



Letter of Intent

Respiratory Therapist Program

AAS Degree in Respiratory Therapy

Office of the Provost

and

Department of Nursing

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## 1. Purposes and Goals

### A. Educational Goals

The goal of the Respiratory Therapy program will be to prepare respiratory therapists who are highly competent in the knowledge, skills and professional demeanor consistent with local employer expectations and national standards as described by the current National Board for Respiratory Care Job Analysis and Examination matrices.

### B. Status of the profession

Respiratory therapists are members of a team of health care professionals working in a wide variety of clinical settings. They evaluate, treat and manage patients of all ages who have respiratory illnesses and other cardiopulmonary disorders. In addition to performing respiratory care procedures, respiratory therapists are involved in clinical decision-making and patient education. The scope of practice for respiratory therapy includes, but is not limited to:

- acquiring and evaluating clinical data;
- assessing the cardiopulmonary status of patients;
- performing and assisting in the performance of prescribed diagnostic studies such as: obtaining blood samples, blood gas analysis, pulmonary function testing and polysomnography;
- evaluating data to assess the appropriateness of prescribed respiratory care;
- establishing therapeutic goals for patients with cardiopulmonary disease;
- participating in the development and modification of respiratory care plans;
- case management of patients with cardiopulmonary and related diseases;
- initiating prescribed respiratory care treatments, evaluating and monitoring patient responses to such therapy and modifying the prescribed therapy to achieve the desired therapeutic objectives;
- initiating and conducting prescribed pulmonary rehabilitation;
- providing patient, family and community education;
- promoting cardiopulmonary wellness, disease prevention and disease management;
- participating in life support activities as required; practicing evidence-based medicine; following research and clinical practice guidelines.

See a descriptive video about respiratory therapy as a career at:

<http://www.aarc.org/career/>

### C. National and Local Educational Trends

Respiratory Therapy is a relatively new profession. Much of the technology utilized in respiratory care had its genesis from equipment developed in the 1950's to support jet combat pilots. Education in the profession began in hospitals but soon found a home in

community colleges where the technical content fit well into an associate degree curriculum. The technical demands of the profession continued to develop over the next decades and pressure on the curricula continued to grow as new technologies emerged in neonatal care, diagnostics and polysomnography.

The accreditation model changed in the mid-1980s to an outcomes-based model which allowed for non-traditional modes of instruction such as correspondence programs. Approximately 25% of technicians were graduates of such non-traditional programs. In the mid-1990s the profession eliminated non-degree granting institutions as providers of basic training and required the minimum of an associate degree. Consequently, technician programs were reduced drastically. There is significant interest within the profession to make the baccalaureate the entry point but little interest from baccalaureate institutions to develop them. This and the reduction in non-degree technicians have made the demand for associate-degree respiratory therapists very high.

In the greater New York City area there are two baccalaureate programs; SUNY Stony Brook, and Long Island University, There are three associate degree programs: Borough of Manhattan Community College, New York University, Nassau County Community College and Molloy College.

Employment of respiratory therapists is expected to increase faster than average for all occupations through the year 2014. This is due to the unprecedented growth in the numbers of the middle-aged and elderly—a development that will increase the incidence of cardiopulmonary disease—and expand the role of respiratory therapists in the early detection of pulmonary disorders, case management, disease prevention and emergency care.

Older Americans suffer most commonly from respiratory ailments and cardiopulmonary diseases such as pneumonia, chronic bronchitis, emphysema, and heart disease. As their numbers increase, the need for respiratory therapists will increase. Advances in inhalable medications, the treatment of accident victims, lung transplant and heart patients, and premature infant care, will increasingly require the services of respiratory care practitioners. Job opportunities are expected to be especially good for respiratory therapists with experience providing cardiopulmonary care to infants.

Although hospitals will continue to employ the vast majority of therapists, a growing number can expect to work outside of hospitals in home health care services, offices of physicians or other health practitioners or consumer-goods rental firms.

