

GRADUATE SCHOOL OF NURSING

2014-2015 Catalogue



The University of Massachusetts Worcester (UMW), comprising the School of Medicine, the Graduate School of Biomedical Sciences and the Graduate School of Nursing, is firmly committed to an environment free of all forms of discrimination, harassment, intimidation, uncivil behavior or other acts of intolerance. UMW will not discriminate on the basis of race, color, religion, gender (including pregnancy, childbirth or related medical conditions), sexual orientation, age, national origin, ancestry, disability, covered veteran status or any other characteristics protected by law.

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The Diversity and Equal Opportunity Office (DEOO) is charged with oversight for the University's affirmative action and equal opportunity policies and for monitoring practices, procedures and programs designed to reach this goal. The DEOO works with all departments and services of the University to reasonably accommodate persons with disabilities or specific religious convictions if such accommodations do not present an unreasonable burden for either the institution or the program of study.

Persons with disabilities or impairments who need assistance to access the information in this catalogue should contact the DEOO at 508-856-2179; TDD: 508-856-6395.

This catalogue is intended to provide academic and nonacademic information about graduate study at UMW to persons who work and study here, to persons who may be interested in applying for admission and to the general public. UMW is fully accredited by the Liaison Committee on Medical Education and the New England Association of Schools and Colleges. The Master's and Doctor of Nursing Practice Programs of the GSN are accredited by the Commission on Collegiate Nursing Education (CCNE).

Commission on Collegiate Nursing Education

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MESSAGE FROM THE CHANCELLOR

There has never been a more exciting time to be a part of the University of Massachusetts Worcester (UMW), the commonwealth's only public academic health sciences center. UMass Worcester brings together an extraordinary community of faculty, students and staff who provide state-of-the-art education, conduct groundbreaking research and take the lead in public service initiatives in Massachusetts and around the globe. Graduate School of Nursing students benefit from studying at an institution at the forefront of scientific advancement, one that attracts close to \$350 million in research funding annually and consistently produces breathtaking advances in basic and clinical research.

The 10-year, \$1 billion Massachusetts Life Sciences Bill enacted in 2008 casts our institution in a critical role in research, discovery, development and education in Massachusetts, most notably through the establishment of the Albert Sherman Center (ASC). The 512,000 square foot, state-of-the-art research and education facility, which opened in 2013, greatly expanded our research capacity and created an ideal learning environment for our students.

The ASC houses many dynamic and complementary research programs, such as the RNA Therapeutics Institute, the Department of Quantitative Health Sciences and the Program in Systems Biology, that will bring together some of the best minds in the world focused on creating new therapies for debilitating diseases. Among them is researcher Craig Mello, PhD, a Howard Hughes Medical Institute Investigator who was awarded the 2006 Nobel Prize in Medicine with colleague Andrew Fire, PhD, of Stanford University for their discovery of RNA interference (RNAi). Since their seminal paper published in *Nature* detailed gene silencing by double-stranded RNA, the technology of RNAi has revolutionized biomedical research. Scientists realize that if RNAi is used to shut down disease-causing genes, then promising new therapeutics can result. Recognized as a global center for RNA-related research and collaboration, UMass Worcester boasts a growing cadre of internationally renowned experts in this field.

The seven-story, 258,000 square foot Ambulatory Care Center (ACC) is another new facility on the campus that exemplifies our commitment to education, research discovery and clinical translation. The ACC offers a unique complement of cutting-edge patient care clinics and education and translational research programs.

While advancing scientific innovation, we continue to be a leader in educating the health care providers of the future. UMW's goal is to prepare graduates to become compassionate healers. As the country sorts through the implications of the historic health care reform law now being implemented nationwide, we will continue to educate the care givers who will be able to meet their patients' health care needs in a new way. Moreover, with a special emphasis on primary care, we are committed to serving the public interest both locally and globally.

Amid all these exciting new developments, our guiding principles remain unchanged and unwavering. In all that we do, our institution places the highest priority on respect for the dignity and diversity of every member of our campus community and remains fully committed to supporting our students' professional, intellectual and emotional growth so they may have the opportunity to fulfill their potential and achieve their professional goals. I invite you to learn more about the Graduate School of Nursing through this catalogue and explore how joining our community can help you fulfill your dreams.

Michael F. Collins, MD
Chancellor, University of Massachusetts Worcester
Senior Vice President for the Health Sciences, University of Massachusetts

MESSAGE FROM THE DEAN

The mission of the Graduate School of Nursing (GSN) at the University of Massachusetts Worcester (UMW) is to prepare nurse scientists, advanced practice nurses, and nurse leaders who together will improve the health care of the Commonwealth of Massachusetts and beyond. Consistent with our public mission, the GSN focuses on care to the underserved. This is accomplished through partnerships with UMass Memorial Health Care and Commonwealth Medicine, the public, nonprofit consulting organization founded by UMW to help state agencies and health care organizations enhance the value, access and delivery of care for at-risk populations.

UMass Worcester consists of three schools: the School of Medicine, the Graduate School of Biomedical Sciences and the Graduate School of Nursing. The GSN's distinct focus and location generate many interprofessional opportunities for collaborative graduate education, research and practice. The GSN is distinctive as the only publicly funded nursing school in the commonwealth with a sole focus on graduate nursing education. It is also one of only three nursing schools in New England based at an academic health sciences center, sharing campus resources and facilities with its clinical partner, UMass Memorial Medical Center, part of UMass Memorial Health Care.

The GSN's educational approach promotes lifelong learning through partnerships and interprofessional collaboration in an academic health center environment. The new Albert Sherman Center will enhance the learning environment and add designated learning community space and experiential learning capacity. The GSN's nurse practitioner tracks lead the way in hospital and community-based practice. The nurse educator program prepares graduates with the knowledge to develop contemporary educational programs in the hospital or academic setting.

The Graduate Entry Pathway (GEP) provides the opportunity for individuals with non-nursing degrees to pursue a career as advanced practice nurses. Many of our GEP students choose the nurse practitioner tracks that contribute to meeting the well-documented shortage of primary care providers.

The Doctor of Nursing Practice (DNP) program prepares advanced nursing practice leaders for careers in health care settings with diverse populations and education settings for professional nursing programs. The PhD program prepares the next generation of nurse scientists who are critical to discovering the knowledge that supports the highest quality patient care through evidence-based nursing practice. The majority of our PhD graduates pursue academic careers in the public college and university setting, filling a critical role in developing the nurses of the future.

GSN graduates are recruited as clinical providers in the acute and primary care settings, and as faculty for all levels of nursing education. Doctoral graduates hold faculty, research and high-level nursing executive positions locally and nationally. As the dean of the GSN, I am proud to represent the ongoing legacy of commitment and service to the citizens of our region. I invite you to learn more about the GSN's unique and challenging programs in the pages of this catalogue.

Paulette Seymour Route, PhD, RN

ABOUT THE UNIVERSITY OF MASSACHUSETTS WORCESTER

The University of Massachusetts Worcester (UMW) was founded by proclamation of the governor and an act of the legislature to meet the health care needs of the residents of the commonwealth. Its mission is to advance the health and well-being of the people of the commonwealth and the world through pioneering education, research and health care delivery with its partner, UMass Memorial Health Care. UMW is one of five campuses that make up the University of Massachusetts. Other campuses are located in Amherst, Boston, Dartmouth and Lowell.

