clinical affiliate support without monetary remuneration.
3. A significant number of graduates furthering their education past the A.A.S degree (B.S. degrees in HCSA, Allied Health Teacher education, and Applied Biology)
4. Structure of the program allowing students to complete the Respiratory Care and R.N. associate degree in three years.
5. Classroom and laboratory facilities.
6. Location at a four year university allows the program to be strategically positioned to start a bachelor's degree for the advanced practitioner.
7. Clinical affiliate and employer satisfaction with student and graduate job performance.
8. Job placement of our graduates.

Respiratory Care Program Areas for Improvement

1. Need to have an active advisory committee.
2. The need to improve communication between the program, students, and affiliates during clinical rotations.
3. Inconsistent faculty coverage and the increased reliance on part-time faculty for the past few years due to extended, frequent medical leaves.

FACULTY PERCEPTIONS OF FERRIS STATE UNIVERSITY RESPIRATORY CARE PROGRAM

INSTRUCTIONS: Rate each item using the following guide along with the explanations accompanying each question:

E = EXCELLENT

G = GOOD

A = ACCEPTABLE

BE = BELOW EXPECTATIONS

P = POOR

DK = Don't know

A comment column has been provided if you wish to explain your rating.

Please Rate Each Item Below	E	G	A	BE	P	DK	Comments
<p>1. Participation in Development of Program</p> <p><i>Excellent-</i> Administrators and others involved in developing and revising the college plan for this occupational program seek and respond to faculty, student and community input.</p> <p><i>Poor-</i> Development of the program does not take into consideration needs or requirements outside of the immediate programmatic needs.</p>	1	1		1			
<p>2. Course Objectives</p> <p><i>Excellent-</i> Objectives have been developed for the courses in the Respiratory Care Program and are used to plan and organize instruction.</p> <p><i>Poor-</i> No objectives have been developed for the courses in the Respiratory Care program.</p>	1	2					
<p>3. Use of Information on Labor Market Needs:</p> <p><i>Excellent-</i> Current data on labor market needs and emerging trends in the job market are used in developing and evaluating this program.</p> <p><i>Poor-</i> Labor market data is not used in planning or evaluation.</p>	1		2				
<p>4. Use of Joint Review Committee Standards</p> <p><i>Excellent-</i> JRCRTE standards are used in planning and evaluating this program and content of its courses.</p> <p><i>Poor-</i> No recognition is given to JRCRTE standards in planning and evaluating this program and content of its courses.</p>	1	1	1				
<p>5. Use of Student Follow-Up Information</p> <p><i>Excellent-</i> Current follow-up on graduates and those who do not complete all of the program are consistently used in evaluating this program.</p> <p><i>Poor-</i> Student follow-up information has not been used in evaluating this program.</p>	1		1			1	
<p>6. Relevance of Supportive Courses</p> <p><i>Excellent-</i> Applicable supportive courses (such as medical terminology, microbiology, etc.) are relevant to program goals and current to the needs of students.</p> <p><i>Poor-</i> Supportive course content reflects no planned approach to meeting needs of students in this program.</p>	1	1	1				

Please Rate Each Item Below	E	G	A	BE	P	DK	Comments
<p>7. Provision for Work Experience/ Internship</p> <p><i>Excellent</i>- Ample opportunities are provided for related work experience is available for students.</p> <p><i>Poor</i>- Few opportunities are provided to students for related work experiences.</p>	2		1				
<p>8. Program Availability and Accessibility</p> <p><i>Excellent</i>- Students and potential students desiring enrollment in this program are identified through recruitment activities, treated equally in enrollment selection, and not discouraged by unrealistic prerequisites. The program is readily available and accessible at convenient times and locations.</p> <p><i>Poor</i>- The program is not available or accessible to most students seeking enrollment. Improper discriminatory selection procedures are practiced.</p>		3					
<p>9. Efforts to Achieve a Bias Free Environment</p> <p><i>Excellent</i>- Emphasis is given to assuring that no illegal or improper bias (whether it be sex, race, or other) occurs in this program.</p> <p><i>Poor</i>- Improper bias appears to be the norm.</p>	1	1		1			
<p>10. Provision for Program Advisement</p> <p><i>Excellent</i>- Instructors in the program advise students on program and course selection. Registration procedures facilitate course selection and sequencing.</p> <p><i>Poor</i>- Instructors make no provision for advising students on course and program selection.</p>	1	1	1				
<p>11. Provision for Career Planning and Guidance</p> <p><i>Excellent</i>- Students in this program have ready access to career planning and guidance services.</p> <p><i>Poor</i>- Little or no provision is made for career planning and guidance services for students enrolled in this program.</p>		3					
<p>12. Adequacy of Instructional Facilities</p> <p><i>Excellent</i>- Instructional facilities and equipment meet the program objectives and student needs.</p> <p><i>Poor</i>- Facilities and equipment for this program generally are restrictive, dysfunctional, or overcrowded.</p>	1		2				
<p>13. Use of Advisory Committees</p> <p><i>Excellent</i>- The advisory committee for this program is active and representative of the occupation.</p> <p><i>Poor</i>- The advisory committee for this program is not representative of the occupation and is not functional.</p>				1	1		
<p>14. Perception of Students Who Go On for a B.S. Degree</p> <p><i>Excellent</i>- Respiratory Care students going on for a B. S. Degree are some of the better students in C.A. H.S.</p> <p><i>Poor</i>- Respiratory Care students going for a B.S. degree are generally poor students</p>	2	1					

SECTION IX : NBRC CREDENTIALING EXAMINATION SCORES

There are no mandatory state licensure examinations for respiratory care practitioners within the state of Michigan. However, there are national credentialing examinations administered by the National Board for Respiratory Care (NBRC). Respiratory care program graduates are eligible to sit for the Entry Level Certification Examination six months after graduation. Successful candidates are awarded the title Certified Respiratory Therapy Technician (CRTT). Therapist level graduates become eligible for a higher professional credential only after they pass the Entry Level Certification Examination and have one year of experience in the respiratory care field. This higher credential is the Registry credential Registered Respiratory Therapist (RRT). This consists of two distinct examinations which may be taken on the same day or on separate examination dates. The first examination is a 100 multiple choice examination testing both applicable theory and clinical knowledge and is called the Written Registry Examination. The second examination consists of a series of ten branching logic latent imaging clinical simulations that assesses clinical knowledge, safety and practice. A graduate must successfully pass both examinations prior to the awarding of the RRT credential by the National Board for Respiratory Care. All examinations administered by the NBRC have been validated based upon the NBRC Job Analysis Surveys conducted every five years. The NBRC is one of very few national credentialing bodies which conducts such examination validations.

Results of each credentialing examination are provided to the program. While individual graduates are not identified by name on the examination report, individual scores are provided. The performance of FSU graduates on the three national examinations (Entry Level Certification, Written Registry and Clinical Simulation Exam) are provided below.

% of Graduates At or Above the NBRC Cut Score

NBRC Examination	1991	1992	1993	1994	1995
Entry Level Practitioner (CRTT)	100%	91%	100%	100%	88%
Written Registry	100%	100%	100%	92%	94%
Clinical Simulation	100%	100%	100%	87.5%	63%

The cut score of each examination varies from year to year and is set by the NBRC. Results from all but the last set of examination scores of graduates indicate the curriculum is meeting the basic competency goal of the program and is above the national average in preparing graduates in the theoretical and clinical realms. The overall national pass rates for the 1995 NBRC examinations were 74 % on the entry level exam, 90% on the written registry and 60% on the clinical simulation examination. FSU was still above the national pass rates and should be proud of the performance of its graduates on these examinations.