Median annual earnings of respiratory therapists were \$43,140 in May 2004. The middle 50 percent earned between \$37,650 and \$50,860. The lowest 10 percent earned less than \$32,220, and the highest 10 percent earned more than \$57,580. In medical and surgical hospitals, median annual earnings of respiratory therapists were \$43,140 in May 2004. (*Bureau of Labor Statistics, Occupational Outlook Handbook*). According to the 2005 Human Resources study from the American Association for Respiratory Care, the projected average annual earnings of RTs working in the U.S. is \$56,222. In this study, therapists just beginning their careers reported average annual earnings of \$41,538.

Salaries in the Brooklyn area appear to average in the top 10% of the salary range and many therapists are reported to work multiple jobs and or significant overtime hours to earn on average over \$60,000 per year.

#### D. Community Interest in the Program

At this early stage of development, we have already received positive responses from four Brooklyn hospitals indicating support for the program and offering to serve as clinical sites. Respiratory Care heads offered to serve on an Advisory Committee and as clinical faculty. Currently, Kingsborough has active clinical training relationships with every hospital in Brooklyn and many others as well.

#### E. Related College Offerings

The administration of Kingsborough has demonstrated a significant interest in programs of this type by its recent commitment to associate degree programs for surgical technologists and physical therapist assistants. The College has a long standing A.A.S. in Nursing which has 42 faculty members, 15 of whom are full-time. Each of these programs has its own office space, classrooms and learning laboratories. The campus also offers programs in community and mental health, therapeutic recreation and transfer options to baccalaureate health professions programs, and is developing a biotechnology program.

In its July 2006 *Report of Institutional Goals* to CUNY, Kingsborough made a commitment to target new certificate and degree programs in health occupations. Currently, Letters of Intent are being prepared for five other health professions programs. These are: Veterinary Technician, Occupational Therapy Assistant, Radiologic Technologist, EMT-Paramedic and Pharmacy Technician.

The College is pursuing the creation of a new academic department which will be responsible for the A.A.S. in Respiratory Therapy as well as five other new health-related technician programs. During this initial stage between the Letter of Intent and CUNY approval to develop a full proposal, and until a new department is established, the Department of Nursing has taken responsibility for the development of the A.A.S. in Respiratory Therapy.

## 2. Need for the Curriculum

By far the largest employer in Brooklyn is health care. The health care resources in Brooklyn and the surrounding areas are enormous. Kingsborough is already affiliated with 90 different healthcare facilities. These facilities will continue to employ a multitude of health care workers.

## 3. Students

Kingsborough administration, faculty and counseling staff universally have confidence in the principle of “If we build it; they will come”. Certainly, the population base served by

Kingsborough is large enough to expect a strong positive reaction to educational opportunities at his level for this rewarding profession. Applicant pools for the extant programs are excellent at present. Brooklyn has a population of over 2.2 million.

Enrollment at Kingsborough Community College (excluding College Now) reached 11,790 students in the spring 2005 semester. In spite of the interest of significant numbers of these students in allied health career education, many do not have access due to the limited number of programs and program seats available. Therefore, there is a need to introduce additional, equally viable career programs.

Meetings with representatives from the 1199SEIU League Training and Upgrading Fund indicate significant interest in a Respiratory Therapy program for its members who are currently employed in health care. The proposed program will address specific scheduling issues presented by these students and non-traditional course scheduling such as evening and weekend courses can be incorporated into the design of the program. Each course in the major can be modularized and tied into technology supported instructional resources such as simulation and computer-assisted instruction and testing. These resources can be utilized for any technical instruction regardless of the course schedule. Clinical experiences can be scheduled throughout the week and during day, evening and night shifts as well as on weekends to accommodate student scheduling needs.

The Department of Student Development has enthusiastically endorsed this proposed program and has agreed to schedule the shadowing of practicing professionals prior to implementation to strengthen their understanding of the work environment and scope of practice for respiratory therapists. This will better equip them to help potential students select the right profession and may increase retention in the program.

