

School of Nursing

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The School of Nursing offers the Master of Science in Nursing (M.S.N.) through the Regents Online Degree Program (RODP) and graduate certificates in Critical Care Nursing and Nursing Informatics.

Master of Science in Nursing— Regents Online Degree Program (RODP)

The Master of Science in Nursing Degree (M.S.N.) is offered through the Regent's Online Degree Program (RODP), and is delivered following the standard protocol established for the delivery of RODP courses and programs. The program includes four concentrations: Nursing Education, Nursing Administration, Nursing Informatics, and Advanced Practice. Courses are offered each semester (Fall, Spring, and Summer) through all six Tennessee Board of Regents universities. The program requires completion of 32-45 semester credit hours depending on the concentration. For more information, please contact Karen Ward at (615) 898-5622 or visit www.tn.regentsdegrees.org/msn/.

Requirements for the Critical Care Nursing Certificate

A graduate certificate in Critical Care Nursing is offered to meet the expanding and changing educational needs of critical care nurses in middle Tennessee. The program provides a high-quality, in-depth curriculum including core concepts, advanced concepts, and critical thinking skills. The rapidly changing components of critical care such as diagnostic tools, therapies, and technologies are incorporated into the curriculum.

The goal of the graduate certificate program in Critical Care Nursing is to provide advanced knowledge and critical thinking skills to prepare the professional nurse to manage patients with complex health problems in the critical care environment.

In addition to the University standards required for admission to the College of Graduate Studies, the admissions requirements include

1. Minimum of baccalaureate degree in nursing
2. Current licensure as a registered nurse

A total of 18 semester hours is required for completion of the graduate certificate program. It may be possible to complete all coursework online excluding clinical labs. An individualized program of study is developed to meet the needs of the adult learner.

The objectives of this certificate program are

1. to enhance knowledge and skills in critical care nursing concepts, including physiology of major organ systems, pathophysiology, and management of organ/system dysfunction.
2. to expand knowledge in electrophysiology, including basic, intermediate, and advanced cardiac arrhythmias and 12-lead, 15-lead, and 18-lead electrocardiography.
3. to expand the professional nurse's knowledge of physical assessment with emphasis on abnormalities in the critically ill patient.
4. to broaden perspectives related to core critical care skills such as hemodynamic monitoring, mechanical ventilatory support, and continuous renal replacement therapy.
5. to develop and refine the professional nurse's critical thinking skills applied to complex patient problems.

Requirements for the Nursing Informatics Certificate

A graduate certificate in Nursing Informatics is offered to prepare baccalaureate nurses functioning in informatics-related roles with the additional skills and knowledge related to the practice of nursing informatics and to prepare advanced practice nurses with the skills and knowledge for leadership in emerging informatics roles within health care organizations.

Terminal objectives for the Informatics Certificate reflect components of the published *Standards and Scope of Practice for the Informatics Nurse Specialist* as published by the American Nurses Association (ANA) in 2001. The Nursing Informatics certificate program provides students an opportunity to

1. incorporate theories, principles, and concepts from appropriate sciences into informatics practice such as information technology, systems and change theories; understand implementation methods, organizational culture, and database structure.
2. integrate ergonomics and human-computer interaction principles into informatics solution, design, selection, implementation, and evaluation.
3. systematically determine the social, legal, and ethical impacts of an informatics solution with nursing and health care.

If a student who wishes to pursue the Informatics Certificate does not possess the basic informatics skills needed by all beginning nurses as outlined by the ANA, an introductory undergraduate/graduate course in nursing informatics is required. A competency-screening tool will be utilized to assist students in their decisions to pursue a preparatory information management course prior to beginning the certificate program of study. Candidates should have

1. computer literacy skills in the areas of basic word processing, database, spreadsheet, presentation, and applications to document patient care delivery and be able to communicate electronically.
2. information literacy skills that allow the nurse to locate, evaluate, and use information appropriately.
3. an understanding of economic, legal, and social issues surrounding the use of information and access.

4. the ability to identify, collect, record, and interpret data related to the care of patients using informatics applications.
5. the ability to implement public and institutional policies related to privacy, confidentiality, and security of information.

Courses identified for this program are taught primarily online with periodic campus meetings for some courses to facilitate the learning process and provide opportunities for hands-on technology interaction. Courses are developed in a manner that will allow students to learn and work independently and interactively with other students and faculty.

The Informatics Certificate program can be completed in 17 semester hours. Students will be expected to have Internet access via a computer that meets minimum criteria deemed necessary for course requirements as well as a personal digital assistant (PDA).

Courses Transferred to Other Programs

The School of Nursing also offers selected graduate courses which may be transferred to programs offering the Master of Science in Nursing. Additional courses which meet the requirements of the State of Tennessee Board of Nursing for a Certificate of Fitness to practice as an Advanced Nurse are also planned. Please contact the School of Nursing for further information.

Courses in Nursing [NURS]

- 5035 Special Topics.** Three credits. Graduate students explore selected nursing topics in depth. A specified topic will be offered each semester according to student interest and faculty availability.
- 5055 Informatics for the Health Care Professional.** Three credits. Present and potential impact of health care and nursing informatics on the nursing and allied health care disciplines and how informatic tools and systems can assist in providing solutions to health care education and practice. Emphasis on the provider's role as a leader and advocate in this rapidly emerging field.