The area of weakness that has been noted is in the decision making skills portion of the clinical simulation examinations. The program started addressing this issue several years ago when the faculty started heavily emphasizing critical thinking and problem solving skills in the very first respiratory care course (RESP 119) students take in the program.

Case studies introduced into the didactic material presented in the Cardiopulmonary Anatomy and Physiology course assisted students in integrating theoretical material and clinical practice very early on. Students enjoyed the case studies format so well, they asked a faculty member to meet with them one hour once a week for a voluntary case studies review group. This group varied in size over the years from a low of five people to a high of twelve people. The first couple of weeks the faculty member led this group and then after that a student would present a case study for discussion. The emphasis on improving the decision making skills of each student during each respiratory care class has continued over the past few years.

Included in the facilities and equipment section is a list of the computer programs (tutorials, computer aided instruction packages and teaching/testing clinical simulations) utilized in the various courses throughout the respiratory care program. These computer programs have assisted students and graduates in preparation and review for the national credentialing examinations. Verbal feedback from graduates indicates that the computerized teaching/testing simulations taken by them was a component of their success in passing the credentialing examinations.

SECTION X : GRADUATE SURVEYS

The Respiratory Care Program has been conducting graduate surveys since 1981. The current survey instrument is one the Joint Review Committee for Respiratory Therapy Education created and requires. Since the program is currently undergoing an accreditation review the Program Review Panel thought the currently used JRCRTE survey would provide the data necessary without sending graduates a second survey.

Respiratory Care Program graduates are sent a survey based on the National Board for Respiratory Care Job Analysis approximately six months post graduation. The graduate survey utilized is 101 questions in length and allows for graduate self-reporting of cognitive skills, clinical competence and professional behavioral traits. It is included at the end of this section.

	1991	1992	1993	1994	1995
Number of Graduates	10	11	12	24	25
Number of Graduates responding to survey	10	2	9	18	15
% of Graduates At or Above the NBRC Cut Score	100%	100%	100%	100%	100%

Graduates rate themselves **above** the cut score of 3 on a scale of 1-5 as set by the NBRC. Overall, graduates viewed themselves as highly professional and adequately prepared for employment in the field of respiratory care. Overall graduates express satisfaction with their job performance.

As a program we would like to see an improved return rate of the graduate surveys. Our plan is to more closely track graduates' places of employment and home addresses to maintain a more current graduate database. Telephone call follow up reminders after the graduate surveys are mailed might improve the rate of return of those surveys as desired by the program faculty.

Graduate Survey

A. Data Collection

- _____ 1. Review existing data in patient record (e.g. respiratory care orders, patient history, physical examination, laboratory data, chest & *upper airway x-ray results, progress notes, *laboratory result, results of respiratory and *cardiovascular monitoring.)
- _____ 2. Recommend procedures to obtain additional data (e.g., chest & *upper airway x-rays, ABGs, spirometry, oximetry, *laboratory studies, *respiratory and *hemodynamic studies.)
- _____ 3. Assess patient's overall respiratory status by inspection, palpation, auscultation and *percussion.
- _____ 4. Interview patient to determine current status (e.g., level of consciousness, ability to cooperate, *exercise tolerance and *nutritional status.)
- _____ 5. Perform and/or interpret results of bedside procedures (e.g., lung mechanics, pulse oximetry, blood gas analysis, tracheal cuff pressure, *capnography, *hemodynamic monitoring and *shunt studies.)
- _____ 6. *Perform and/or interpret the following: spirometry and *other pulmonary function studies and *oxygenation studies.
- _____ 7. Interpret results of procedures (e.g., ABGs, oximetry, *fluid balance, *sleep studies and *hemodynamic monitoring.)
- _____ 8. Determine appropriateness of prescribed therapy, recommend modifications where indicated, and participate in the development of the respiratory care plan.
- _____ 9. *Inspect and describe findings of chest and lateral neck x-rays.
- _____ 10. *Determine pathophysiological state and perform quality assurance.

B. Equipment Management

- _____ 11. *Perform quality control procedures for gas metering devices, pulmonary function equipment, blood gas analyzers and ventilator volume/flow/pressure calibration.
Select and obtain equipment and assure cleanliness of equipment appropriate to the respiratory care plan, including the following:
- _____ 12. *Oxygen administration devices, humidifiers and aerosol generators.
- _____ 13. Gas delivery, metering and clinical analyzing devices (e.g., regulators, flowmeters, blenders, oxygen analyzers, blood gas analyzers, pulse oximeters, *oxygen concentrators and *capnographs.)
- _____ 14. Resuscitation devices (e.g., manual bag-valve, *demand-valve)
- _____ 15. Suctioning devices
- _____ 16. Ventilators (e.g., pneumatic, microprocessor, *high frequency, *BiPAP, *transport and *home)
- _____ 17. Artificial airways (e.g., oral and nasal airways/tubes, intubation equipment, *double lumen endotracheal tube and *exhaled CO2 detection devices)
- _____ 18. *Hemodynamic monitoring devices
- _____ 19. *Fiberoptic bronchoscopes

CHAPTER 1: Employer & Graduate Surveys

Assemble, check for proper function and identify malfunctions of the following equipment:

- _____ 20. Gas delivery, metering and clinical analyzing devices (e.g., regulators, flowmeters, blenders, oxygen analyzers, pulse oximeters, blood gas analyzers, *co-oximeter and *oxygen concentrators)
- _____ 21. Therapeutic gas administration devices, humidifiers and aerosol generators
- _____ 22. Ventilators and patient breathing circuits (continuous and IPPB)
- _____ 23. Manual resuscitators, intubation equipment and artificial airways
- _____ 24. Suctioning devices
- _____ 25. Metered dose inhalers and spacers
- _____ 26. *Hemodynamic monitoring devices
- _____ 27. *Vacuum systems (e.g., regulators and pleural drainage devices)

Take action to correct malfunctions of the following equipment:

- _____ 28. *Therapeutic gas administration devices, humidifiers and aerosol generators
- _____ 29. Ventilators (e.g., microprocessor, *high frequency, *BiPAP, *home and *transport)
- _____ 30. Resuscitation devices (e.g., manual, *demand-valve)
- _____ 31. Suctioning devices
- _____ 32. Gas delivery and analyzing devices
- _____ 33. Intubation equipment and artificial airways
- _____ 34. *Arterial catheters and pulmonary artery catheter
- _____ 35. *Vacuum systems — pleural drainage devices
- _____ 36. *Blood gas analyzers and sampling devices

C. Clinical Practice

- _____ 37. Explain planned therapy and goals to patient
- _____ 38. Note, interpret and record patient's responses to therapy
- _____ 39. Protect patient from nosocomial infection by adhering to infection control policies and procedures

Conduct therapeutic procedures to achieve maintenance of a patient airway including:

- _____ 40. Maintain proper cuff inflation and position of endotracheal or tracheostomy tube
- _____ 41. *Select endotracheal and tracheostomy tubes
- _____ 42. *Perform endotracheal intubation
- _____ 43. *Change tracheostomy tubes
- _____ 44. *Extubate the patient

Conduct therapeutic procedures to achieve removal of bronchopulmonary secretions including:

- _____ 45. Instruct and encourage proper coughing techniques
- _____ 46. Perform postural draining, percussion and vibration
- _____ 47. Administer aerosol therapy and prescribed agents (e.g., bronchodilators, saline, mucolytics)
- _____ 48. Perform suctioning with and without artificial airways
- _____ 49. *Initiate PEP