A local, regional and statewide health resource, UMW comprises the School of Medicine, opened in 1970; the Graduate School of Biomedical Sciences, opened in 1979; and the Graduate School of Nursing, opened in 1986. UMW also offers dynamic graduate medical education and continuing medical education programs.

Beyond fulfilling its core missions of health sciences education and public service, UMW is home to a thriving biomedical research enterprise. With major funding from the \$1 billion Massachusetts Life Sciences Bill signed into law in 2008, UMW research programs are central to the Massachusetts Life Sciences Initiative. Federal and private research grants and contracts reached over 240 million in fiscal year 2013. In 2006, UMW professor Craig C. Mello, PhD, and his colleague Andrew Fire, PhD, of Stanford University, were awarded The Nobel Prize in Physiology or Medicine by the Nobel Assembly at Karolinska Institute for their discoveries related to RNA interference (RNAi). First published in the journal *Nature* in 1998, their research showed that a particular form of ribonucleic acid (RNA)—the cellular material responsible for the transmission of genetic information—can silence targeted genes. This RNAi process offers astounding potential for understanding and manipulating the cellular basis of human disease and for the development of new therapeutics for disease treatment and cure.

Educational Mission

When the School of Medicine opened in 1970, UMW's singular educational objective was to provide high quality and accessible medical education to the residents of the Commonwealth of Massachusetts. Through the subsequent openings of the Graduate School of Biomedical Sciences and the Graduate School of Nursing, UMW has broadened its educational reach to train highly qualified professionals to practice in all arenas of integrated health care and research.

The Graduate School of Nursing offers master's, post-master's and doctoral degrees, preparing registered professional and advanced practice nurses within nurse practitioner and nurse educator tracks and for faculty, research and other nursing leadership positions. Subtrack professional and clinical education is also offered in selected areas. The basis for study includes theoretical foundations of professional and advanced practice nursing, research process and design, societal forces that influence nursing, advanced pathophysiology, pharmacology, health assessment, clinical decision making, track content and clinical education.

The Graduate School of Biomedical Sciences comprises two divisions—Basic & Biomedical Sciences and Clinical & Translational Sciences—and ten programs of study. The graduate programs train students in their selected track area and emphasize a broad background in the basic medical sciences, in preparation for research with direct relevance to human disease. Graduates are equipped to collaborate with scientists and physicians involved in basic research and clinical observations, and are prepared to initiate careers as educators in schools of the health professions or in the biotechnology industry.

Consistently ranked by U.S. News & World Report as one of the leading medical schools in the nation for primary care education, the School of Medicine has a foremost responsibility to provide our students with an accessible, comprehensive and personally rewarding medical education of the highest quality,

one that optimally prepares them to excel as tomorrow's physicians—caring, competent, productive and fulfilled in their chosen career serving a diversity of patients, communities and the health sciences. The school is committed to training in the full range of medical disciplines, with an emphasis on practice in the primary care specialties, in the public sector and in underserved areas of Massachusetts.

Our educational program has benefited in recent years from major investments in state-of-the-art educational technology and medical simulation, including the Albert Sherman Center, a 512,000 square foot research and education building opened in 2013. In addition to doubling the research space on campus, the Sherman Center serves as the home to the interprofessional Center for Experiential Learning and Simulation (iCELS), a 24,000-square-foot comprehensive, full-service simulation center.

The educational mission is further enhanced by 46 accredited residency and fellowship programs; cooperative degree programs with area colleges and universities; diverse community-based education programs across Massachusetts; outstanding achievements in basic and clinical research in the health sciences; and the Commonwealth Medicine division, dedicated to serving the state's broad community of health care and service agencies. As the commonwealth's only public medical school, UMW places an emphasis on partnerships with the community, creating opportunities for students to learn in and contribute to serving Massachusetts communities and the care of its vulnerable and underserved populations.

The mission of the Office of Ethics is to foster an environment in which all members of the UMW community are encouraged to recognize the values embedded in human interactions and to develop the skills necessary to respond appropriately. Committed to providing high quality ethical consultation and educational programming, the office maintains a computerized collection of resources relevant to ethical issues in health care,

which is available to all members of the UMW community.

UMASS WORCESTER

<i>The Learning Community</i>	
Faculty (including voluntary)	3,022
Basic science full and part-time faculty	331
Clinical full and part-time faculty	2,522
Nursing full and part time faculty	169
<i>School of Medicine</i>	
MD	486
MD/PhD Students	32
Alumni	3,583
<i>Graduate School of Biomedical Sciences</i>	
PhD students	319
MD/PhD students	32
Clinical and Population Health Research students	20
Master of Science in Clinical Investigation students	8
Alumni	586
<i>Graduate School of Nursing</i>	
MS Students	47
Graduate Entry Pathway students	77
PhD students	28
Doctor of Nursing Practice students	31
Alumni	993

Interprofessional Education

Interprofessional Education (IPE) has been integrated into the GSN and UMass Worcester's public service and educational mission. The World Health Organization Framework for Action recognizes the need for interprofessional education and collaborative practice to meet the demands for a paradigm shift in health care delivery from individuals to teams of providers in order to improve care for individuals and populations. The 2011 Core Competencies for Interprofessional Collaborative Practice are integrated along with determinants of health into educational curricula to promote a culture of team learning and team-based practice that is patient, family and population-centered across the full continuum of care. As an academic

health sciences center, the GSN enjoys many collaborative opportunities for interprofessional teamwork to promote the national Healthy People 2020 goals and objectives with medically underserved, vulnerable and/or high-risk populations.

IPE experiences include interprofessional clerkships, population health community service learning practica, simulation scenarios, optional enrichment electives and clinical immersions in a variety of settings focused on health disparities and population-based needs. Practica, clerkships, and clinical sites include partnerships with the Massachusetts Department of Corrections, Massachusetts Department of Public Health, Edward M. Kennedy Community Health Center, Worcester Family Health Center, geriatric health centers, Worcester Department of Public Health, Worcester Public Schools, and the Worcester Senior Center. Other examples of interprofessional educational practica available to GSN students include the Geriatric Interest Group, Correctional Health Clerkship, Worcester's Community Immunity public immunization clinic, End-of-Life Care, Geriatrics Fall Prevention, Ghanaian Women's Health and Oral Health in Diverse Populations.

Public Service Mission

The faculty, students and staff of UMass Worcester are committed to making an impact on the health and well-being of the people of the commonwealth and the world. Every day, in ways large and small, our institutional community is actively and passionately engaged in the communities we serve, undertaking numerous and varied outreach initiatives with partners in the academic, business and philanthropic fields. Collaborations include partnerships with the long-running Worcester Pipeline Collaborative and Regional Science Resource Center, both award-winning programs recognized as national models for K–12 science, technology, engineering and mathematics education outreach; and student-run, faculty-supervised free clinics that provide care for underserved and economically disadvantaged patients.

By working with schools, community groups and social service organizations, UMass Worcester's reach is extended into places where we can make a difference. And by creating and sustaining relationships with the social and cultural fabric of the region—and, indeed, much of the world—we provide both real-world help and role models for the next generation of nurses, doctors, researchers and leaders.

