Respiratory Care

KU offers a bachelor's degree program in respiratory care. Students enter after completing two years of prerequisites taken from KU's Lawrence campus or any regionally accredited two- or four-year college or university. The advanced curriculum and location at an academic medical center means students receive extensive experience in advanced respiratory therapy techniques.

For working professionals having graduated from a COARC-approved advanced practice level program, KU also offers a flexible online bachelor's degree-completion program in respiratory care. Students must already have the RRT credential and must take any missing prerequisite courses in addition to the online respiratory care courses to meet the credit-hour requirements for the bachelor's degree.

Located at the region's premier academic health center, the Department of Respiratory Care and Diagnostic Science is a part of the School of Health Professions (http://healthprofessions.kumc.edu/) on the medical center campus of the University of Kansas. KU Medical Center (http://www.kumc.edu/) is located in the heart of the Kansas City metropolitan area at 39th and Rainbow Boulevard – about 40 minutes away from the main KU campus (http://www.ku.edu/) in Lawrence, Kansas.

Advising and FAQ

For information about respiratory care at KU, please visit the department's website (http://respiratorycare.kumc.edu). Students interested in entering this field should contact an advisor as early as possible in their collegiate career to ensure prerequisite course work will be completed on schedule. Advising and campus visits are available Monday-Friday by appointment. Please email respiratory@kumc.edu for information. For advising on the KU Lawrence campus, please see the KU Undergraduate Advising Center (http://advising.ku.edu/).

Courses

RESP 200. Introduction to Respiratory Therapy. 1 Hour.
This course is intended to be an introductory course for learners who are entering college-level health care programs or for those who believe they may be interested in pursuing a career in Respiratory Therapy. Topics are appropriate for professions that involve direct patient care, as well as those that provide support services. IND.

RESP 300. Introduction to Respiratory Care Procedures. 4 Hours.
An introductory course designed to acquaint the student with the fundamental theory, procedures, and equipment used in respiratory therapy. Emphasis is placed on understanding application of equipment and procedures to the patient, and the respiratory therapy treatment of patients requiring non-continuous ventilatory assistance. This course introduces such topics as cardiopulmonary resuscitation, bronchopulmonary hygiene, airway care, oxygen therapy, and cleaning and sterilization of equipment. Prerequisite: Enrollment in the Respiratory Care Program. LEC.

RESP 301. Respiratory Care Evidence Based Practice 1. 1 Hour.
This course is designed to provide the participant with a basic introduction to healthcare research with emphasis on evidence based practices. Students will learn how to identify a research question and conduct a proper literature search. This course will teach students the strengths and weaknesses of different search sources, how to review and critique a scientific article, and present the results of their literature review. Students will learn how to properly cite and develop a bibliography that is consistent with scientific writing, as well as, develop an introduction section of a research paper. This course will familiarize the students with cardiopulmonary medical terminology. Prerequisite: Enrollment in the Respiratory Care Program. LEC.

RESP 302. Respiratory Care Evidence Based Practice 2. 1 Hour.
This course is the continuation of Respiratory Care Evidence Based Practice 1 and designed to reinforce the principles of healthcare research, evidence based practices, and the medical terminology used in the cardiopulmonary sciences. Students will refine their ability to identify a research question, conduct a literature search, review and critique a scientific article, and present the results of their literature review. This course will continue to emphasize proper citation and bibliography documentation consistent with scientific writing. Prerequisite: RESP 301 and Enrollment in the Respiratory Care Education Program. LEC.

RESP 305. Cardiopulmonary Anatomy and Physiology. 2 Hours.
This course will introduce the student to normal anatomy and physiology of the cardiopulmonary systems. Students will focus on the etiology, and treatment of pulmonary and cardiac diseases, with emphasis on the pulmonary system. LEC.

RESP 306. Cardiopulmonary Pathophysiology. 2 Hours.
This course will introduce the student to normal cardiopulmonary systems, as well as, cardiopulmonary pathology. Students will focus on the etiology, pathophysiology, and treatment of pulmonary and cardiac diseases, with emphasis on the pulmonary system. LEC.