CHAPTER 1: Employer & Graduate Surveys

- _____ 50. *Select closed system suction catheter
Conduct therapeutic procedures to achieve adequate spontaneous and artificial ventilation including:
- _____ 51. Instructing patient in proper breathing technique, incentive spirometry and *muscle training
- _____ 52. Initiate and adjust continuous mechanical ventilation when setting is/is not specified
- _____ 53. Institute and modify weaning procedures
- _____ 54. *Initiate and adjust inverse ratio ventilation
- _____ 55. *Initiate and adjust pressure control ventilation
- _____ 56. *Initiate and adjust external negative pressure ventilation
Conduct therapeutic procedures to achieve adequate arterial and tissue oxygenation including:
- _____ 57. Administer oxygen to minimize hypoxemia, (e.g., on and off ventilator, before/after suctioning)
- _____ 58. Initiate and adjust CPAP/PEEP
- _____ 59. *Initiate and adjust combinations of IMV/SIMV, PEEP, pressure support and pressure control ventilation
- _____ 60. *Initiate and adjust BiPAP therapy
Evaluate and monitor patient's response to respiratory care including:
- _____ 61. Vital signs, cardiac rhythm and sputum production
- _____ 62. FIO₂/liter flow, tidal volume, respiratory rate, airway pressure, *mean airway pressure, I:E ratio and maximum inspiratory pressure
- _____ 63. *Recommend chest x-ray, as well as measurement of electrolytes, hemoglobin, WBC count and/or chemistries
- _____ 64. *Perform transcutaneous gas monitoring, oximetry and co-oximetry
- _____ 65. *Perform/measure/calculate and interpret hemodynamic parameters
Make necessary modification in therapeutic procedure including:
- _____ 66. Terminate treatment based on patient's adverse reaction
- _____ 67. Modify bronchial hygiene
- _____ 68. Adjust ventilator and alarm setting, change patient breathing
- _____ 69. Change type of incentive breathing equipment or adjust incentive goals based on patient response
- _____ 70. Change type of equipment, dilution of medication, or modify patient breathing patterns for aerosol therapy based on patient response
- _____ 71. Change mode of administration or adjust flow/gas concentration for oxygen and other gas therapy based on patient response
- _____ 72. Modify artificial airway to include: inflate/deflate cuff, change or alter position of endotracheal and tracheostomy tubes based on patient response
Recommend modification in respiratory care based on patient response including:
- _____ 73. Recommend discontinuation of, or change in, duration of therapy
- _____ 74. Recommend change in oxygen therapy
- _____ 75. Recommend change in aerosol drug dosage or concentration

CHAPTER 1: Employer & Graduate Surveys

- _____ 77. Recommend change in mechanical ventilator settings
- _____ 78. Recommend change in weaning procedures
- _____ 79. *Recommend insertion of chest tubes
- _____ 80. *Recommend initiation, or change in, BiPAP therapy
- _____ 81. *Recommend initiation, or change in, pressure control ventilation
Initiate and conduct or modify respiratory care techniques in an emergency setting:
- _____ 82. CPR
- _____ 83. *Initiate ECG monitoring
- _____ 84. *Recommend defibrillation, administration of bicarbonate and instillation of medication
- _____ 85. *Perform endotracheal intubation
Assist physician with special procedures, including:
- _____ 86. *Bronchoscopy, tracheostomy, intubation and cardioversion
- _____ 87. *Stress testing or sleep studies
Conduct pulmonary rehabilitation/home care, including:
- _____ 88. *Establish optimal therapeutic goals
- _____ 89. *Implement and monitor graded exercise program
- _____ 90. *Evaluate patient's progress

D. Professional Behaviors

Please mark the following statements as True (T) or False (F) and describe the circumstances on the back of this page for each statement that is answered with False (F).

- _____ 91. My professional integrity has never been questioned.
- _____ 92. I have never been criticized for being unfeeling or unsympathetic towards a patient or family.
- _____ 93. I have never been criticized for being unmotivated.
- _____ 94. My supervisors have never mentioned my uniform or grooming.
- _____ 95. No one has ever called me "unprofessional."
- _____ 96. I have never been criticized for being too direct or frank in dealing with patients, families or colleagues.
- _____ 97. I never attempt to perform a procedure or make a statement when I am unsure of myself.
- _____ 98. My charting and verbal reports have never been criticized.
- _____ 99. I have never been criticized for wasting time or "not planning ahead."
- _____ 100. I find input from colleagues and supervisors useful and I try to respect their ideas and follow their suggestions when possible.
- _____ 101. I never take shortcuts in performing service for my patients.

Today's Date

Your Date of Graduation

Name (please print) (optional)

Signature (optional)

SECTION XI: EMPLOYER SURVEYS

The Respiratory Care Program has been conducting employer surveys since 1982. The current survey instrument is one the Joint Review Committee for Respiratory Therapy Education created and requires. Since the program is currently undergoing an accreditation review the Program Review Panel thought the currently used JRCRTE survey would provide the data necessary without sending employers a second survey.

The employer surveys are based on the National Board for Respiratory Care Job Analysis Matrix. These surveys are mailed to employers of recent graduates approximately six months after graduation. The employer survey is consistent in length and comprehensiveness to the survey completed by the graduates. It is included at the end of this section.

% of Graduates At or Above the NBRC Cut Score

	1991	1992	1993	1994	1995
Number of Graduates	10	11	12	24	25
Number of Employers	10	2	9	12	10
% of Graduates At or Above the NBRC Cut Score	100%	100%	100%	100%	100%

Graduates were consistently rated by employers **above** the cut score of 3 on a scale of 1-5 as set by the NBRC. The reliability of the survey data could be impacted by rater inconsistency. It may be difficult for any supervisor to adequately assess the knowledge of a graduate by observation.

Over the past two years, we have obtained excellent feedback by having one-on-one discussions with the employers of our graduates. The expectation of the employers to have adequately prepared employees was well documented by the returned survey data. This indicates that the program is meeting its basic competency goal.

The faculty would like to see an improved rate of return of the employer surveys. Our plan the next time the surveys are mailed out is to follow up on the employer surveys with telephone calls to try to motivate employers to return the surveys.

Employer Survey

A. Data Collection

- _____ 1. Review existing data in patient record (e.g. respiratory care orders, patient history, physical examination, laboratory data, chest & *upper airway x-ray results, progress notes, *laboratory result, results of respiratory and *cardiovascular monitoring.)
- _____ 2. Recommend procedures to obtain additional data (e.g., chest & *upper airway x-rays, ABGs, spirometry, oximetry, *laboratory studies, *respiratory and *hemodynamic studies.)
- _____ 3. Assess patient's overall respiratory status by inspection, palpation, auscultation and *percussion.
- _____ 4. Interview patient to determine current status (e.g., level of consciousness, ability to cooperate, *exercise tolerance and *nutritional status.)
- _____ 5. Perform and/or interpret results of bedside procedures (e.g., lung mechanics, pulse oximetry, blood gas analysis, tracheal cuff pressure, *capnography, *hemodynamic monitoring and *shunt studies.)
- _____ 6. *Perform and/or interpret the following: spirometry and *other pulmonary function studies and *oxygenation studies.
- _____ 7. Interpret results of procedures (e.g., ABGs, oximetry, *fluid balance, *sleep studies and *hemodynamic monitoring.)
- _____ 8. Determine appropriateness of prescribed therapy, recommend modifications where indicated, and participate in the development of the respiratory care plan.
- _____ 9. *Inspect and describe findings of chest and lateral neck x-rays.
- _____ 10. *Determine pathophysiological state and perform quality assurance.