#### **4. Curriculum**

This curriculum is designed to prepare students who will succeed in earning State licenses and National Board for Respiratory Care credentialing and are ready to work anywhere in the United States as highly qualified respiratory therapists. The curriculum includes the science of human anatomy all health technicians must know and is prerequisite to clinical courses, and the humanities, social science and other general education courses which are essential for all associate degree graduates, provide a foundation for further higher education and help create a well-rounded individual and citizen. To meet both NYSED and the National Board for Respiratory Care accreditation, the proposed AAS in Respiratory Therapy will need a waiver of the 60-credit limit for associate degree programs.

## **A. Description of New Courses**

### **110 Introduction to Respiratory Care**

**Credit**

**5**

Introduction to the respiratory care profession. Topics include the role of the respiratory care practitioner, medical gas administration, basic patient assessment, infection control and medical terminology. Mathematical calculations associated with respiratory care practice are mastered.

### **111 Therapeutics and Diagnostics**

**Credit**

**4**

Entry-level therapeutic and diagnostic procedures used in respiratory care. Pharmacology delivered by respiratory therapists is covered.

### **112 Patient Management**

**Credit**

**2**

Entry-level adult/pediatric mechanical ventilation and respiratory care procedures in traditional and alternative settings. Emphasis is placed on therapeutic modalities and physiological effects of cardiopulmonary rehabilitation, home care, mechanical ventilation and monitoring.

### **114 Cardiopulmonary Pathophysiology**

**Credit**

**3**

The study of cardiopulmonary anatomy and physiology. Emphasis is placed on cardiovascular and pulmonary physiology, acid/base balance and blood gas interpretation. It introduces the etiology, pathogenesis and physiology of cardiopulmonary diseases and disorders.

### **132 Clinical 1**

**Credit**

**2**

This course provides entry-level clinical experience. Emphasis is placed on patient assessment, interaction and empathic skills, professional demeanor and ethics. Students will deliver basic respiratory care modalities. Clinic is two days per week. Offered during the six week module.

### **145 Clinical 2**

**Credit**

**4**

Entry-level clinical experience. Emphasis on therapeutic and diagnostic patient care. Students interact with patients and family, complete independent assessments and deliver therapeutic modalities. Offered during the twelve-week semester. However, some clinics are completed during the following six-week module. Pre-requisite: Clinical 1

### **153 Clinical 3**

**Credit**

**6**

Advanced practitioner clinical experience. Emphasis is placed on therapeutic and diagnostic patient care. Students begin to interact with patients in an intensive care setting. Offered during the twelve-week semester. However some of the clinics are completed during the six-week module immediately following.

Pre-requisite: Clinical 2

### **210 Critical Care 1**

**Credit**

**4**

The basic modalities in the treatment of acute patient needs found in the intensive care environment. Topics include the study of mechanical ventilation, underlying pathophysiology and the introduction of critical care monitoring.

### **211 Advanced Testing and Monitoring**

**Credit**

**1**

This course includes advanced information gathering and decision making for the respiratory care professional. Topics include advanced cardiac monitoring and special procedures.

### **236 Critical Care 2**

**Credit**

**4**

The continuation of acute patient care and its underlying pathophysiology. Topics include the further study of mechanical ventilation, related pathophysiology and the interpretation of critical care monitoring systems.

Pre-requisite: Critical Care 1

### **247 Clinical 4**

**Credit**

**6**

Experience in advanced diagnostic and critical skills for adult patients. Offered during the twelve-week semester. However, some of the clinics are completed during the six-week module immediately following.

Pre-requisite: Clinical 3

### **214 Neonatal and Pediatric Respiratory Care**

**Credit**

**2**

This course provides in-depth coverage of the concepts of neonatal and pediatric respiratory care. Emphasis is placed on neonatal and pediatric pathophysiology and on the special therapeutic needs of neonates and children.



## **253 Clinical 5**

### **Credit**

**4**

This clinical focuses on pediatric and neonatal patients and the specialized equipment used in their general and intensive care management. Offered during the twelve-week semester. However, some of the clinics are completed during the six-week module immediately following.

Pre-requisite: Clinical 4

The entire curriculum outline follows on the next page.