RESP 310. Clinical Pharmacology. 2 Hours.
The student will learn about adrenergic and parasympatholytic bronchodilators, corticosteroids, mucus-controlling drugs, surfactant agents, antitussives, and the anti-infective drugs used for the treatment of respiratory disorder. Prerequisite: Enrollment in the Respiratory Care Program. LEC.

RESP 315. Clinical Application 1. 3 Hours.
This course introduces the beginning respiratory therapy student to the clinical environment. The student participates in clinically-oriented workshops, observation rotations, learning laboratory sessions, or simulations that focus on the application of respiratory therapy equipment, theory, patient management, and communication in the clinical setting. Prerequisite: Enrollment in the Respiratory Care Program. FLD.

RESP 320. Pulmonary Pathology. 3 Hours.
A course consisting of lecture and group discussion designed to introduce the student to pulmonary pathology. Special emphasis is placed on the etiology, pathophysiology, and treatment of pulmonary diseases. This course includes such topics as signs and symptoms of lung disease, chronic obstructive pulmonary diseases, pleural and mycotic diseases. Prerequisite: Enrollment in the Respiratory Care Program. LEC.

RESP 325. Mechanical Ventilators. 3 Hours.
This course contains such topics as arterial puncture, classification of mechanical ventilators and adjunct devices, and their application to the patient. Four hours of lecture/discussion and a 3 hour weekly laboratory acquainting the student with the rationale for continuous mechanical ventilation and the basic operation of adult, pediatric and neonatal mechanical ventilators. Emphasis is placed on the selection of appropriate equipment and assessment of its effect on the patient. Prerequisite: Enrollment in the Respiratory Care Program. LEC.

RESP 326. Mechanical Ventilation Lab. 2 Hours.
This course contains such topics as arterial puncture, classification of mechanical ventilators and adjunct devices, and their application to the patient. 2 hour weekly laboratory acquainting the student with the rationale for continuous mechanical ventilation and the basic operation of adult, pediatric, and neonatal mechanical ventilators. Emphasis is placed on the selection of appropriate equipment and assessment of its effect on the patient.
on the patient. Prerequisite: Enrollment in the Respiratory Care Program. LAB.

RESP 330. Pulmonary Function. 2 Hours.
Lecture and laboratory introducing the student to basic pulmonary function procedures. This course allows the student to practice pulmonary function tests and interpret the results. Lecture and laboratory topics include such topics as the measurement of lung volumes and capacities, body plethysmography, blood gas analysis, and flow volume loops. Prerequisite: Enrollment in the Respiratory Care Program. LEC.

RESP 335. Clinical Application 2. 4 Hours.
This course provides the respiratory therapy student with an introduction to the critical care setting. The student will begin to apply the procedures and equipment most often utilized in the intensive care areas. Emphasis is placed on continuous mechanical ventilation, artificial airways, airway care, and bedside pulmonary function testing. The student will assume limited patient care responsibility in the critical care areas. Prerequisite: RESP 315. FLD.

RESP 340. Respiratory Review 1. 2 Hours.
Respiratory Care Review- This course provides a complete review of the junior year respiratory care curriculum and aids in the preparation for students to take the Self-Assessment examination. Upon successful completion, students will be prepared to begin the senior year curriculum. Prerequisite: Successful completion of the first and second semesters of the respiratory care curriculum. LEC.

RESP 345. Clinical Application 3. 3 Hours.
This course is a continuation of the clinical sequence that provides the respiratory therapy student with experience in the critical care setting. The student applies the procedures and equipment utilized by respiratory care practitioners in the intensive care areas. Emphasis is placed on continuous mechanical ventilation, artificial airways, airway care, and bedside diagnosis. The student assumes progressively more patient care responsibility in the critical care areas under preceptor supervision. Prerequisite: Completion of RESP 335. FLD.