B. Equipment Management

- _____ 11. *Perform quality control procedures for gas metering devices, pulmonary function equipment, blood gas analyzers and ventilator volume/flow/pressure calibration.
Select and obtain equipment and assure cleanliness of equipment appropriate to the respiratory care plan, including the following:
- _____ 12. *Oxygen administration devices, humidifiers and aerosol generators.
- _____ 13. Gas delivery, metering and clinical analyzing devices (e.g., regulators, flowmeters, blenders, oxygen analyzers, blood gas analyzers, pulse oximeters, *oxygen concentrators and *capnographs.)
- _____ 14. Resuscitation devices (e.g., manual bag-valve, *demand-valve)
- _____ 15. Suctioning devices
- _____ 16. Ventilators (e.g., pneumatic, microprocessor, *high frequency, *BiPAP, *transport and *home)
- _____ 17. Artificial airways (e.g., oral and nasal airways/tubes, intubation equipment, *double lumen endotracheal tube and *exhaled CO₂ detection devices)
- _____ 18. *Hemodynamic monitoring devices
- _____ 19. *Fiberoptic bronchoscopes

Assemble, check for proper function and identify malfunctions of the following equipment:

- _____ 20. Gas delivery, metering and clinical analyzing devices (e.g., regulators, flowmeters, blenders, oxygen analyzers, pulse oximeters, blood gas analyzers, *co-oximeter and *oxygen concentrators)
- _____ 21. Therapeutic gas administration devices, humidifiers and aerosol generators
- _____ 22. Ventilators and patient breathing circuits (continuous and IPPB)
- _____ 23. Manual resuscitators, intubation equipment and artificial airways
- _____ 24. Suctioning devices
- _____ 25. Metered dose inhalers and spacers
- _____ 26. *Hemodynamic monitoring devices
- _____ 27. *Vacuum systems (e.g., regulators and pleural drainage devices)

Take action to correct malfunctions of the following equipment:

- _____ 28. *Therapeutic gas administration devices, humidifiers and aerosol generators
- _____ 29. Ventilators (e.g., microprocessor, *high frequency, *BiPAP, *home and *transport)
- _____ 30. Resuscitation devices (e.g., manual, *demand-valve)
- _____ 31. Suctioning devices
- _____ 32. Gas delivery and analyzing devices
- _____ 33. Intubation equipment and artificial airways
- _____ 34. *Arterial catheters and pulmonary artery catheter
- _____ 35. *Vacuum systems — pleural drainage devices
- _____ 36. *Blood gas analyzers and sampling devices

C. Clinical Practice

- _____ 37. Explain planned therapy and goals to patient
- _____ 38. Note, interpret and record patient's responses to therapy
- _____ 39. Protect patient from nosocomial infection by adhering to infection control policies and procedures

Conduct therapeutic procedures to achieve maintenance of a patient airway including:

- _____ 40. Maintain proper cuff inflation and position of endotracheal or tracheostomy tube
- _____ 41. *Select endotracheal and tracheostomy tubes
- _____ 42. *Perform endotracheal intubation
- _____ 43. *Change tracheostomy tubes
- _____ 44. *Extubate the patient

Conduct therapeutic procedures to achieve removal of bronchopulmonary secretions including:

- _____ 45. Instruct and encourage proper coughing techniques
- _____ 46. Perform postural draining, percussion and vibration
- _____ 47. Administer aerosol therapy and prescribed agents (e.g., bronchodilators, saline, mucolytics)
- _____ 48. Perform suctioning with and without artificial airways
- _____ 49. *Initiate PEP

CHAPTER 1: Employer & Graduate Surveys

- _____ 50. *Select closed system suction catheter
Conduct therapeutic procedures to achieve adequate spontaneous and artificial ventilation including:
- _____ 51. Instructing patient in proper breathing technique, incentive spirometry and *muscle training
- _____ 52. Initiate and adjust continuous mechanical ventilation when setting is/is not specified
- _____ 53. Institute and modify weaning procedures
- _____ 54. *Initiate and adjust inverse ratio ventilation
- _____ 55. *Initiate and adjust pressure control ventilation
- _____ 56. *Initiate and adjust external negative pressure ventilation
Conduct therapeutic procedures to achieve adequate arterial and tissue oxygenation including:
- _____ 57. Administer oxygen to minimize hypoxemia, (e.g., on and off ventilator, before/after suctioning)
- _____ 58. Initiate and adjust CPAP/PEEP
- _____ 59. *Initiate and adjust combinations of IMV/SIMV, PEEP, pressure support and pressure control ventilation
- _____ 60. *Initiate and adjust BiPAP therapy
Evaluate and monitor patient's response to respiratory care including:
- _____ 61. Vital signs, cardiac rhythm and sputum production
- _____ 62. FIO₂/liter flow, tidal volume, respiratory rate, airway pressure, *mean airway pressure, I:E ratio and maximum inspiratory pressure
- _____ 63. *Recommend chest x-ray, as well as measurement of electrolytes, hemoglobin, WBC count and/or chemistries
- _____ 64. *Perform transcutaneous gas monitoring, oximetry and co-oximetry
- _____ 65. *Perform/measure/calculate and interpret hemodynamic parameters
Make necessary modification in therapeutic procedure including:
- _____ 66. Terminate treatment based on patient's adverse reaction
- _____ 67. Modify bronchial hygiene
- _____ 68. Adjust ventilator and alarm setting, change patient breathing
- _____ 69. Change type of incentive breathing equipment or adjust incentive goals based on patient response
- _____ 70. Change type of equipment, dilution of medication, or modify patient breathing patters for aerosol therapy based on patient response
- _____ 71. Change mode of administration or adjust flow /gas concentration for oxygen and other gas therapy based on patient response
- _____ 72. Modify artificial airway to include: inflate/deflate cuff, change or alter position of endotracheal and tracheostomy tubes based on patient response
Recommend modification in respiratory care based on patient response including:
- _____ 73. Recommend discontinuation of, or change in, duration of therapy
- _____ 74. Recommend change in oxygen therapy
- _____ 75. Recommend change in aerosol drug dosage or concentration

CHAPTER 1: Employer & Graduate Surveys

- _____ 76. *Recommend use of pharmacologic agents (e.g., sedation, bronchodilators, muscle relaxants)
- _____ 77. Recommend change in mechanical ventilator settings
- _____ 78. Recommend change in weaning procedures
- _____ 79. *Recommend insertion of chest tubes
- _____ 80. *Recommend initiation, or change in, BiPAP therapy
- _____ 81. *Recommend initiation, or change in, pressure control ventilation
Initiate and conduct or modify respiratory care techniques in an emergency setting:
- _____ 82. CPR
- _____ 83. *Initiate ECG monitoring
- _____ 84. *Recommend defibrillation, administration of bicarbonate and instillation of medication
- _____ 85. *Perform endotracheal intubation
Assist physician with special procedures, including:
- _____ 86. *Bronchoscopy, tracheostomy, intubation and cardioversion
- _____ 87. *Stress testing or sleep studies
Conduct pulmonary rehabilitation/home care, including:
- _____ 88. *Establish optimal therapeutic goals
- _____ 89. *Implement and monitor graded exercise program
- _____ 90. *Evaluate patient's progress

D. Professional Behaviors

- _____ 91. Integrity
- _____ 92. Empathy
- _____ 93. Motivation
- _____ 94. Personal hygiene
- _____ 95. Professionalism
- _____ 96. Diplomacy
- _____ 97. Confidence
- _____ 98. Communication
- _____ 99. Time Management
- _____ 100. Accepts instruction, direction and/or suggestions.
- _____ 101. Careful delivery of service.

List each task/descriptor rated as "N" (not acceptable or not competent) and state the critical incident (attach an additional sheet of paper, if necessary). If more than one graduate is being rated please identify which graduate is inadequate. If this is not possible, please identify how many graduates this rating refers to.