The Office of Global Health is the latest conduit to broaden UMass Worcester's reach. The office coordinates and optimizes current and future endeavors in global medicine to elevate it to a more visible, high-impact initiative; develop a network of international activities that can inspire UMW medical, nursing and basic science students as on-site teachers and practitioners; and enhance training of health care providers internationally. The Office of Global Health also works with the Office of Research to help coordinate specific clinical trials and epidemiological studies as opportunities arise.

Commonwealth Medicine

The Commonwealth Medicine division carries out UMW's public service mission by applying unparalleled skills and experience to raise the quality of health care programs. The division reaches beyond the traditional boundaries of academia to establish research initiatives, training programs and clinical services focusing on the public sector. This approach—instrumental in creating groundbreaking programs in health care reform, public sector financing, clinical training and policy research—has met with remarkable success.

Today, Commonwealth Medicine operates dozens of programs and centers, serving state and federal agencies and other health care organizations in 20 states and internationally, providing health care consulting, service delivery, policy and program development, and financing services and strategies. Its current efforts—and many successes—are the building blocks of the health care delivery model of the future.

Examples of our service delivery programs include the Community Case Management program, which coordinates needed services for children disabled by complex, chronic medical problems. We also work with individuals with acquired brain injuries who live in nursing homes, but whose quality of life could be improved in home or community settings, and create transition plans to help them move to a community setting.

Facilitating educational opportunities for UMW students, Commonwealth Medicine was instrumental in launching the Graduate Entry Pathway in the Graduate School of Nursing. This program includes cooperative training opportunities that encourage public service. In addition, Commonwealth Medicine partnered with the Graduate School of Biomedical Sciences to develop the PhD program in Clinical & Population Health Research, one of the first in the nation to promote graduate study that fosters the analytic skills and methods necessary to conduct both health services and clinical research.

Currently, nursing students have a chance to learn more about Commonwealth Medicine's services through our Disability Evaluation Services program. This opportunity, available to some students through one of the primary care rotations, allows students to gain an overview of the disability process in Massachusetts. It provides an awareness of the federal and state criteria used for making disability determinations, as well as an overview of MassHealth, the Massachusetts Medicaid program, and the Massachusetts Department of Transitional Assistance.

Learn more about Commonwealth Medicine at www.commed.umassmed.edu.

Community Outreach

The GSN is distinguished by its unwavering support of public service, as exemplified by the breadth and depth of voluntary service and community activism on the part of its students.

GSN students, along with School of Medicine students who are part of the UMass Worcester International Health Interest Group, participate as part of an interprofessional team in the Dominican Republic (DR) Mission, an annual medical service trip. Students work in medical teams along with interprofessional faculty clinicians, providing mobile clinics for immigrant workers in rural villages. Each small team cares for approximately 100 patients each day. In addition to the mobile clinics, students organize educational sessions in the villages and discuss issues pertaining to women and children's health and preventive care, particularly ways to reduce the spread of infectious disease. The DR Mission is hosted by the Good Samaritan Foundation, an organization that for more than 20 years has served Haitian immigrants working in sugar cane fields near the city of La Romana.

GSN goals are consistent with the Massachusetts Department of Higher Education (DHE) Nursing Initiative, which also addresses numerous academic and workforce issues. We are fortunate to have Dean Paulette Seymour Route represent UMass Worcester on the DHE Nursing Advisory Committee.

The HIV Education and Prevention Project is a collaborative effort undertaken by GSN faculty Carol Jaffarian, MSN, and Carol Bova, PhD, on behalf of UMass Worcester and the Armenian Relief Society. The World AIDS Foundation has provided funding support enabling them to conduct nursing research in Armenia for HIV needs assessment and education. Ms. Jaffarian is also an executive committee member appointed to the United Nations Non-Governmental Organization (NGO) Committee on HIV/AIDS.

The Geriatric Fellows Program provides nursing and interprofessional providers with opportunities to enhance their knowledge of geriatric health care needs while also participating in professional activities and interdisciplinary partnerships. GSN faculty Kathleen Miller, EdD, developed the Comprehensive Geriatric Education and Mentoring across Settings (Co-GEMS) initiative to provide more specialized geriatric care training to improve care for

the increasing number of elders who are living longer. The Co-GEMS project provides education and mentoring to registered nurses, licensed practical nurses and certified nursing assistants at 13 sites including hospitals, public health hospitals, federally qualified health centers, long-term care facilities and both federal and state correctional facilities in the Commonwealth of Massachusetts. Through Co-GEMS, the GSN established the Geriatric Fellows Program with funding from the U. S. Department of Health and Human Services' Health Resources and Services Administration.

Graduate Student Nursing Organization (GSNO)

The purpose of the Graduate Student Nursing Organization (GSNO) is to foster communication, coordination and continuity among graduate students and the administration and faculty of UMW, the GSN and the University of Massachusetts community. Membership includes all full and part-time students enrolled in the GSN. The GSNO has also become involved with interprofessional offerings at UMW, connecting with students from the School of Medicine and the Graduate School of Biomedical Sciences. The GSNO and GSN students are involved in many service-related initiatives including the DR Mission trip, the UMass Medicine Cancer Walk, volunteer opportunities in local health care clinics, community refugee work and international relief missions.

Worcester Nursing Pipeline Consortium

The GSN is a founding member of the Worcester Nursing Pipeline Consortium (WNPC), whose mission is to increase enrollment, retention, graduation and academic advancement of qualified nursing students and nurses committed to improving health care in Central Massachusetts. In partnership with nursing schools at all levels of nursing education within Central Massachusetts, as well as clinical and community partners, the WNPC seeks the recruitment and retention of qualified prospective students committed to improving health care; promotes the image of nursing as a health career through the WNPC in partnership with health care

agencies, institutions, schools and communities; and links nursing schools within Worcester and Central Massachusetts to expedite career advancement among qualified and talented students.

Approximately 15 years since its inception, the WNPC has expanded its membership to 17 academic, clinical and community partners who share common goals and interests related to recruiting students into nursing careers and supporting the development of faculty nurse educators. Programs sponsored by GSN in partnership with WNPC include the Annual Nursing Expo that exposes interested high school students, their parents and teachers to the various aspects of nursing education and practice; nursing student recruitment campaigns; novice nurse educator events; workshops; mentorship programs; and preceptor partnerships. WNPC continues to receive funding from the Fairlawn Foundation and its member organizations to carry on its vital mission of addressing the nursing and nurse educator shortage in the area with scholarships. Visit the WNPC Web site at www.worcesternpc.org.

Research Mission

The research mission of UMass Worcester is to promulgate scientific inquiries that produce groundbreaking discoveries in the basic and clinical sciences. Currently supporting more than 300 investigators, the growing UMW research enterprise has led to stimulating advances in the treatment of disease and injury, as UMW scientists undertake research to discover the causes of and cures for the most devastating diseases of our time.

Accomplished faculty members include a Nobel Prize winner; one Lasker Award recipient; three members of the National Academy of Sciences; a member of the Royal Society; six Howard Hughes Medical Institute Investigators; Banting Medal awardees; Pew and Keck scholars; MERIT awardees; a Fellow of the American Association for the Advancement of Science; cancer research award recipients; and many other winners of scientific accolades. Capitalizing on a collaborative environment, UMass Worcester

research expertise lies in both basic and clinical areas, with concentrations in diabetes, molecular genetics, immunology, virology, HIV/AIDS, cancer, signal transduction, structural biology (with attention to innovative drug design), bone cell biology, chemical biology, gene function and expression, neuroscience, imaging, and occupational and environmental health.