RESP 350. Clinical Application (special). 1 Hour.
This course provides the intermediate respiratory therapy student with opportunities to practice basic respiratory therapy procedures. Emphasis placed on performance of respiratory therapy procedures and application of equipment. This course emphasizes such topics as oxygen therapy, aerosol therapy, incentive spirometry, patient assessment, and IPPB therapy. The student will assume limited patient care responsibilities. FLD.

RESP 375. Clinical Special. 0 Hours.
This course provides the advanced respiratory therapy student with opportunities to refine procedural and evaluative skills in the critical care areas. The student will spend a minimum of twenty-four hours per week in the clinical setting. Emphasis is placed upon the students ability to evaluate the patients’ clinical situation and recommend appropriate therapy modalities to the clinical supervisor. During this course the student will assume wider-ranging patient care responsibilities. FLD.

RESP 399. Generalist Practice. 1 Hour.
This course is designed to allow students the opportunity to improve and perfect skills acquired in the junior year clinical courses. Emphasis will be given to refining the students’ abilities to assess patient status and administer appropriate therapy modalities. This course may also be used to assess respiratory therapy knowledge and skills of students transferring from other programs. Prerequisite: Permission of instructor. FLD.

RESP 400. Chronic Respiratory Disease Management: The Evolving Role of the Respiratory Therapist. 3 Hours.
This course is an introduction to the evolving role of respiratory therapists in health care, especially in the area of chronic disease management. The students will explore various trends that are contributing to the role respiratory therapy may play in patient care. Topics covered in this course include COPD and asthma management, pulmonary rehabilitation, cardiopulmonary exercise testing, home care, elderly care, nutritional care of the pulmonary patient, and communication skills necessary for patient education. Students in this course will gain an understanding of how they can contribute to an inter-professional team in order to provide safe and effective patient care. Presentation of topics in this course may include lecture, group work/discussion, audiovisual, computer and other multimedia aids. Prerequisite: Enrollment in the Respiratory Care Program. LEC.

RESP 405. Advanced Critical Care. 4 Hours.
Concepts of the diseases and disorders that effect the critically ill adult are explored. Emphasis is placed on understanding common illnesses such as cardiac dysrhythmias, acute coronary syndrome, trauma of the chest and head, organ failure and toxic exposure as well as the other medical challenges of the critically ill patient. Prerequisite: Enrollment in the Respiratory Care Program. LEC.

RESP 410. Neonatal Respiratory Care. 3 Hours.
This course is designed to provide the student with an introductory knowledge of fetal and newborn cardiorespiratory anatomy, physiology, development, pathophysiology, and care. Prerequisite: Senior year standing or permission of instructor. LEC.

RESP 411. Neonatal/Pediatric Respiratory Care Lab. 2 Hours.
This Course is designed to provide the student with an introductory knowledge of fetal and newborn cardiorespiratory anatomy, physiology, development, pathophysiology, and care in a lab setting. Prerequisite: Senior year standing. LEC.

RESP 415. Clinical Application 4. 4 Hours.
This course provides the advanced respiratory therapy student with opportunities to refine procedural and evaluative skills in the critical care areas. In the clinical setting emphasis is placed upon the student's ability to evaluate the patient's clinical situation and recommend appropriate therapy modalities to the clinical instructor. During this course the student will assume a progressively wider range of patient care responsibilities. Prerequisite: Enrollment in the Respiratory Care Program. FLD.

RESP 420. Health Care Management, Ethics and Law. 2 Hours.
This course provides an overview of fundamental concepts in healthcare management, law, and ethics. Students will learn the skills and knowledge necessary to be successful in management leadership, management design, and managing diversity. Ethical concerns relevant to the healthcare manager will be addressed. Current and historical controversies in healthcare will be discussed. Upon completion of this course, students will have the knowledge to understand laws, ethics, and management principles of the complex healthcare landscape. LEC.