Facility

Evaluator's Signature

Date

Title

SECTION XII: ADVISORY COMMITTEE SURVEY

The Respiratory Care Program has utilized some of the adjunct faculty from the various clinical affiliates we have throughout the State of Michigan along with representatives from the sales, home care and student areas as part of our advisory committee. A fourteen question survey similar to the survey used during the last PRP review in 1991 was sent to the twelve individuals identified this year by the faculty as members or candidates for membership on our current advisory committee in October of 1996. Ten of the twelve advisory committee surveys were returned. Comments from the survey questions are as follows:

What are the major strengths of the Respiratory Care Program?

- Flexibility with program sites and student schedules
- The major strength of the program is the quality of individual students in your program. They come to the affiliate hospitals well educated and prepared for becoming involved in their own education.
- Good history of producing competent therapists, good teaching of core curriculum, traditionally have high standards.
- Multiple site orientation, instead of just one or two sites.
- Format- lecture/didactic first year, clinical second year
- Solid knowledge of Respiratory Care
- The individual attention each student is afforded
- The new addition of the SLA course format in RESP 119
- The extended internships that allow students to gain practical appreciation knowledge
- Ferris seems willing to work with the clinical affiliates to improve
- Strong basic clinical skills

What are the areas in need of improvement in the Respiratory Care Program?

- Keeping current and not allowing students to pass when they are not ready- increasing competency levels
- More content in critical thinking and assessment, need to challenge the student more at the patient's bedside
- Need better follow-up in the clinical setting, i.e. more frequently. Don't be afraid to "weed-out" those not meeting the standards; reputation is becoming "they let anyone through".
- For education into Health Care not just hospital based care. Need to have students become very active into state and national societies, and actively communicate with congress both state and national.
- Minimize first year clinical time.
- Assessment of therapy skills.
- Better cohesiveness of faculty members

- Better decision-making skills which can be obtained from more-intensive oral questioning
- More availability of lab practice time during the day to accommodate non-traditional students, perhaps placing lectures in another classroom elsewhere in Allied Health building would leave RESP lab open throughout the day .
- B.S. degree
- Lacking basic pediatric skills

**ADVISORY COMMITTEE PERCEPTIONS
FERRIS STATE UNIVERSITY
RESPIRATORY CARE PROGRAM**

INSTRUCTIONS: Rate each item using the following guide

E = EXCELLENT means nearly ideal, top 5 to 10%

G = GOOD is a strong rating, top one-third

A = ACCEPTABLE is average, the middle-third

BE = BELOW EXPECTATIONS is only fair, bottom one-third

P = POOR is seriously inadequate, bottom 5 to 10%

DK = DON'T KNOW

	P	BE	A	G	E	DK	COMMENTS
1. Instructional program content: • Based on performance objective that represent job skills and knowledge required for successful entry level employment			2	8			
• Designed to provide students with practical job application experience			1	9			
• Periodically reviewed and revised to keep current with changing job practices and technology		2	1	7			
2. Instructional equipment: • Current and representative of that used on the job			1	6		3	
3. Instructional facilities: • Allocate sufficient space to support quality instruction				8		2	
4. Placement: • Job opportunities exist for students completing the program or leaving with marketable skills			3	6	1		

From your perspective, what are the major strengths of the Respiratory Care Program?

From your perspective, what are the major needs for improvement in the Respiratory Care Program?

SECTION XIII: CONCLUSIONS

1. Graduate and Employer Surveys:

The follow-up surveys returned by graduates between 1991 and 1995 and the employers of graduates during the same years appears to identify a high quality graduate. Few to no significant weaknesses are noted in the cognitive skills, clinical competency or professional traits of Ferris State University's Respiratory Care Program graduates as self-reported by graduates and their employers.

2. Student Perceptions of the Program:

The student perceptions survey indicated a couple of areas of concern students had with their respiratory care and FSU education which the program has been and is addressing. The majority of students rate the knowledge of RESP instructors, availability of help and interesting instruction as good or better.

Those areas relating to their non-professional courses such as knowledge of faculty, faculty assistance and course work were rated fairly high.

3. Enrollment Trends :

The program has taken the appropriate actions (recruitment efforts, SLA course, FSUS 100, intrusive counseling and tutoring) over the past five years to positively impact student recruitment and retention statistics as noted by the steady increase in enrollment and dramatic decrease in attrition. It is expected that the same progress made the past few years will continue the next five years.

4. Faculty Perceptions of the Program:

An on-campus and clinical faculty dedicated to the goals and objectives of FSU and the respiratory care profession. Sufficient clinical sites providing excellent experiences for students at locations closer to their permanent residences.

Strong support for the program by students, graduates, employers, faculty and clinical affiliates both verbally and financially.

With some minor exceptions, review of these surveys suggests the perception of a strong program which needs to begin to explore alternative delivery systems including new clinical sites and a B.S. degree in Respiratory Care.

5. Advisory Committee Perceptions of the Program:

The overall impressions of the various members of the program's advisory

committee were quite high with concurrence on the need for the program, the quality of the program and the continuation of the demand for the program's graduates both as a consequence of human resource shortages and the program's reputation among potential employers.

The advisory committee as a whole needs to be reactivated and meet on a more regular basis so that advice on the changes in health care that impact the program in the future can be discussed.

6. Graduate Credentialing Examination Scores:

Review of FSU Respiratory Care program graduate scores on nationally validated credentialing examinations suggest that our graduates are above the national average in their theoretical and clinical preparation. FSU should be proud of the excellent performance of its graduates on these examinations.

7. Labor Market Analysis:

Evidence suggests that the respiratory care profession is continuing to grow and that positions as a result of both growth and turn-over will increase the demand for graduates in Michigan and nationwide.

There is direct evidence that the quality of the Ferris program has led to the preferential and active recruitment of its graduates over the graduates of the twelve other programs within this state.

The closure of the North Central Michigan College respiratory care program in the Spring of 1990 leaves Ferris State University as the only regional program providing respiratory therapists to the upper peninsula, the northern lower peninsula, and West Central Michigan.

It is clear that there are excellent employment and career advancement opportunities for respiratory care program graduates. The salary range of \$22,000 to \$28,000 is within the range of other A.A.S. healthcare graduates.

8. Evaluation of Program Resources:

The supply and expense budget has remained relatively static over the past eleven years. Faculty have been able to maintain program excellence through additional external sources. Donated or borrowed equipment and supplies, along with equipment purchases with Vocational Education and alumni funds, have assisted the program in adequately meeting student instructional needs from year to year.

Strong financial support of the program by graduates, faculty, industry and clinical affiliates.

The laboratory/classroom available to the program presents an instructionally sound environment for student education and is sufficient to support a high quality program. The respiratory care laboratory/classroom and equipment are scheduled in a manner to maximize utilization by students in their educational endeavors.

Current available data about productivity and costs to educate program graduates is skewed by the academic quarter to semester conversion and figures based on low enrollment do to under reported RESP student counts as a result of dual program classification of students. More current and accurate data should reflect a decrease in program costs per student credit hour.

Concern was noted on faculty, student and advisory committee surveys in the area of the increasing use of part-time faculty and the program director over the past few years to cover leaves of absence by full-time faculty especially the clinical coordinator position.

9. Curriculum Evaluation:

The course syllabi and materials were found to be professionally constructed, and clearly document that the Ferris State University Respiratory Care curriculum meets all standards set by the Joint Review Committee for Respiratory Therapy Education as evidenced by the 1991 accreditation process. All the course syllabi are available, under separate cover, for examination.

Students and faculty found the supportive courses in the curriculum to be relevant to the programs goals and met the current needs of students.