Kingsborough Community College  
A.A.S. in Respiratory Care Curriculum

| Course number |   | Lecture | Lab | Clinic | Credit |
|---------------|---|---------|-----|--------|--------|
| 110           | Intro to Respiratory Care               | 4       | 6   |        | 5      |
| 111           | Therapeutics and Diagnostics            | 2       | 6   |        | 4      |
| 112           | Patient Management                      | 1       | 3   |        | 2      |
| 114           | Cardiopulmonary Pathophysiology         | 2       | 3   |        | 3      |
| 132           | Clinic 1                                |         |     | 96     | 2      |
| 145           | Clinic 2                                |         |     | 144    | 4      |
| 153           | Clinic 3                                |         |     | 288    | 6      |
| 210           | Critical Care 1                         | 3       | 3   |        | 4      |
| 211           | Advanced Testing and Monitoring         |         | 3   |        | 1      |
| 214           | Neonatal and Pediatric Respiratory Care | 1       | 3   |        | 2      |
| 236           | Critical Care 2                         | 3       | 3   |        | 4      |
| 247           | Clinic 4                                |         |     | 288    | 6      |
| 253           | Clinic 5                                |         |     | 144    | 4      |
|               |   |         |     | 960    | 47     |
| 12            | English 12                              |         |     |        | 4      |
| 24            | English 24                              |         |     |        | 3      |
|               | Anatomy and Physiology for Allied       |         |     |        |        |
| 15            | Health                                  |         |     |        | 6      |
|               | Applied Physical Science for Allied     |         |     |        |        |
| 25            | Health                                  |         |     |        | 3      |
| 11            | General Psychology                      |         |     |        | 3      |
| 31            | Intro to Sociology                      |         |     |        | 3      |
|               |   |         |     |        | 3      |
|               |   |         |     |        | 22     |

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|--|
| <b>Respiratory Care Program</b><br><b>Full-Time (4 semester) Plan of Study</b> |
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Fall /  
Winter

|     |  |    |
|-----|--|----|
| 15  | Anatomy and Physiology for Allied Health*  | 6  |
| 25  | Applied Physical Science for Allied Health | 3  |
| 110 | Intro to Respiratory Care                  | 5  |
| 132 | Clinic 1*                                  | 2  |
|     |  | 16 |

Spring /  
Summer

|     |                                 |    |
|-----|---------------------------------|----|
| 111 | Therapeutics and Diagnostics    | 4  |
| 112 | Patient Management              | 2  |
| 114 | Cardiopulmonary Pathophysiology | 3  |
| 145 | Clinic 2*                       | 4  |
| 12  | English 12                      | 4  |
|     |                                 | 17 |

Fall /  
Winter

|     |                                 |    |
|-----|---------------------------------|----|
| 11  | General Psychology              | 3  |
| 210 | Critical Care 1                 | 4  |
| 153 | Clinic 3*                       | 6  |
| 211 | Advanced Testing and Monitoring | 1  |
| 24  | English 24                      | 3  |
|     |                                 | 17 |

Spring /  
Summer

|     |   |    |
|-----|---|----|
| 31  | Intro to Sociology                      | 3  |
| 236 | Critical Care 2                         | 4  |
| 247 | Clinic 4*                               | 6  |
| 214 | Neonatal and Pediatric Respiratory Care | 2  |
| 253 | Clinic 5*                               | 4  |
|     |   | 19 |

\* Uses six week module

## 5. Faculty

The program will require the minimum accreditation standard which is at least two full-time faculty and a medical director. Additional faculty and clinical faculty may be required depending on the number of students enrolled and whether there will be one or two classes admitted per year. All program faculty members must hold at least a

bachelor's degree and the RRT credential from the National Board for Respiratory Care. The accreditation standards for the key program personnel as described in the Respiratory Care Accreditation standards are as follows:

**1. Key Administrative Personnel**

The sponsor must appoint a full-time Program Director, a full-time Director of Clinical Education, and a Medical Director.