RESP 450. Chronic Respiratory Disease Management. 3 Hours.
This course is open only to online students. This course is an introduction to the evolving role of respiratory therapists in health care, especially in the area of chronic disease management. The students will explore various trends that are contributing to the role respiratory therapy may play in patient care. Topics covered in this course include COPD and asthma management, pulmonary rehabilitation, cardiopulmonary exercise testing, home care, elderly care, nutritional care of the pulmonary patient, and communication skills necessary for patient education. Students in this course will gain an understanding of how they can contribute to an inter-professional team in order to provide safe and effective patient care. Presentation of topics in this course may include lecture, group work/discussion, audiovisual, computer and other multimedia aids. LEC.
RESP 455. Physical Science. 3 Hours.
This course is open only to online students. Introduces the physical science principles that govern the movement and behavior of gases, particles, and equipment utilized in the practice of the respiratory care. Prerequisite: Enrollment in the Respiratory Care Program. LEC.

RESP 460. ACCS Specialty Credential Prep. 3 Hours.
The focus of this course is on the advanced medical and respiratory care of the critically ill adult patient. Emphasis is placed on introducing the learner to common emergency disorders such as MI, trauma, drug overdose and poisonings and disorders or diseases seen the in the intensive care unit patient. Emphasis is placed on the respiratory, cardiovascular and renal systems with a general discussion of organ transplantation. Students enrolled in the course will receive preparatory instruction in advanced cardiac life support (ACLS). LEC.

RESP 465. NPS Specialty Credential Prep. 3 Hours.
This course will serve as review of material covered on the NBRC Matrix for the NBRC Neonatal/Pediatric Specialty Examination. The purpose of this course is to guide students in the review and preparation for the NBRC NPS Specialty Examination. This will include weekly covered content, as well as practice exams. LEC.

RESP 470. AE-C Specialty Credential Prep. 3 Hours.
This course will provide an in-depth review of asthma education based on the National Asthma Educator Certification Board (NAECC) detailed content outline. Including the asthma condition, patient and family assessment, asthma management and organizational issues. Prerequisite: Enrollment in Respiratory Care. LEC.

RESP 480. Simulation and Interprofessional Education (IPE). 3 Hours.
This introductory course is designed for health care students to learn key concepts of building and leading a collaborative health care team. The course addresses both the clinical and behavioral aspects of performance with emphasis on interprofessional simulation-based education. The course is offered in a self-paced online format with a competency-based approach. The course will be taught over an eight-week period. The object of the course is to introduce collaborative practice for providing patient-centered care. The student will be introduced to: Interprofessional education and collaborative practice terminology Core Competencies for Interprofessional Collaborative Practice Foundations of effective health care teamwork Leading a collaborative health care team Skills to develop and implement simulation-based education. Prerequisite: Enrollment in Respiratory Care. LEC.

RESP 490. Special Studies or Projects. 1-9 Hours.
This course involves individual study, research or projects in the field of respiratory care under instructor guidance. Written reports and periodic conferences are required. Content and unit credit will be determined by student-instructor conferences and/or departmental conferences. This course may be repeated for a maximum of nine credits. Prerequisite: Admission to the respiratory care program and consent of instructor. LEC.

RESP 495. Management, Ethics, and Law in Respiratory Care. 3 Hours.
This course is only open to online students. This course provides an overview of fundamental concepts in healthcare management, law, and ethics. Students will learn the skills and knowledge necessary to be successful in management leadership, management design, and managing diversity. Ethical concerns relevant to the healthcare manager will be addressed. Current and historical controversies in healthcare will be discussed. Upon completion of this course, students will have the knowledge to understand laws, ethics, and management principles of the complex healthcare landscape. LEC.

RESP 601. Scientific Investigation Part I. 1 Hour.
This course is designed to provide the participant with an introduction to research skills culminating in a group Proposal of a bench study or chart review. The Proposal will consist of three sections: Introduction, Review of the Literature and Methods. The three sections will be developed through a series of progress reports with the aid of a faculty advisor. Students will work in groups to develop a research question about their daily practice that can only be answered by conducting research. This course will include discussions of the types of research data and the structure of a research proposal. Students will have opportunities to read, interpret and analyze research reports and practice in writing critical evaluations of the literature as it applies to their research question. Prerequisite: Statistics LEC.