The Respiratory Care Program is presently going through another accreditation process. Proposed revisions to the curriculum that came about from the accreditation self study and the program review will be acted upon as soon as the accreditation site visit has been completed in the spring.

SECTION XIV: RECOMMENDATIONS

After reviewing all the data and discussing the results of the many surveys, the consensus of the PRP is that the Respiratory Care Program at Ferris State University is an excellent educational and professional program that all at FSU can be proud. The many strengths and follow up activities of the program include:

1. Excellent employment and career advancement opportunities exist for the graduates. Continue monitoring the employment trends in the Respiratory Care Profession.
2. An excellent record on national credentialing examinations. Continue monitoring the credentialing examination scores as they are available to ensure program goals are being met. 36
3. Clinical sites that are sufficient in number and provide excellent internship experiences for students. Pursue alternative clinical internship settings to meet the challenges of the changing healthcare delivery system. ~~34-35~~
4. An on-campus and clinical faculty dedicated to the goals and objectives of FSU and the profession of respiratory care. Continue the use of small laboratory sections, and procedural proficiency evaluations of students prior to and during clinical internships. Continue the surveying of all constituents every semester to ensure the programs goals are being achieved. 34-35
5. General satisfaction of the students, graduates, employers with the faculty, on campus and clinical experiences. Continue surveying each of the programs constituents annually to ensure the programs goals are being achieved. 25, 38, 43
6. Strong support for the program by students, graduates, employers, faculty and clinical affiliates. Continue the surveying of each of the aforementioned constituents annually to ensure the program goals are being achieved.
7. Continue recruitment efforts, the use of SLA course formats, tutoring and intrusive counseling sessions that have yielded a steady increase in enrollment and a dramatic increase in retention rates. Monitor enrollment and retention rates as has occurred for the past sixteen years.
8. Pursue the development of the B.S. degree in Respiratory Care within the next year or so. Why
9. Improve the collection and utilization of follow-up data on program completers and leavers for program evaluation and planning activities.

10. Complete the accreditation process (self study and site visit) in the spring. The expectation is the program will once again be granted full accreditation status without qualifications as occurred in 1991.

11. Continue improving the communication between FSU, students and clinical faculty at hospitals throughout the state. Pursue the utilization of the internet in addition to the current use of letters, telephone calls and visits to achieve the effective, timely communication with students and clinical faculty.

12. Pursue the proposed curriculum changes following the JRCRTE accreditation visit in the spring.

think 2bt. 211/250 switch

The Program Review Panel recommends that the program officials and faculty continue the processes that have resulted in the strengths listed above. We currently find no major program weaknesses.

APPENDICES

A-C

Appendix A

PROGRAM REVIEW PANEL EVALUATION FORM

Program Respiratory Care

Instructions: Circle the number which most closely describes the program you are evaluating.

1. Student Perception of Instruction Average Score 4.0

5	4	3	2	1
---	---	---	---	---

Currently enrolled students rate instructional effectiveness as extremely high

Currently enrolled students rate the instructional effectiveness as below average

2. Student Satisfaction with Program Average Score 4.0

5	4	3	2	1
---	---	---	---	---

Currently enrolled students are very satisfied with the program faculty, equipment, facilities, and curriculum

Currently enrolled students are not satisfied with program faculty, equipment, facilities, or curriculum

3. Advisory Committee Perceptions of Program Average Score 4.0

5	4	3	2	1
---	---	---	---	---

Advisory committee members perceive the program curriculum, facilities, and equipment to be of the highest quality

Advisory committee members perceive the program curriculum, facilities, and equipment needs improvement

4. Demand for Graduates Average Score 4.66

5	4	3	2	1
---	---	---	---	---

Graduates easily find employment in field

Graduates are sometimes forced to find positions of their field

5. Use of Information on Labor Market

Average Score 3.6

5	4	3	2	1
---	---	---	---	---

The faculty and administrators use current data on labor market needs and emerging trends in job openings to systematically develop and evaluate the program

The faculty and administrators do not use labor market data in planning or evaluating the program

6. Use of Profession/Industry Standards

Average Score 3.8

5	4	3	2	1
---	---	---	---	---

Profession/industry standards (such as licensing, certification, accreditation) are consistently used in planning and evaluating this program and content of its courses

Little or no recognition is given to specific profession/industry standards in planning and evaluating this program

7. Use of Student Follow-up Information

Average Score 3.0

5	4	3	2	1
---	---	---	---	---

Current follow-up data on completers and leavers are consistently and systematically used in evaluating this program

Student follow-up information has not been collected for use in evaluating this program

8. Relevance of Supportive Courses

Average Score 4.2

5	4	3	2	1
---	---	---	---	---

Applicable supportive courses are closely coordinated with this program and are kept relevant to program goals and current to the needs of students

Supportive course content reflects no planned approach to meeting needs of students in this program

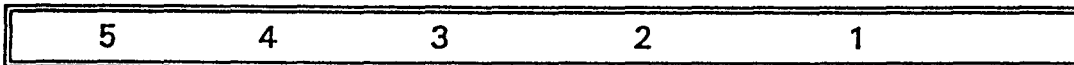
9. Qualifications of Administrators and Supervisors Average Score 3.75



All persons responsible for directing and coordinating this program demonstrate a high level of administrative ability

Persons responsible for directing and coordinating this program have little administrative training and experience

10. Instructional Staffing Average Score 3.6



Instructional staffing for this program is sufficient to permit optimum program effectiveness

Staffing is inadequate to meet the needs of this program effectively

11. Facilities Average Score 4.4



Present facilities are sufficient to support a high quality program

Present facilities are a major problem for program quality

12. Scheduling of Instructional Facilities Average Score 4.0



Scheduling of facilities and equipment for this program is planned to maximize use and be consistent with quality instruction

Facilities and equipment for this program are significantly under-or-over-scheduled

13. Equipment Average Score 3.8



Present equipment is sufficient to support a high quality program

Present equipment is not adequate and represents a threat to program quality

14. Adaption of Instruction

Average Score 4.0

5	4	3	2	1
---	---	---	---	---

Instruction in all courses required for this program recognizes and responds to individual student interests, learning styles, skills, and abilities through a variety of instructional methods (such as, small group or individualized instruction, laboratory or "hands on" experiences, credit by examination)

Instructional approaches in this program do not consider individual student differences

15. Adequate and Availability of Instructional Materials and Supplies

Average Score 3.8

5	4	3	2	1
---	---	---	---	---

Faculty rate that the instructional materials and supplies as being readily available and in sufficient quantity to support quality instruction

Faculty rate that the instructional materials are limited in amount, generally outdated, and lack relevance to program and student needs

ADMINISTRATIVE PROGRAM REVIEW

Program/Department: Respiratory Care/Hospital Related

Date Submitted: October 18, 1996 Dean: Isabel J. Barnes

Please provide the following information:

Enrollment/Personnel

	Fall 1992	Fall 1993	Fall 1994	Fall 1995	Fall 1996
Tenure Track FTE	2	2	2	2	2
Overload/Supplemental FTEF	0.1	0.11	0	0.11	
Adjunct/Clinical FTEF (unpaid)	50	50	50	50	50
Enrollment on-campus total*	47	48	46 (a)	32 (a)	39 (a)
Freshman		6	9	6	7
Sophomore		17	13	9	8
Junior		12	12	8	16
Senior		13	12	9	5
Prc-respiratory care		25	34	37	26
TBD					3
Enrollment off-campus*	0	0	0	0	0

*Use official count (7-day count for semesters, 5-day count for quarters).

(a) Under-reported since number of students are simultaneously enrolled in HCSA, Pre-Nursing or Nursing.