Research growth is reflected in increased funding levels. Extramural funding has more than doubled since FY '98 to more than \$240 million in FY '13.

Today, UMass Worcester is proud to be at the forefront of the commonwealth's Life Sciences Initiative, having received funding in 2007 and 2008 to establish an Advanced Therapeutics Cluster (ATC) on campus. The ATC brings together an interdisciplinary group of research faculty and physician-scientists in three interconnected research clusters—neurodegenerative disease, RNA biology and gene therapy. RNA studies at UMW are conducted by world leaders in the field.

The ATC is housed in the Albert Sherman Center, a new research and education facility opened in 2013 that adds approximately 512,000 square feet to a campus that has grown exponentially over the past 10 years. The Albert Sherman Center doubles the campus's research capacity and follows on the heels of the Aaron Lazare Medical Research Building, an innovatively designed research facility that added 360,000 square feet of laboratory space to UMW when it opened in the fall of 2001.

The Graduate School of Nursing research mission is to provide students and faculty with a scholarship research cluster based on partnerships and collaboration. Our research focus is on individual and family health behaviors in chronic conditions, with faculty focusing on chronic disease management and support for individuals and families with HIV/AIDS and other infectious conditions, diabetes, cancer, cardiovascular disorders, community health disparities and workforce development for high quality health care. The GSN Research Advisory Committee (RAC) is an innovative standing

committee that was initiated to identify and provide faculty with opportunities to access the support they need to further develop their programs of research or scholarly projects that address individual, family and/or community needs. This support provides faculty with a dynamic environment in which to conduct research at the discovery/exploratory, descriptive, predictive and/or intervention level with the goal of improving clinical and/or community outcomes. This type of environment and scholarship is vital for educating and socializing our students in the research process and to support their future research and evidence-based practices. The RAC also interfaces with the UMass Center for Clinical and Translational Science in an effort to develop innovative interdisciplinary research teams that include nurse scientists and students, and provides guidance and support to equip faculty and students with the tools and research-related resources needed to tackle research or projects dealing with complex health problems. As an intensive education-teaching environment, the GSN also explores education research opportunities with faculty to identify novel and innovative ways to teach graduate students and to evaluate new methods. All of these activities advance the scientific foundation for professional nursing practice through intra- and interprofessional research endeavors and the dissemination of such research.

Lamar Soutter Library

The Lamar Soutter Library is the physical and virtual center for information resources at UMass Worcester. These resources include access to more than 5,000 online journals, as well as access to major biomedical electronic databases and to a comprehensive collection of both print and electronic books. In addition to standard medical resources, the Lamar Soutter Library also houses a Humanities in Medicine collection, a Women in Medicine collection and a History of Medicine collection, as well as rare books and the archives of the institution.

Members of the library staff are intrinsically immersed in the curriculum of the school,

supporting students' knowledge of utilizing and analyzing highest quality medical information. Instruction offered by the library includes the use of online bibliographic management tools, seminars in Evidence-Based Medicine and workshops in effective ways to locate and retrieve resources needed for both scientific and clinical work.

The library's computer area includes more than 100 workstations for access to word processing and spreadsheets, and to the library's electronic resources via the internet. The library's electronic resources are available off-campus to UMW students and faculty via proxy.

The Lamar Soutter Library is one of eight regional resource libraries affiliated with the National Library of Medicine. In addition, the library participates in a number of consortial agreements that greatly expand the availability of resources for students. The library also takes an active role in community information outreach in our role as the only public medical library in Massachusetts, and serves as the library for the school's clinical partner, UMass Memorial Health Care. Centrally located on the UMW campus, the library also serves as a gathering place for cultural activities such as employee and student art exhibits, book readings and guest lectures.

Standardized Patient and Interprofessional Experiential Learning and Simulation Programs

The Interprofessional Center for Experiential Learning and Simulation called iCELS at UMass Medical School provides state-of-the-art simulation to meet the educational needs of our academic health sciences center, for the benefit of our students, faculty, learners, staff, patients and our communities. UMW has long used patient simulation as an essential component of its academic and clinical training.

Established in 1982 originally as the Standardized Patient Program (SPP), iCELS provides exemplary simulation development, programming, and

research for medical, nursing and clinical professionals. Hands-on simulation experiences can build bridges among disciplines and transform health sciences education and practice.

iCELS staff work collaboratively with instructors to design, implement, and assess clinical simulations as we serve the educational needs of UMass Medical School—and offer state-of-the-art simulation technologies and support to New England's clinical and professional health care workforce. iCELS reflects the environment fostered at our academic health sciences center—innovation and excellence in education, basic and translational research and patient-centered care. UMW standardized patients number more than 100, and represent some of the best in the country.

The iCELS vision is to be the simulation hub for excellence in education, training, research and innovation, serving our campus, clinical partner, affiliates and the greater Worcester and Central Massachusetts community. As a campus-based, community-wide resource, the iCELS brings together a diverse array of teachers and learners, forging new partnerships that will build a community of simulation talent and expertise at UMMS and beyond. Our working model of interprofessional education creates the ideal learning environment for promoting patient safety and advancing quality care through experiential learning and team-based teaching, training and practice. The ideal learning environment of iCELS will foster learner centered teaching, life-long learning through deliberate practice; robust performance-based assessment and the special opportunity to learn in safe and risk-free setting.

With the flexibility to simulate clinic rooms, inpatient facilities, disaster sites, and other health care settings, the interprofessional Center for Experiential Learning and Simulation (iCELS) is a resource for creating cutting edge teaching and assessment experiences. Housed in the Albert Sherman Center on the UMass Medical School Campus in Worcester, Mass., the two-floor, 24,000 square-foot iCELS facility offers:

- 20 clinic exam rooms furnished with ambulatory care equipment and supplies
- Four large simulation scenario rooms that can be set up in various ways to mimic clinical and/or emergency situations
- Clinical skills lab with 11 beds/stations with an array of patient care equipment and supplies and three stations with wall mounted air/suction
- Technical skills lab features separate wet and dry lab space to provide training modalities from wet tissue to virtual reality
- Video capture and playback throughout the center
- High-fidelity simulators
- Task trainers
- Clinical equipment
- Virtual trainers

Our technology-infused space is supported by CAE [LearningSpace](#), a comprehensive audiovisual and center management system. CAE LearningSpace integrates the captured audio, video and performance data in a web-based format. Instructors and students can view videos and data both onsite and remotely for immediate debriefing and ongoing feedback.

Services for Students

The Graduate School of Nursing office and the UMW Offices of Student Affairs, Diversity and Equal Opportunity, Financial Aid, Admissions, the Bursar and the Registrar are on the first floor of the main school building. The Lamar Soutter Library, student laboratories and other student areas are open at night for students who wish to study or work in the building.

Diversity and Student Affairs

The Offices of Student Affairs and Diversity and Equal Opportunity work collaboratively to ensure a supportive environment that is consistent with UMW values and conducive to preparing nursing students to serve diverse populations and relate to a global society. Diversity is promoted within our institution to foster an atmosphere of compassion,

civility and mutual respect, stimulating inventiveness and broadening our talents and perspectives. To that end, we seek to nurture the academic, professional and social lives of all of our graduate students and especially those from racial groups that are underrepresented in health care and our GLBT students. The support includes advising, coaching and assisting with academic achievement, social and personal issues. Students are encouraged to participate in professional conferences along with UMW faculty. Through UMW-sponsored networking events and Mentoring Circles Program, students, faculty and residents work to build an inclusive culture by leveraging differences.

