

Loma Linda University Masters of Respiratory Care Course Descriptions

RSTH 550 Advanced Procedures in Cardiopulmonary Science (2)

The study and practice of invasive and noninvasive procedures and associated equipment such as the management of: artificial airways, fiberoptic bronchoscopy, thoracentesis, chest tubes, hyperbaric therapy, arterial blood gas sampling, line placements, ACLS procedures, medications, IV's, related to the critical care patient. Emphasis on the application to patient situations, assessment of care, and principles of equipment use above that of the entry level respiratory care practitioner.

RSTH 541 Advanced Concepts in Critical Care I (2)

Advanced studies of general medicine, cardiopulmonary and critical care topics as they relate to cardiopulmonary science are explored. Concepts of physical principles and molecular mechanisms associated with phenotypic changes in compliance, resistance, etc, upon implementation of positive pressure ventilation (PPV) are discussed as well as benefits and limitations of techniques offered by advanced, novel modes of ventilation in regard to reduced physiological insult upon PPV. The course will expand on current understanding of the typical respiratory care practitioner to encourage research questions, data interpretation and revision of current protocols and modalities.

RSTH 542 Advanced Concepts Critical Care II (2)

Continuation of RSTH 541 to include advanced understanding of the systemic effects of the critical care patient, their effects on the cardiopulmonary system, and the role of the cardiopulmonary system in maintaining homeostasis. This includes discussion of case study assessment, interpretation and intervention to encourage improved intensive cardiopulmonary care. The course will expand on current understanding of the typical respiratory care practitioner to encourage research questions, data interpretation and revision of current protocols and modalities.

RSTH 560 Advanced Cardiopulmonary Assessment, Diagnostics, and Monitoring (2)

An integrated approach to general medicine, cardiopulmonary assessment, diagnostics, and monitoring to include: theory, management, practice, and application to the cardiopulmonary patient. This expands beyond the pulmonary system to include total system assessment, interpretation of diagnostics and implementation of planning geared toward improved intensive cardiopulmonary care. The course will expand on current understanding of the typical respiratory care practitioner to encourage research questions, data interpretation and revision of current protocols and modalities.

RSTH 571 Advanced Pathophysiology of Cardiopulmonary Diseases I (3)

A case study approach of the pathophysiology, clinical signs and symptoms, diagnosis, management, practice, and prognosis of acute and chronic pulmonary and cardiac diseases, with an emphasis on respiratory care and co-morbidities. A study of cardiopulmonary function as it relates to the understanding of the pathophysiology of disease states.

RSTH 572 Advanced Pathophysiology of Cardiopulmonary Diseases II (3)

A case study approach to explore pathophysiology, clinical signs and symptoms, diagnosis, management, practice, and prognosis of acute and chronic cardiopulmonary diseases and co-morbidities. A study of cardiopulmonary function as it relates to the understanding of the pathophysiology and molecular mechanisms of disease states that encourages research questions/exploration and protocol/policy modification.

RSTH 501, 502 Advanced Cardiopulmonary Anatomy and Physiology I (3) and II (3)

Clinical approach and application of cardiopulmonary anatomy and physiology to the respiratory care and medical patient. This course includes the study of respiratory physiology, cardiac and circulatory function with relevant clinical application. Provides an in-depth study of cardiac and pulmonary anatomy and physiology beyond undergraduate gross anatomy and physiology course work, particularly at the molecular mechanistic level.

RSTH 596, 597 Advanced Clinical Practice in Respiratory Care I, II, (2, 2)

Clinical practicum in medicine, pulmonary and critical care, under the direct supervision of a practicing-supervising, pulmonologist, or other physician pre-approved, with emphases on both in-patient and out-patient assessment, diagnosis, management, practice, and procedures. Pre-requisite-prior approval of the program director and an approved signed preceptor agreement on file.

RSTH 585 Current Issues in Respiratory and Health Care Policy (3)

This course will address emerging issues in medicine, cardiopulmonary science and health care policy. The course will review relevant research and new trends in respiratory care management and practice that impacts patient care to include inpatient, outpatient, rehabilitation, prevention, and related topics.

RSTH 591 Capstone Project in Respiratory Care I (3)

The graduate student will address and present a substantial issue related to their professional area of interest. Capstone I will emphasize the design, literature review and needs assessment of their project, and understanding of the IRB approval process.

RSTH 592 Capstone Project in Respiratory Care II (3)

As a continuation of the Capstone Project the graduate student will implement approved research plan and begin data accumulation and interpretation. Progress will be reported in writing and through oral presentation to allow continued evaluation and modification of the research process as necessary.