Financial

Expenditures*	FY92	FY93	FY94	FY95	FY 96
Supply & Expense	\$8,092	\$11,725	\$9,535	\$9,352	\$10,928
Equipment**		19 1,140 (2 ns)	16 (0 ns)	11.5 (0) 500	17 (0 ns) 500
Gifts & Grants	1,052	1,074	947	594	477

*Use end of fiscal year expenditures.

**Does not include Voc-Ed and General Fund dollars.

Other

	AY 91-92**	AY 92-93**	AY93-94	AY 94-95	AY 95-96
Number of Graduates * - Total	13	11	24	27	23
- On campus	13	11	24	27	23
- Off campus	0	0	0	0	0
Placement of Graduates	100%	100%	97%	70%	N/A
Average Salary	N/A	N/A	\$24,295	\$23,992	N/A
Productivity - Academic Year Average	364	536	425	446	386
- Summer	219	184	0	485	194
Summer Enrollment	13	28	21	20	21

* Use total for academic year (F, W, S)

**Represents productivity on quarter system.

JULIAN F. EASTER
17260 Valley Drive
Big Rapids, MI 49307

Home (616) 796-1650
Work (616) 592-2312

SUMMARY:

Over 15 years of progressively responsible positions in health care. Enjoy patient care and didactic duties. Good combination of practical and theoretical experience. Motivated. Hard working. Well organized.

EDUCATION:

Western Michigan University, Kalamazoo, Michigan
Doctoral Degree Program, Winter, 1994 - anticipated graduation, January, 1998
Education Administration and Supervision - Higher Education

Pittsburgh State University, Pittsburgh, Kansas
Master of Science Degree: 1986
Major: Community College Teaching

Biosystems Institute, Tempe, Arizona 1980-1981
Graduate AMA accredited Respiratory Therapist Program

University of Notre Dame, Notre Dame, Indiana 1970-1974
Bachelor of Arts Degree in Music Education

Lorain Catholic High School, Lorain, Ohio 1966-1970
Graduate

PROFESSIONAL CERTIFICATION:

Registered Respiratory Therapist (RRT) - June, 1983
Certified Respiratory Therapy Technician (CRTT) - June, 1982
Advanced Cardiac Life Support Instructor (ACLS)
Basic Cardiac Life Support Instructor

PROFESSIONAL AFFILIATIONS:

American Association for Respiratory Care
National Board for Respiratory Care
Michigan Society for Respiratory Care
American Heart Association

PROFESSIONAL EXPERIENCE:

Ferris State University, Big Rapids, Michigan
Department Head, Hospital Related Programs, May 1992 - Present
Responsible for the administrative management of the Respiratory Care, Radiography and Nuclear Medicine programs

Program Director, Respiratory Care, August, 1991-Present

Responsible for the management of the Respiratory Care program. Duties include supervising of personnel and program/curriculum development.

JULIAN F. EASTER, (Continued)

PROFESSIONAL
EXPERIENCE:
(Continued)

Firelands College, Huron, Ohio

Director of Clinical Education, August, 1988-July 1991

Responsible for supervising the clinical instruction of the Respiratory Care students. Assist in didactic/lab instruction. Assist the Program Director with program and curriculum development.

Labette County Medical Center, Parsons, Kansas

Director of Respiratory Care, July 1985 - August, 1988

Responsible for managing the Respiratory Care Department and formal training programs for students, nursing personnel and medical staff.

Labette Community College, Parsons, Kansas

Didactic/Clinical Instructor, July 1983 - July 1985

Primary Instructor of the technician program. Assisted in teaching advanced respiratory therapy theory in the therapist program. Extensive involvement in program and curriculum development for the Joint Review Committee for Respiratory Therapy Education Accreditation.

Biosystems Institute, Tempe, Arizona

Didactic/Clinical Instructor, February 1981-June 1983

Served as didactic instructor teaching the basic sciences, math, pharmacology, EKG, basic and advanced theory in the technician and therapist program.

Primary instructor of five month accelerated therapist program.

As a clinical instructor, worked with students supervising and instructing them on practical applications of RT techniques. Served as a clinical evaluator of students in the external technician and therapist programs. Assisted in program development.

St. Joseph Hospital of Phoenix Arizona

Staff technician (part-time) November 1980 - February 1981

Performed general and critical care duties.

Central Michigan Community Hospital, Mt. Pleasant, MI

Staff Technician, January 1978 - September 1980
Responsibilities in general and critical care. Performed basic pulmonary function testing, basic cardiography and a full range of respiratory technician procedures.

JULIAN F. EASTER, (Continued)

RELATED
PROFESSIONAL
EXPERIENCE:

American Heart Association of Michigan, Mecosta
County Division
Board Member - 1992-Present
Michigan Society for Respiratory Care
Chairman - Awards and Scholarships Committee -
1995-1996
Sandusky/Medical College of Ohio Health Education
Committee Advisory Board Member - 1990-91
Easter Seal Society of Northwest Ohio - Board of
Trustees - 1989-91
American Lung Association of Ohio's South Shore
Board of Trustees - 1990-91
Ohio Consortium for Blacks in Higher Education
State Treasurer - 1989-91
President, Kansas Respiratory Care Society
(Section VIII) - 1986-1987
Chairman of Advisory Board for the Labette Commu-
nity College Respiratory Care Program - 1985-1988
National Board of Respiratory Care Entry Level and
Advanced Practitioner Examinations Item Writer -
1985-Present
Clinical Facilitator for "Freedom From Smoking"
clinics sponsored by the American Lung Association

PERSONAL:

Birth Date: November 28, 1952 - Lorain, Ohio
Health: Excellent
Marital Status: Married
Children: Four

REFERENCES:

Available on request.

**BRENDA K. BROWN, M.A., R.R.T.
901 COLBURN, MARLBOROUGH-1
BIG RAPIDS, MI 49307
(616) 592-2318**

I. EXPERIENCE

Ferris State University, Clinical Coordinator - Respiratory Care Program,
Big Rapids, Michigan, September, 1996 - Present.

Ferris State University, Associate Professor - Respiratory Care Program,
Big Rapids, Michigan, May, 1995 - Present.

Ferris State University, Assistant Professor - Respiratory Care Program,
Big Rapids, Michigan, December, 1984 - Present.

Ferris State College, Technical Instructor - Respiratory Therapy Program,
Big Rapids, Michigan, September, 1981 - December, 1984.

Wyandotte General Hospital, Critical Care Respiratory Therapist,
2333 Biddle Avenue, Wyandotte, Michigan, July, 1979 - August, 1981.

Mecosta County General Hospital, Staff Respiratory Therapist.
405 Winter Avenue, big Rapids, Michigan, June, 1978 - June, 1979.

Metropolitan Hospital, Non-Registered Cardiopulmonary Technician.
1919 Boston Avenue, Grand Rapids, Michigan, September, 1977 - April, 1978.

II. EDUCATION

Master of Arts degree in Health Care Administration, Central Michigan University,
Mt. Pleasant, Michigan, 1984.

Bachelor of Science degree in Applied Biology, Ferris State College,
Big Rapids, Michigan, 1979.

Associate in Applied Science degree in Respiratory Therapy, Ferris State College,
Big Rapids, Michigan, 1978.