Accommodations for Students under the Americans with Disabilities Act

According to the Americans with Disabilities Act (ADA), a disability is defined as an impairment that substantially limits one or more of the major life activities of an individual; a record of such an impairment; or the perception that one has such an impairment. UMW is firmly committed to providing full access to individuals with disabilities. In so doing, UMW intends to fully comply with the Americans with Disabilities Act (ADA) of 1990 and Equal Employment Opportunity Commission guidelines. Students who avail themselves of the ADA will not be related with prejudice or adversity. The Office of School Services, working in collaboration with the Diversity and Equal Opportunity Office (DEOO), coordinates all student disability issues. The Vice Provost for School Services serves as the ADA Student Coordinator. Once admitted, the student is responsible for notifying the ADA Student Coordinator of his/her disability, requesting academic accommodations in writing and providing appropriate documentation of the disability. A student may request accommodations at any time during matriculation. All requests for accommodations are reviewed and acted on by the Academic Accommodations Committee. It is always the student's choice whether or not to accept any recommended accommodation. Confidentiality is a strict practice of the Academic Accommodations Committee. Students may be referred to the

Academic Accommodations Committee by course coordinators or Academic Evaluation Boards for analysis of the academic difficulty and its possible relationship to a disability. Accommodation under ADA will not be in conflict with the fundamental nature of the academic programs of UMW. Learn more at

www.umassmed.edu/schoolservices/ada.aspx.

Appropriate Treatment of Students Policy

The University of Massachusetts Worcester (UMW), in accordance with its mission statement and operating principles, and as required for accreditation by the Liaison Committee for Medical Education (LCME), has developed this policy to help ensure the appropriate treatment of students (ATS). This procedure is specifically required for the accreditation of the School of Medicine, and has also been approved by the deans of the Graduate School of Biomedical Sciences, Graduate School of Nursing, Graduate Medical Education, and Office for Postdoctoral Scholars. To the extent possible, it is the policy of UMW to provide a learning environment that fosters mutual trust and understanding between teachers and students. When all participants in the educational process at UMW understand and uphold the standards of appropriate treatment of students, the environment enhances teaching, learning and professional development, to the benefit of all. Inappropriate treatment occurs when the behavior shows disrespect for the dignity of others and unreasonably interferes with the learning process. It can take the form of physical punishment or threat, sexual harassment, psychological cruelty, and discrimination based on race, color, creed, religion, gender, age, sexual orientation, gender identity and expression, genetic information, national origin, covered veteran status, disability, ancestry or any other characteristic protected by law. Please note that separate schoolwide policies are in place covering sexual harassment, consensual amorous relationships and discrimination based on protected-class status.

For more information, including definitions, policies and procedures for reporting inappropriate treatment, students are encouraged to contact the DEOO <http://www.umassmed.edu/deoo/index.aspx>

The DEOO is responsible for coordination and monitoring of ATS complaints, for training faculty members to serve as resource persons for students with ATS-related inquiries and concerns, and for ongoing oversight and periodic review of the training process.

Student Counseling Service

Student Counseling Services (SCS) provides counseling, psychotherapy, assistance with stress management and educational programs on emotional well-being for students. Students come to SCS seeking personal growth and greater self-understanding as well as healthier psychological functioning. Many students using the service want to cope more effectively with difficult or stressful academic situations, while others seek counseling to deal with broader life issues. Some students come because of more serious, troublesome and/or chronic difficulties in their lives. Others are beginning to address health and wellness issues. SCS maintains strict standards of privacy and confidentiality. The service cost is covered by the prepaid Student Health Plan (SHP) fee.

Student Health Services

The Student Health Service (SHS) seeks to preserve and maintain the health of students while they are at UMW by providing up-to-date health screening programs as well providing routine health care for many of the students.

SHS maintains a dedicated Web site for all student health issues, including information on blood borne pathogen exposures, insurance plan, upcoming flu or TST clinics, and all SHS policies as well as access to all health clearance forms. The Student Health Service is located in a building adjacent to the Medical School and hospital.

Students may choose a primary care provider at SHS or off campus, including their current provider, with

approval of the SHS director. Hours of operation are 8 a.m. to 5 p.m. Monday through Friday, with 24/7 coverage available through the hospital's emergency room.

The Student Health Plan (SHP) is the administrative entity funded by the mandatory student health fee, providing routine primary health care coverage to students under the direction of physicians or nurse practitioners. With an additional fee, students may elect to have their immediate family members (i.e., spouse, children) covered under the SHP. Students are covered by the SHP during their period of enrollment, from registration through Aug. 31 of the following school year. A brochure describing the plan and its services is available through the Student Health Service. The University requires all students to carry supplemental insurance to cover specialty consultations, diagnostic evaluations and inpatient services. Such a policy may be purchased either through the University or privately.

Food Services

The cafeteria and dining room are located on the first floor of UMass Memorial Medical Center—University Campus, which is contiguous to UMW. The menu features a variety of selections, including a large salad bar, deli bar, grill, soups, entrees, snacks, pastries and beverages. In addition, a second cafeteria is located in the Albert Sherman Center.

Campus Bookstore

Located in the Medical School building lobby, the campus bookstore is open Monday through Friday from 7:45 a.m. to 4 p.m. The bookstore offers all required text and reference books (at a 5 percent discount with no tax charged) for the School of Medicine, Graduate School of Biomedical Sciences and Graduate School of Nursing. Books not in stock may be ordered through the store at www.umassmed.edu/bookstore. Trade books, school clothing, school insignia items, medical instruments, school supplies, magazines and a variety of snack foods are available. The bookstore also offers UPS shipping services.

Housing and Transportation

Graduate School of Nursing students reside in the local community or commute, as housing facilities are not available on campus. Bus transportation to the campus is available via several routes. Those who wish to park on campus are required to register with the Office of Public Safety and pay an annual parking fee.

UMass Memorial Health Care

UMass Memorial Health Care, Inc. is the clinical partner of the University of Massachusetts Worcester and the largest health care system in Central and Western Massachusetts. It is a not-for-profit, integrated system designed to provide all levels of health care from primary to quaternary. UMass Memorial Health Care delivers care through the UMass Memorial Medical Center and community hospitals (Clinton Hospital, HealthAlliance Hospital and Marlborough Hospital) with health care services further enhanced and augmented by community primary care practices, ambulatory outpatient clinics, home health agencies, hospice programs, rehabilitation and mental health services.

As the region's tertiary referral center, UMass Memorial Medical Center offers a full complement of advanced technology and support services, providing the region with a broad range of specialists renowned for their expertise in clinical areas, including the Centers of Excellence—heart and vascular, cancer, musculoskeletal and diabetes—as well as emergency medicine, surgery, women's health and children's medical services.

UMass Memorial Medical Center is a 781-licensed-bed facility on three campuses: Hahnemann, Memorial and University. UMass Memorial Medical Center records 134,000 visits at its two emergency departments located on the University and Memorial Campuses. The Medical Center is also the region's transplantation center and provides liver, kidney, pancreas and bone marrow transplantation.

