

# PULMONARY SCIENCE (PUL)

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## **PUL 220 Epidemiological Foundations 4 credits**

This course is designed to provide students with a historical background in epidemiological studies. The course is also designed to expose students to the principles and concepts necessary for understanding the basics of epidemiological activity and classical epidemiological investigations. By applying knowledge from a range of disciplines, epidemiologists are able to more adequately study disease, wellness and other health-related events in populations. The ultimate goal of this course is to stimulate a desire for further education in epidemiological course work.

## **PUL 301 Principles of Healthcare Systems 4 credits**

The objective of this course is to provide the students with a basic understanding of the healthcare system. As the participants progress through the course they will build their healthcare vocabulary, strengthen their understanding of healthcare concepts and have the opportunity to experience healthcare decision making through the evaluation of case scenarios.

## **PUL 322 Compliance and Regulatory Requirements 4 credits**

The focus of this course is to examine the role law plays in the everyday operation of our health care system from the management perspective. Key topics will include: The Affordable Care Act of 2010, Corporate Compliance and Integrity, Fraud and Abuse, health care laws, and health care regulatory agencies. Laws and bills related to health care in the State of Minnesota will be examined and followed.

## **PUL 329 Advances in Pharmacology in Critical Care Medicine 4 credits**

This course is designed to help broaden the health care professional's knowledge of pharmacology. Topics include types and effects of drugs, including diagnostic imaging contrast media. Pharmacology, pharmacokinetics, and pharmacodynamics of drugs commonly used in ancillary health care are presented. Students taking this course will also study the most recent FDA approved medications and understand the current state of respiratory care practice in today's health care environment.

## **PUL 330 Multi-Specialties in Respiratory Therapy 4 credits**

This course outlines the diverse disciplines in the Respiratory Therapy profession ranging from acute care to chronic management. It gives Respiratory Therapists the opportunity to develop more understanding of professional diversification of other specialties in their field, including Sleep Medicine, neo-Peds, Specialization, Flight Medicine, Home Care, and others. This seven week extensive course will identify the needs, demand and unique requirements for each specific specialization. Respiratory Studies will be implemented based on current guidelines, practices and procedures of accredited professional standards in Respiratory Care.

## **PUL 331 Advancement in Critical Care Monitoring 4 credits**

This course focuses on the advanced medical and respiratory care needed for the critically ill adult patients. Among the topics covered are cardiopulmonary assessment of trauma, postsurgical, cardiac and renal patients. The course will also provide instruction in advanced cardiac life-support.

## **PUL 332 Advanced Cardiopulmonary Sciences 4 credits**

This course provides students with techniques and methods used to analyze and evaluate the health status of critically ill patients. This course has an emphasis on the respiratory, cardiovascular and renal systems and is beneficial for students who work within a critical care facility.

## **PUL 342 Healthcare Information Systems 4 credits**

This course examines the intricate interlocking healthcare technology systems from patient self-service to data entry by the practitioner. Additionally, students will explore security, legal and ethical implications associated with electronic healthcare systems. Finally, students will learn about enterprise healthcare information and management systems that contribute to ensuring quality patient care.

## **PUL 400 Health Psychology 4 credits**

This class is designed to help students learn those skills necessary in forging a bridge between the client-learner's thoughts, feelings and actions by integrating thought and behavior into one synergistic approach to the delivery of health education that can accommodate the whole person. Cognitive techniques, such as lecture discussion, readings, presentations, collection of data and specific planning combined with the behavioral components of emotion and action will help in bringing about this synergistic process.

## **PUL 435 Ethics and Decision Making in Health Care Environments 4 credits**

This is a foundational course in ethics for individuals pursuing vocations of service in health care. Students will have a greater understanding of the ethical principles that are applied to the delivery of health care services and the processes for making sound ethical decisions. Students will develop models of decision making that are consistent with core personal values as well as the ethical standards of their professions. Motivations for ethical healthcare decisions will be evaluated. The roles and responsibilities of healthcare professionals will be explored on the basis of Christian values as well as assumptions drawn from reason and societal norms and expectations.

## **PUL 490 Senior Research Capstone 4 credits**

This course provides the foundation for the research project. The students will engage in a literature survey of research in the instructor's area of expertise and develop a research proposal consisting of a research hypothesis, a rationale for the work and experimental design.