III. CREDENTIALS

The National Board for Respiratory Care:
Certified Respiratory Therapy Technician - December 2, 1978
Registered Respiratory Therapist #10898 - November 22, 1980

IV. COMMITTEES

Sept. 1985 - May 1986	Gill Advisory Committee
Sept. 1985 - May 1986	Student Publications Advisory Committee
Sept. 1986 - May 1988	Student Health Advisory Committee
Sept. 1986 - May 1987	Student Activities Budget Advisory Committee
Feb. 1992 - Present	University Retention Committee
May 1992 - May 1994	Academic Senate, CAHS Senator
May 1993	Senate Election Committee, CAHS Representative

IV. COMMITTEES (cont'd)

College of Allied Health Sciences:

Sept. 1995 - Present	Respiratory Care Program Accreditation Visit Committee
April 1996 - Present	Chair, Respiratory Care Program Review Panel
Sept. 1995 - Present	Tenure Committee for Sheila Squicciarini
Sept. 1994 - May 1995	Dean's Student Advisory Committee
Sept. 1994 - Present	Planning Committee
Sept. 1994 - Present	Computer Advisory Committee
Oct. 1993 - May, 1994	Tech Prep
Apr. 1992 - May 1992	Hospital Related Program Tenure Committee
Jan. 1992 - May 1992	Respiratory Care Program Review Panel
Jan. 1992 - Apr. 1992	Chair, Respiratory Care Semester Conversion
Jan. 1991 - Apr. 1991	Respiratory Care Program Accreditation Site Visit
Jan. 1991 - July 1991	Respiratory Care Program Director Search
Sept. 1990 - May 1991	Library Committee
Sept. 1989 - May 1990	Curriculum Committee
Sept. 1985 - May 1986	Faculty Staff Development Committee
1984 - 1986	Health Career Committee
1984 - 1985	Clinical Education Committee
1985 - 1986	Editor, School of Allied Health Alumni Newsletter
1984 - 1986	Alumni Association Board of Directors, Ferris State College
1984 - 1986	President, Alumni Association Board of Directors, School of Allied Health, 1985
April 1985	Co-Chairman, RST Program Alumni Reunion
1981 - Present	Respiratory Care Program Advisory Committee

V. PROFESSIONAL AFFILIATIONS

Member - American Association for Respiratory Care since 1977.
Member - Michigan Society for Respiratory Care since 1977.
Member - Ferris State University Alumni Association since 1990.
Faculty Member - Lambda Beta Honor Society, April, 1996.

VI. OTHER PROJECTS

Guest Speaker:

FSU Nursing Students - "Oxygen Administration", December, 1991, 1986, 1985.
FSU Nuclear Medicine - "Exercise Stress Testing", Spring 1985, 1986.
Northwest Michigan Medical Records Association - "Respiratory Care and Coding", November, 1991.
FSU Industrial & Environmental Health Students - "Pulmonary Function Testing", February, 1994.
FSU Allied Health Career Opportunities Class - "Respiratory Care as a Career", October, 1993.
Instructor - Structured Learning Assistance Course - Cardiopulmonary Anatomy & Physiology Course, August 1995 - December, 1995.
Lecture Moderator - Michigan Society for Respiratory Care Annual Symposium, May, 1986, 1996.

VI. OTHER PROJECTS (cont'd)

Member - B.S. degree in Respiratory Care Development Committee, February, 1982, May, 1993.
Advisor - FSU dual degree (Respiratory Care & Nursing) option, 1992 - Present
Facilitator - Case Study Review Group, 1992 - Present
AARC Clinical Practice Guideline Reviewer, September, 1993 - present.
Chair - Respiratory Care Week Activities, Yearly.
Advisor or Co-Advisor - Respiratory Care Student Club, 1981 - present.
Mentor for: S. Squicciari, T. McCutcheon, K. Kain, D. Easter, B. Connelly, S. Scully, A. Jeffrey, A. Flint.
Established the Ferris State University Chapter of the Lambda Beta Honor Society, February, 1987.
Author - "A Chat With 1988 AARC President", July, 1987 Michigan Society for Respiratory Care Newsletter.
Reviewer - "Manual of Pulmonary Function Testing", September-October, 1987, Michigan Society for Respiratory Care Newsletter.
Developer - Cardiopulmonary Pharmacology Course, February, 1985.

VII. CIVIC ACTIVITIES

Paris United Methodist Church, Member, 1991 - Present
Liturgist, 1994 - Present
Lay Speaker, 1995 - Present
Administrative Board Trustee, 1995 - Present
Masters Investment Club of Big Rapids, Member, 1991 - Present
Presiding Partner, 1993 - 1995
Vice Presiding Partner, 1995 - Present
Wesley Foundation of Big Rapids Remodeling Project, Member, Feb., 1996 - Present
VFW Auxiliary 4102 Webster-Koehn Post, Member, 1988 - Present
American Heart Association, Mecosta County Board of Directors, Member, Sept., 1992 - Present
Vice President, May, 1995 - May, 1996
MIAHA Annual Meeting Delegate, May, 1994-1996
Annual Meeting Chair, Jan., 1996 - May, 1996
Nominations Committee, Member - 1993-96, Chair - 1994-95
Communications Committee, Member, 1994-96
Heartwalk, Team Captain and Project Worker, October 1992-95
Jump Rope for Heart, Project Worker, February, 1994-95
Big Rapids Area Jaycees, Member, 1985-90
Cystic Fibrosis Bike-A-Thon, Co-Chair, 1985-87, 1989
Chair, Returnable Cans for Project Starburst, October, 1985-86
Jaycee of the Month, May, 1987
Chair, Care for Share - receipts for Cystic Fibrosis Foundation, Sept., 1990

Ann Flint, MS, RRT

Respiratory Care Program
Ferris State University
Big Rapids, Michigan 49307
(616) 592-3769

Home Address:
41 Lowell NE
Grand Rapids
(616) 454-0802

EDUCATION:

- 1991 Master of Science, Occupational Education (Human Resource Development),
Ferris State University, Big Rapids, Michigan
- 1985 Bachelor of Science, Health Care Education
University of Michigan
- 1981 Associate of Applied Science, Respiratory Therapy
Carteret Technical College, Morehead City, North Carolina

PROFESSIONAL EXPERIENCE:

- Sept. 1996 - Present Instructor
Ferris State University, Big Rapids, Michigan
- Sept. 1987 - Aug. 1996 Clinical Coordinator
Ferris State University, Big Rapids, Michigan
Coordinated clinical instruction at FSU's twenty-five affiliate hospitals, taught
several lecture courses, developed multiple computer projects for instruction
- Feb. 1990 - Present Staff Therapist, Respiratory Care
St. Joseph Mercy Hospital, Ann Arbor, Michigan
- Sept. 1992 - Dec. 1992 Instructor
Monroe County Community College, Monroe, Michigan
Instructed didactic courses and labs while covering a sabbatical for a Monroe
CCC faculty member
- June 1985 - Aug. 1987 Clinical Coordinator
Washtenaw Community College, Ann Arbor, Michigan
Coordinated clinical instruction at WCC's eight affiliate hospitals, taught labs
and instructed clinical students in intensive care at St. Joseph Mercy Hospital
- Oct. 1982 - July 1987 Staff Therapist, Respiratory Therapy
St. Joseph Mercy Hospital, Ann Arbor Michigan
- Jan. 1983 - June 1985 Clinical Instructor, Respiratory Therapy
Washtenaw Community College, Ann Arbor, Michigan
Clinical instruction of students in intensive care at St. Joseph Mercy Hospital

PROFESSIONAL AFFILIATIONS:

- Member of the Michigan Society for Respiratory Care since 1982.
Chair, Educators' Membership Section, 1995 (following year as Chair-Elect).
Chair (rotating with co-chair), Publications Committee, 1985-1995.
Chair, Professional Practice Committee and Historian, 1992-94.
President's Award, 1992
- Member of the American Association for Respiratory Care since Oct. 1979.

Published Spring, 1994-- *AARC Distinguished Papers Monograph*, "Whistleblowing as a Professional Duty," co-authored with Dr. Raymond Edge.