Clinical services are focused on radiation therapy and cancer care, neurology, trauma and critical care,

psychiatry, surgery and advanced cardiovascular care. The Heart and Vascular Center of Excellence provides integrated, patient-centered heart and vascular care by using the latest research and technology available in cardiovascular medicine and surgery. UMass Memorial Medical Center is the number one hospital in Massachusetts five years in a row for heart survival according to the U.S. Center for Medicare and Medicaid Services.

The Weight Center provides medical and multidisciplinary support services in the specialty of bariatric medicine, including gastric bypass surgery, behavioral therapy and comprehensive follow-up care for weight management. The Children's Medical Center provides extensive services, including an internationally recognized newborn intensive care unit, orthopedics, gastroenterology, neurology, pulmonology, oncology and surgery, the only pediatric intensive care unit in Central Massachusetts, and the Child Protection Program, providing evaluations of children for suspected abuse, neglect and maltreatment. The Children's Medical Center is accredited by the National Association of Children's Hospitals and Related Institutions, a designation that identifies it as a facility delivering exceptional care to children.

The Duddie Massad Emergency and Trauma Center on the University Campus, the region's only Level I trauma center, is the home base of Life Flight, New England's first hospital-based air ambulance and the only emergency helicopter service in Central Massachusetts. Since its founding in 1982, Life Flight has become one of the busiest single-aircraft services in the country, with more than 27,000 patient flights. The Duddie Massad Emergency and Trauma Center provides training and consultation to providers and appoints medical directors for area towns' emergency medical services. UMass Memorial also sponsors the Disaster Medical Assistance Team – Massachusetts (DMAT-MA2), a volunteer group of professional and paraprofessional medical personnel who augment local medical efforts and provide emergency medical care during a disaster or other adverse event.

The University Campus is the site of the Ambulatory Care Center (ACC), offering a unique complement of state-of-the-art patient care clinics and translational research programs in a seven-story, 258,000-square-foot building. The ACC provides convenient access to outpatient services for cancer, diabetes, heart and vascular, orthopedics and to diagnostic testing services.

The Memorial Campus is a leading provider of acute care services in the greater Worcester area and offers a broad array of primary, secondary and tertiary care services. The maternity center delivers more than 3,900 babies a year, more than any hospital in the region. It is the regional referral center for women with high-risk pregnancies, and it provides the region's only Level III Newborn Intensive Care Unit, a 49-bed unit providing the most advanced life-saving care for fragile infants. The Levine Ambulatory Care Center on the Memorial Campus is the site of the New England Hemophilia Center and provides cancer services, including radiation oncology, gynecological oncology and infusion treatments. The Department of Urology is also located on the Memorial Campus with clinics in the Levine Ambulatory Care Center. The full spectrum of urologic care is offered including cancer care, infertility, stone disease and robotic surgery. The Levine Center is also the hub for the Medical Center's pre-surgical evaluation services.

In addition, the Spine Center and the Arthritis and Joint Replacement Center, also located on the Memorial Campus, provide a full spectrum of multidisciplinary care for orthopedic patients, including arthroscopic and open surgery for injury and orthopedic disease. Cardiologists also see patients for routine visits and diagnostic testing.

The Hahnemann Campus is home to the Medical Center's day surgery services, including orthopedic (hand) and cosmetic surgery, as well as sports medicine, eye care and dermatology services. The Hahnemann Family Health Center is located at Hahnemann and is recognized by the National Committee for Quality Assurance as a Level 3 Patient Centered Medical Home.

THE GRADUATE SCHOOL OF NURSING

Never before has the demand for health care been so driven by market and societal forces. These include: the explosive growth in research and technology; the aging of the population; the unique needs of culturally diverse, medically underserved and vulnerable populations; the rising acuity levels of patients in hospital- and community-based settings; and the emphasis on building healthier communities through preventive care and chronic disease management.

The aims of the Graduate School of Nursing (GSN) are to prepare nurses to improve health outcomes, attend to the built environment, and collaborate on interprofessional educational (IPE) initiatives that will have a positive impact on population health—locally, nationally, and globally—through practice, research and education.

The aging of the nursing and faculty workforce and the anticipated critical shortage of professional and advanced practice nurses complicate the current situation in health care delivery. In response, the GSN provides graduate education that serves as the foundation for excellent and innovative clinical decision making through practice-based research and service, leading to improved health care for all.

Through GSN partnerships with multicultural communities and academic and clinical organizations, research, practice and education are integrated to advance nursing knowledge, science and competencies leading to exemplary health care. GSN faculty and staff are dedicated to identifying and capitalizing on opportunities to promote national distinction and innovation in professional and advanced nursing education, research and clinical service. One of the few nursing schools in New England based at an academic health sciences center and the only publicly funded graduate nursing school in Massachusetts, the GSN prepares professional and advanced practice nurses to become leaders, practitioners, scientists and

educators at the master's, post-master's and doctoral levels

Mission

The mission of the Graduate School of Nursing is to prepare practice-focused and research-focused doctorally prepared nurses and leaders to improve the quality of life and health outcomes for the Commonwealth and beyond. Through partnerships with multi-cultural communities and clinical organizations; research, practice, service and education are integrated to advance nursing knowledge, science and competencies to provide exemplary health care for all.

Philosophy of Nursing

Nursing is a science grounded in shared values and ethical principles encompassing healing and the art of caring. Professional nursing is the use of core and generalist knowledge and competencies across the health/illness continuum in the care and actualization of individuals, families, and communities of diverse ethnic, religious and socioeconomic backgrounds in a variety of settings. Nursing recognizes that the concept of the health/illness curriculum has evolved to appreciate that health is dynamic, encompassing the biophysical, psychosocial, behavioral and spiritual aspects of the human experience, and that the health of individuals, families and communities is inseparable from the social economic, political and physical environment in which people grow and develop. Doctoral education prepares advanced practice nurse, educators and scientists to provide and manage care, collaborate with colleagues in other professions, contribute to the growth of the discipline through leadership, scholarly inquiry, teaching and lifelong learning, and serve society shaping the complex environment in which care is provided.

Philosophy of Nursing Education

The Graduate School of Nursing shares the values of the University of Massachusetts Worcester campus and of the American Association of Colleges of Nursing, of which it is a member. The Graduate

School of Nursing endorses the Social Policy Statement, Code of Ethics and the Scope and Standards of Advanced Practice Nursing of the American Nurses Association.

Graduate nursing education builds on the liberal arts and sciences and major concentrations of undergraduate education. The GSN supports graduate students as they prepare for and transition into roles as advanced practice nurses, leaders, and scientists by providing them with programs of study that are organized for adult learners, and that meet national and state standards. The foundation for the core and specialized knowledge and competencies incorporated into the GSN programs of study including courses are the *Essentials of Baccalaureate Nursing*, the *Essentials of Master's Education for Advanced Practice Nursing*, the *Essentials of Doctoral Education for Advanced Nursing Practice* and the *Research-focused Doctoral Program in Nursing* all from the American Association of the Colleges of Nursing; the standards of the National Organization of Nurse Practitioner Faculties; national certification and the requirements of the Massachusetts Board of Registration in Nursing.

Students are expected to actively engage with nursing faculty to shape the learning environment of the GSN. Our aim is to provide high quality affordable education of advanced practice nurses in an environment that fosters personal and professional development within nursing community.