*Full-time is defined as the usual and customary time commitment required by the institution for faculty members or employees in equivalent positions in other health educational activities. Under this definition, the Program Director and the Director of Clinical Education should be sufficiently free from service and other non-educational responsibilities to fulfill the educational and administrative responsibilities of the respiratory care program. The Medical Director need not be full-time.*

**Program Director**

**(1) Responsibilities**

The Program Director must be responsible for all aspects of the program, including the organization, administration, continuous review, planning, development, and general effectiveness of the program.

*The Program Director should pursue ongoing formal training designed to maintain and upgrade his/her professional, instructional and administrative capabilities.*

**(2) Qualifications**

The Program Director must be a Registered Respiratory Therapist (RRT) and hold such professional license or certificate as is required by the state in which he or she is employed. The Program Director must possess at least a baccalaureate degree.

*The Program Director should have a minimum of four (4) years experience as a Registered Respiratory Therapist, of which at least two (2) years should have been spent in clinical respiratory care and at least two (2) years in a teaching position in an accredited respiratory care program. Formal teacher training/experience is recommended.*

**Director of Clinical Education**

**(1) Responsibilities**

The Director of Clinical Education must be responsible for organization, administration, continuous review, planning, development, and general effectiveness of clinical experiences for students enrolled in the respiratory care program.

*The Director of Clinical Education should pursue ongoing, formal training designed to maintain and upgrade his/her professional, instructional and administrative capabilities.*

**(2) Qualifications**

The Director of Clinical Education must be a Registered Respiratory Therapist (RRT) and hold such professional license or certificate as is required by the state in which he or she is employed. The Director of Clinical Education must possess at least a baccalaureate degree.

*The Director of Clinical Education should have a minimum of four (4) years experience as a Registered Respiratory Therapist, of which at least two (2)*

*years should have been spent in clinical respiratory care and at least two (2) years in a teaching position in an accredited respiratory care program. Formal teacher training/experience is recommended.*

#### **Medical Director**

##### **(1) Responsibilities**

The Medical Director of the program must provide the input necessary to ensure that the medical components of the curriculum, both didactic and supervised clinical practice, meet current standards of medical practice. He/she must also assure physician instructional involvement in the training of Respiratory Therapists.

##### **(2) Qualifications**

The Medical Director must be a Board Certified/eligible, licensed physician, with recognized qualifications, by training and/or experience, in the management of respiratory disease and in respiratory care practices.

#### **Faculty and/or Instructional Staff**

##### **(a) Responsibilities**

In classrooms, laboratories, and all clinical facilities where a student is assigned, there must be (a) qualified individual(s) clearly designated as liaison(s) to the program to provide instruction, supervision, and timely assessments of the student's progress in meeting program requirements.

##### **(b) Qualifications**

Instructors must be appropriately credentialed for the content area being taught, knowledgeable in subject matter through training and experience, effective in teaching their assigned subjects and who exhibit professional behavior in the workplace.

### **6. Facilities, Laboratory Equipment, Supplies and Library Materials**

The A.A.S. in Respiratory Therapy will require approximately the same laboratory, classroom and faculty office space as Kingsborough's current A.A.S in Physical Therapist Assistant.

Professional journals and supporting texts will be added to the Kibbee Library in sufficient numbers to support students' course assignments. The Library will provide on line access to Medline. Local hospital libraries can be appropriate resources as well.

### **7. Cost Assessment**

The equipment for a Respiratory Care Laboratory can be acquired by donation, rented or borrowed. Typical equipment for a laboratory costs approximately \$50,000. State-of-the-art ventilators commonly cost about \$25,000 but this expensive equipment becomes obsolete quickly and it is best leased or rented. Rentals are less expensive and the number of days laboratory exercises call for this equipment is limited.

Annual budgets for typical respiratory therapy programs include on-going disposable supplies, equipment needs, faculty development and accreditation fees which will average about \$25,000. Faculty salaries are comparable to those for the current KCC health care programs' faculty and directors which are about \$85,000. These costs will be incorporated into the College strategic planning and budgeting of College funds.