RSTH 593 Capstone Project in Respiratory Care III (3)

This is a continuation of RSTH 592. The graduate student will present their findings of the total project with emphases of the data collection, implementation, and evaluation of their project. MSRC faculty and students will participate in discussion of need for revision or further validation studies.

RSTH 594 Capstone Project in Respiratory Care IV (3)

Student will present their findings of the final Capstone Project both written dissertation and defense format with emphasis on exploring publication options and feasibility.

AHCJ 545 Legal and ethical issues in the health professions (3)

This course discusses the history and structure of federal and state governments, including torts, contracts, administrative law, criminal law, and reporting issues. Legal and ethical issues in patient confidentiality and release of patient information, and the impact of technology on the collection and dissemination of patient information are presented. Medical-legal liability issues, including corporate compliance.

AHCJ 571 Statistics and Research for Health Professionals I (3)

Introduces the scientific method in health science research. Focuses on the major steps of the research process: problem identification, literature review, conceptual framework, identification of variables, statement of hypothesis, experimental design, and analysis and presentation of data. Includes critical evaluation of research literature. Applies the research process to problems in related specific allied health fields. Develops a research proposal. Pilot tests a research proposal. Tests procedures and data forms. Implements the research proposal in a practice setting.

AHCJ 572 Statistics and Research for Health Professionals II (3)

Computer data analysis and preparation of a research report. Student prepares a poster appropriate for a professional meeting. Graphics, tables, and abstracts.

RSTH 580 Research Concept in Respiratory Care Sciences (3)

The application of research specific to respiratory care science through the evaluation and comparison of relevant literature to clinical practice.

RSTH 574 Nutrigenomics and Cardiopulmonary Health and Disease

Discusses nutrition and its effects on epigenetic regulation of genes that determine cardiopulmonary health and disease. Offers a brief overview of epigenetics, with a focus on food as source stimuli for altering the expression of pathway components known to both induce and minimize disease progression of the cardiovascular and pulmonary systems.

AHCJ 566 Theoretical Foundations of Leadership (3)

A web-based course that introduces students to the discipline of leadership focuses on the relevance of leadership through study of trait theory, situational leadership, transactional vs. transformational leadership, leadership vs. management, and leadership ethics. Students will reflect upon theoretical approaches, correlate those approaches with personal experience, and apply those approaches in the professional setting.

RELE 524 Bioethics and Society (3 units)

Explores—from Christian and philosophical perspectives—issues confronting both society and

patients. Use case studies to illustrate such themes as health disparities, AIDS policy, end-of-life care, and organ transplantation.

AHCJ 519 Graduate Wholeness Portfolio (1) Students develop a portfolio that demonstrates the graduate student's progression toward the student learning outcomes set by Loma Linda University—including wholeness, Christ-centered values, commitment to discovery and lifelong learning, effective communication, embracing and serving a diverse world, and collaboration.

RSPS 510 Sleep Neurophysiology and Pathologies (4)

First course in a three-course series that can be taken independent of the series. Case study-based analysis that covers advanced neurophysiology involved in various normal and abnormal sleep patterns and respiratory drive. Discusses common sleep pathologies and pharmacological interventions at the macro and molecular levels

RSPS 511 Methodologies in Sleep Disorder Assessment and Intervention (4)

Second course in a three-part series, but can be taken independent of the series. Introduces the foundations of patient preparation for various polysomnogram evaluations. Includes detailed discussion of the physical principles employed in acquiring and interpreting cardiac, neuro, and respiratory diagnostics. Uses case studies to reiterate the components of a PSG, cardiac diagnostics (include 3/12-lead ECG), and certain neurodiagnostics important for thorough evaluation of sleep and respiratory patterns; as well as to distinguish between respiratory and nonrespiratory sleep disorders while introducing the pharmacology, noninvasive and invasive modalities, and behavioral/cognitive therapy commonly used in the treatment of sleep disorders.

RSPS 512 Advanced Polysomnography Practicum (4)

Third course in a three-course series. Clinic-based practicum in which students perform a variety of sleep assessments—including patient set up, observation/monitoring, data acquisition, evaluation, and scoring. Students apply interventional modalities, such as CPAP or bi-level therapy with appropriate titration to relieve respiratory-related sleep disorders. Gives students opportunities to perform advanced clinical procedures in the sleep center and to perform complete polysomnographs independently under supervision of the sleep center staff. Students present case studies based on patient-information gathering that include history and physical, review of systems, rationale for diagnostics and treatment, vital signs, medical history, questionnaire, scores, waveform, treatments, and study data. Program director provides approval for distance education students' mentorship and site assignment. At least half of the clinical activity mentored by a board-certified sleep specialist