Goals

The goals of the Graduate School of Nursing are to:

- Prepare advanced practice nurses, leaders, educators and scientists to shape nursing and health care delivery through the integration of education, research, practice and service.
- Create a dynamic research environment to conduct multi-method research where findings are translated into practice.
- Integrate faculty and student practice to meet mutually prioritized health needs through

innovative education, practice, public service and research.

UMass Medical School Core values

The following core values are based on the UMass Medical School and UMass Memorial Health Care Academic Health Sciences Center Strategic Plan:

- improving health and enhancing access to care for people within our community, the commonwealth, and the world;
- excellence in achieving the highest quality standards in patient care and satisfaction, education and research;
- common good as an institutional focus, exercised both internally and externally;
- collegiality as we work through a shared vision for the common good;
- integrity in decision-making and actions held to the highest ethical standards;
- diversity promoted within our institution to foster an atmosphere of compassion, courtesy, and mutual respect, stimulating inventiveness and broadening our talents and perspectives;
- academic opportunity and scholarship through high-quality, affordable educational programs for the training of physicians, nurses, advanced practitioners, researchers, and educators; and
- scientific advancement made possible by embracing creative thinking and innovation to yield an understanding of the causes, prevention, and treatment of human disease for the pursuit of knowledge and the benefit of people everywhere.

UMass Worcester Graduate School of Nursing Core Values

The Graduate School of Nursing core values parallel the UMass Medical School overall core values:

Value	Statement
Academic Opportunity	Provide high quality, affordable education programs for professional and advanced practice nurses, educators, scientists, and leaders in an environment that fosters personal & professional development within the nursing community.
Collaboration	Fostering effective interprofessional partnerships with multi-cultural communities, families and individuals, and clinical and educational organizations.
Human Dignity, Respect, Altruism	Respect the dignity and diversity of all individuals while engaging in practice, research, and education for the benefit of others.
Integrity, Self-regulation, & Autonomy	Embrace the ANA Code of Ethics for nurses in practice, research, and education to preserve the autonomy and integrity of the nursing profession and those we serve.
Quality	Excellence in achieving the highest quality standards in patient care and satisfaction, education, and research.
Scientific Advancement	Create, translate, integrate, and apply the science of nursing through evidence-based practice to improve the quality of life and health outcomes for individuals and families.
Service	Foster initiatives to promote health and social justice to provide care and advocacy for vulnerable populations.

Academic Programs and Pathways

The Graduate School of Nursing offers master's, post-master's and doctoral degrees, preparing registered professional and advanced practice nurses within nurse practitioner and nurse educator tracks for clinical practice, faculty, research and other nursing leadership positions. Specialties are also offered in selected areas. The basis for study includes theoretical foundations of professional and advanced practice nursing, research process and design, societal forces that influence nursing, advanced pathophysiology, pharmacology, health assessment, clinical decision making, track content and clinical education.

Track Options to the Master of Science in Nursing degree

The GSN offers, several tracks to the master's degree that lead to the preparation of nurse practitioners and nurse educators:

Graduate Entry Pathway (GEP) is for individuals with a bachelor's degree in a field other than nursing, leading first to registered nurse licensure and then to master's in advanced practice nursing tracks (population foci) in:

- Adult-Gerontology Primary Care Nurse Practitioner (AG-PCNP)
- Adult-Gerontology Acute Care Nurse Practitioner (AG-ACNP)
- Family Nurse Practitioner (FNP)

In addition, applicants to the GEP to master's program may consider:

- GEP to DNP Track (FNP track only)

Traditional Master's Track is for registered nurses with a bachelor's degree in nursing taking master's advanced practice nursing tracks (population foci) in:

- Adult-Gerontology Primary Care Nurse Practitioner (AG-PCNP)

- Adult-Gerontology Acute Care Nurse Practitioner (AG-ACNP)
- Nurse Educator

Pre-master's Option is for registered nurses with a bachelor's degree in a field other than nursing or associate's degree in nursing. Students take undergraduate prerequisites, then proceed with master's pathway tracks in:

- Adult-Gerontology Primary Care Nurse Practitioner (AG-PCNP)
- Adult-Gerontology Acute Care Nurse Practitioner (AG-ACNP)
- Nurse Educator

Post-master's Certificate Option is for registered nurses with a master's degree in nursing from a program accredited by the National League for Nursing Accrediting Commission or the Collegiate Commission on Nursing Education who wish to expand their competencies in the graduate nursing tracks in order to become an:

- Adult-Gerontology Primary Care Nurse Practitioner (AG-PCNP)
- Adult-Gerontology Acute Care Nurse Practitioner (AG-ACNP)
- Nurse Educator

In addition, applicants to the traditional master's option may also consider:

- Bachelor's to Doctorate in Nursing Practice (DNP) Nursing Track (with Master's FNP Track only)
- Bachelor's to PhD in Nursing Track

Master's pathway program specialties include:

- Cancer Care
- Cardiovascular Care
- Critical Care
- Emergency Care
- Nurse Educator

Pathways to Doctoral Nursing degrees

Students seeking a terminal nursing degree have two options in the Graduate School of Nursing:

- Doctor of Nursing Practice (DNP), a practice doctorate
- Doctor of Philosophy in Nursing (PhD), a research doctorate

Doctor of Nursing Practice (DNP)

The DNP is to prepare students for leadership roles as nurse practitioners or nursing administrators. Approved by the Massachusetts Board of Higher Education in 2008, the program prepares graduates for leadership roles in advanced nursing practice. The curriculum is designed to educate students to improve and transform health care through systems leadership, research translation and advanced clinical knowledge.

The GSN offers three tracks to the DNP:

- **GEP to DNP Track** (with Master's FNP track only)
- **Bachelor's to DNP Track** (with Master's FNP Track only)
- **Post-master's to DNP Track**

The Post-master's to DNP Track offers advanced nursing leadership role preparation for Nurse Practitioners and Nurse Administrators.

The PhD in Nursing

The GSN's innovative PhD program promotes mentorship in research and scholarship among its faculty and students for the advancement of nursing science and practice. The PhD in Nursing program has been based at UMW since 2005, after more than 10 years as a collaborative program with the University of Massachusetts Amherst.

The GSN offers three tracks to the PhD:

GEP to PhD Track is open to individuals with a bachelor's degree in a field other than nursing completing their first-year of Graduate Entry Pathway (GEP) courses at UMW.

GEP students are expected to complete 1,000 hours total (500 hours is required prior to the start of the clinical year) of work as a registered nurse before the end of their final semester in addition to their required clinical practica.

Bachelor's to PhD Track is open to registered nurses with a bachelor's degree and to students who have completed first-year Graduate Entry Pathway (GEP) courses at UMW. The purpose of the Bachelor's to PhD Track is to accelerate the research careers of nurse scientists.

Master's to PhD Track is open to registered nurses with a master's degree in nursing or a related field. This program prepares nurse researchers with the ability to conduct clinical and translational research within a multidisciplinary setting, and nursing faculty for careers in teaching and research.

See individual academic programs for further information about programs, tracks and specialties, course sequences, admission, and selected policies and procedures.