RESP 605. Scientific Investigation Part I. 1 Hour.
This course is designed to provide the participant with an introduction to research skills culminating in a group Proposal of a bench study or chart review. The Proposal will consist of three sections: Introduction, Review of the Literature and Methods. The three sections will be developed through a series of progress reports with the aid of a faculty advisor. Students will work in groups to develop a research question about their daily practice that can only be answered by conducting research. This course will include discussions of the types of research data and the structure of a research proposal. Students will have opportunities to read, interpret and analyze research reports and practice in writing critical evaluations of the literature as it applies to their research question. Prerequisite: Enrollment in the Respiratory Care Program. LEC.

RESP 610. Scientific Investigation Part III. 1 Hour.
Each study group will write the Discussion and Conclusion sections of their paper and share their findings in a poster presentation. The final version of each group's study manuscript must be submitted to course instructor prior to graduation. The quality of the manuscript will be appropriate for submission to the journal of Respiratory Care. Prerequisite: Enrollment in the Respiratory Care Program. LEC.

RESP 615. Respiratory Review II. 2 Hours.
This course involves individual student under instructor guidance. A series of practice exams are taken and discussed including a secured practice registry exam and clinical simulation exam. Prerequisite: Enrollment in the Respiratory Care Program. LEC.

RESP 620. Community and Global Health. 3 Hours.
This course will explore a wide variety of major health issues that impact us as global citizens. Students will be exposed to an overview of challenges that face the world today as they learn about strategies and programs that promote health in a variety of settings. Through this course, students will become more culturally competent healthcare providers. They will learn about disparities related to ethnicity, socioeconomic issues, human rights, and resource limits as they relate to the health of populations. Prerequisite: Enrollment in the Respiratory Care Program. LEC.

RESP 625. Clinical Application 5. 4 Hours.
This course provides the student with the opportunity to integrate clinical activities and responsibilities related to neonatal and pediatric respiratory care. Prerequisites: Enrolled in Respiratory Care Program. FLD.

RESP 630. Lean Management. 3 Hours.
Lean Management – This course will introduce students to lean management principles such as Lean Six Sigma in healthcare. Students will learn process improvement through lean management concepts which will prepare them for management positions. Prerequisite: Enrollment in the Respiratory Care Program. LEC.
RESP 640. Professional Communication. 3 Hours.
Professional Communication – this course will provide students with the tools they need to communicate clearly and effectively which will prepare them for the working world and leadership. Students will learn how to have crucial conversations on how to address serious issues via written or verbal. Prerequisite: Enrollment in the Respiratory Care Program. LEC.

RESP 650. Medical Writing & Research. 3 Hours.
This course is designed to introduce the student to the basics of health research and writing methods. Health care research is the necessary foundation for meaningful improvements in clinical practice. This course will make the health research and writing process accessible, manageable, and enjoyable for health care students. Prerequisite: Enrollment in Respiratory Care. LEC.

RESP 655. Leadership Management. 3 Hours.
The objective of this course is to prepare undergraduate students to become successful leaders in healthcare by viewing leadership competencies by studying relevant and contemporary skills in today’s ever changing healthcare landscape. By the end of the course, students should have an understanding of how to approach complex leadership problems and comprehend them. Prerequisite: Senior year standing or permission of the instructor. LEC.

RESP 665. Capstone Project. 6 Hours.
This course is designed to give the student the opportunity to develop a project that is professionally relevant. This project will allow the student to explore opportunities such as implementing process change, protocol creation, and curriculum development. The course is individualized to the students’ intellectual interests and professional development. Prerequisite: RESP 450- Chronic Disease Management, RESP 455- Physical Science, RESP 460- Advance Critical Care, RESP 465- Neonatal Resp. Care, RESP 470- Cardiopulmonary Diagnostics, RESP 495- Healthcare Mngt, Law, Ethics, RESP 650- Research in Healthcare, RESP 655- Leadership Management. LEC.