- 6091 Critical Thinking - A Case-Based Approach.** Three credits. Case-based tutorials used to integrate anatomy, physiology, pathophysiology, assessment, and management concepts in patients with select critical illnesses. Graduate students guided through the steps of critical thinking, with emphasis on identification of patient problems, prioritizing needs, determining short-term and long-term goals, anticipating therapeutic interventions, and initiating appropriate nursing care. Select critical problems include sepsis, congestive heart failure, renal failure, diabetic ketoacidosis, cardiogenic shock, bleeding esophageal varices, respiratory failure in patient with chronic lung disease, coronary artery bypass surgery, and thermal injury.
- 6101 Advanced Health Assessment.** Three credits. Prerequisite: Undergraduate adult physical assessment course. Physical assessment skills and clinical practice related to evaluation of the health status of the adult client. Refines physical assessment skills learned at the undergraduate level. Predictable pathological findings and the mechanisms underlying these findings in selected diseases. Emphasis on differentiating normal and abnormal findings and on techniques used to distinguish the abnormal. Two lecture hours and two clinical hours per week.
- 6103 Advanced Pathophysiology.** Three credits. An exploration and analysis of scientific knowledge relevant to selected pathophysiological states confronted in health care management. Basis for the foundation of clinical decisions related to selected diagnostic tests and the initiation of therapeutic regimens. Pathophysiology across the lifespan correlated with clinical diagnoses and management.
- 6104 Advanced Pharmacology.** Three credits. Advanced pharmacokinetics and pharmacodynamics of commonly used drug categories analyzed in depth with consideration to safe, quality, cost effective drug therapy for client care. Emphasis on pharmacologic therapy management by nurse clinicians in independent and collaborative practice for clients across the lifespan. Prescriptive guidelines included.
- 6401 Informatics and Information Management.** Two credits. Prerequisite: Permission of department. Provides an overview of nursing informatics and the theoretical foundation for information management within the health care setting. Explores the impact of automated data management through advances in information technology, health care information systems, and telehealth.
- 6402 Health Care Information Systems.** Three credits. Prerequisite: Permission of department. Introduces concepts upon which health care information systems are developed, implemented, and maintained. Operating systems, networking concepts, security issues, and workstation design and evaluation related to the health care environment addressed.
- 6403 Analysis and Design of Health Care Information Systems.** Three credits. Prerequisite: NURS 6402. Offers knowledge and skills for implementing and evaluating health care information systems in practice. Informatics models, conceptual frameworks, and practice activities discussed.
- 6404 Evaluation of Health Care Information Systems.** Three credits. Prerequisite: NURS 6403. Application of advanced health care information systems and emerging technology.
- 6405 Health Care Data Analysis Techniques.** Two credits. Prerequisite: Permission of department. Principles of data collection, organization, and statistical analysis and interpretation covered. Opportunity to review complex applications for data mining and reporting within health care environment.

- 6406 Trends in Health Care and Technology.** One credit. Prerequisite: Permission of department. Examines the newest trends in health care technology.
- 6407 Informatics Applications I.** Two credits. Corequisite: NURS 6403. Builds on concepts and technology introduced in other related informatics coursework to provide additional experiences in informatics applications in health care settings. Explores a variety of informatics applications.
- 6409 Informatics Applications II.** Two credits. Pre- or corequisite: NURS 6404. Builds on the concepts and technology introduced in other related informatics coursework to provide additional experiences in informatics applications in health care settings. Explores a variety of informatics applications and identifies specific informatics applications based on practice needs.
- 6521 Advanced Concepts in Critical Care.** Three credits. Focuses on advanced concepts related to multi-organ/system function and dysfunction. Physiology, assessment, pathophysiology, system failure, and clinical management of the endocrine and defense systems addressed. Detailed overviews of multisystem dysfunction in shock, trauma, and burns used to integrate core concepts with more complex pathophysiology and advanced treatment modalities.
- 6522 Core Concepts in Critical Care - Part I.** Two credits. Focuses on the interrelatedness of major organ systems in health and disease. Physiology, pathophysiology, system failure, and clinical management integrated to provide advanced knowledge necessary to deliver care to critically ill patients. Includes cellular metabolism, the neurological system, the gastrointestinal system, and the hepatic system.
- 6523 Core Concepts in Critical Care - Part II.** Two credits. Focuses on the interrelatedness of major organ systems in health and disease. Physiology, pathophysiology, system failure, and clinical management integrated to provide advanced knowledge necessary to deliver care to critically ill patients. Includes the cardiovascular system, the hematologic system, and electrolyte balance.
- 6524 Core Concepts in Critical Care - Part III.** Two credits. Focuses on the interrelatedness of major organ systems in health and disease. Physiology, assessment, pathophysiology, system failure, and clinical management integrated to provide advanced knowledge necessary to deliver care to critically ill patients. Includes the renal and respiratory systems and acid base balance.
- 6525 Electrocardiography for Critical Care Nurses.** Three credits. A systematic approach to the interpretation of cardiac dysrhythmias and 12-lead electrocardiographic abnormalities. Disturbances of automaticity and conductivity are summarized, including electrocardiographic characteristics, hemodynamic consequences, and therapeutic interventions of sinus, atrial, junctional, and ventricular arrhythmias and conduction abnormalities. An overview of 12-lead, 15-lead, and 18-lead electrocardiograms is presented as a foundation for recognizing abnormalities, such as myocardial infarction patterns and bundle branch blocks.
- 6529 Advanced Critical Care CNS Practicum.** Four credits. Combines clinical practice with case-based tutorials to integrate concepts in the care of patients with select critical illnesses. Students guided through steps of critical thinking, with emphasis on identification of patient problems, prioritizing needs, determining short-term and long-term goals, anticipating therapeutic interventions, and initiating appropriate nursing care.