Master of Science in Nursing Degree

The Master of Science in Nursing curricula incorporates theory, clinical laboratory and practice in a graduate nursing track. The common course of study for each track includes graduate core courses in theories, research process and design, and societal forces that influence interprofessional nursing practice. Advanced practice nursing core courses include advanced pathophysiology, advanced health assessment and advanced pharmacotherapeutics. The focus of a particular track and the courses specifically needed to develop expertise in each vary, as detailed in the course sequences. The master's program also offers optional courses in specialty areas of practice which include cancer care, cardiovascular care, critical care, emergency care, and nursing education. Full- and part-time studies are available in the master's pathway program.

Master's Pathway Program Outcomes

The master's pathway program prepares advanced practice nurses as either nurse practitioners or nurse educators. Graduates synthesize and integrate knowledge from the biological, psychological, social and nursing sciences. They also analyze the effect of developmental, economic, cultural, epidemiological, social, political, ethical, legal and spiritual factors influencing the care of patients with an emphasis on vulnerable and diverse populations. Graduates assess, intervene, and evaluate patients and families' responses to health/illness states by applying the competencies of advanced practice. They apply the standards of practice and evidence-based literature to make cost-effective clinical judgments in the context of quality patient outcomes.

The graduates also manage care as a member of an interprofessional team providing preventive and population-based health care in institutions and communities. As advanced practice nurses, they provide clinical leadership within the context of social, economic, political, legal, cultural and ethical forces that affect health care delivery, health policy and professional nursing practice. They contribute to

the scholarly advancement of the nursing profession through education, research and clinical practice. Graduates embrace life-long learning through participation and leadership in professional development.

Tracks to the Master of Science Degree Pathway

Within the GSN master's pathway program, tracks lead to the preparation of advanced practice nurses and nurse educators. Advanced practice nursing population foci include adult-gerontology primary care, adult-gerontology acute care, or family nurse practitioner (available to GEP and BSN to DNP applicants only). The nurse educator track is available to traditional master's applicants only.

Traditional Master's Track

Traditional Master's Track to master's degree is for registered nurses with a bachelor's degree in nursing.

Pre-master's Option to master's degree is for registered nurses with a bachelor's degree in a field other than nursing or an associate's degree in nursing (see Pre-master's Option for additional details).

The Graduate Entry Pathway to Master's Degree Track

The Graduate Entry Pathway (GEP) is designed as an alternate track into the Master of Science in Nursing program for applicants who have a bachelor's degree in a field other than nursing, who are not registered nurses and who seek a master's degree in nursing to become a nurse practitioner.

The GEP to master's track is a full-time program lasting a minimum of three years that:

- prepares professional nurses for generalist entry-level practice through initial licensure by examination in Massachusetts as a registered nurse;
- establishes the foundation for competent professional practice as a registered nurse with a

requirement of 1000 RN practice hours by graduation; and

- equips students for studies in a track area in the Master of Science in Nursing program.

GEP graduates receive a Master of Science degree.

GEP Summary of Study

GEP Year One: Pre-licensure Component

The academic calendar runs from mid-August to the end of July. During this period, students complete the courses and clinical experiences required for licensure as a registered nurse. Upon successful completion of pre-licensure requirements and enrollment in the subsequent 500- and 600-level courses in the first part of the GEP Year Two, the GSN will issue qualifying students a Certificate of Completion so that they may sit for the National Certification Licensing Examination for Registered Nurses (NCLEX-RN). The Certificate of Completion is not the equivalent of an academic degree, and is awarded in the Commonwealth of Massachusetts only to students who are enrolled in a graduate degree program.

GEP Year One Outcomes

Consistent with the terminal outcomes of the Master of Science in Nursing program, upon completion of Year One of the Graduate Entry Pathway, students will be able to:

- think critically for the purposes of exercising evidence-based clinical judgment and making ethical decisions;
- provide clinical nursing care using the core competencies and knowledge of a professional registered nurse;
- communicate effectively with individuals, families and communities of diverse backgrounds and with colleagues in other professional disciplines;
- demonstrate leadership skills to enhance health care delivery and promote professional nursing; and

- exemplify the personal and professional values and characteristics consistent with the professional nursing role.

GEP Year Two

Students transition into Master of Science coursework. In the fall semester, in addition to traditional master's (600-level) courses, GEP students take NG603C Interprofessional Population Health Clerkship. In the spring semester, GEP students take NG522 Transition to Professional Nursing.

GEP Year Three

In the final year of the GEP program, the plan of study will vary based on the track of choice, with GEP students taking the additional 600-level courses for their chosen track:

Adult-Gerontology Primary Care Nurse Practitioner
Adult-Gerontology Acute Care Nurse Practitioner
Family Nurse Practitioner

GEP students are expected to complete 1,000 hours total (500 hours is required prior to the start of the clinical year) of work as a registered nurse before the end of their final semester in addition to their required clinical practica.

Transitioning to Master's Pathway Courses, Tracks and Specialties

The master's curriculum incorporates theory, clinical laboratory and practica in a graduate nursing track. The common course of study for each track includes graduate core courses in theories, research process and design, epidemiology, genetics and societal forces that influence interprofessional nursing practice. Advanced practice nursing core courses include advanced pathophysiology, advanced health assessment and advanced pharmacotherapeutics. The focus of a particular track and the courses specifically needed to develop expertise in each vary, as detailed in the course sequences. The master's pathway program also offers optional courses in specialty areas which include cancer care, cardiovascular care, critical care, emergency care, and nurse educator specialties (described below).

Full- and part-time studies are available in the master's program.

Master's Program Outcomes

The GEP to master's program is designed to prepare advanced practice nurses as adult-gerontology primary care, adult-gerontology acute care, or family nurse practitioners. The graduates synthesize and integrate knowledge from the biological, psychological, social and nursing sciences. They also analyze the effect of developmental, economic, cultural, epidemiological, social, political, ethical, legal and spiritual factors influencing the care of patients with an emphasis on vulnerable and diverse populations. The graduates assess, intervene, and evaluate the responses of patients to health/illness states by applying the track competencies of advanced practice. They apply the standards of practice and evidence-based literature to make cost-effective clinical judgments in the context of quality patient outcomes. The graduates also manage health/illness care as a member of an interdisciplinary team implementing preventive and population-based health care in institutions and communities. As advanced practice nurses, they provide clinical leadership within the context of social, economic, political, legal, cultural and ethical forces that affect health care delivery, health policy and professional nursing practice. They contribute to the scholarly advancement of the nursing profession through education, research and clinical practice. The graduates embrace life-long learning through participation and leadership in professional development.

GEP Nurse Practitioner Tracks

Students in the Graduate Entry Pathway are eligible for entry into the track component of the master's program, given successful completion of prerequisite coursework.

The Master of Science tracks available to GEP students are:

- Adult-Gerontology Primary Care Nurse Practitioner (AG-PCNP)

- Adult-Gerontology Acute Care Nurse Practitioner (AG-ACNP)
- Family Nurse Practitioner (available to GEP students only)

The Adult-Gerontology Primary Care Track

The Adult-Gerontology Primary Care (AG-PCNP) track prepares advanced practice nurses to function in ambulatory or community-based settings as an adult-gerontology primary care nurse practitioner. The focus of the track is on the delivery of primary care to the individual within the context of the family and community. The direct role component includes the management and delivery of care for adult-older adults with common episodic or chronic health problems, and the core competencies emphasizing teaching, consultation and research. Graduates of this track are eligible to take the Adult-Gerontology Primary Care Nurse Practitioner certification examination prepared by an approved national organization as accepted by the Board of Registration in Nursing and to apply to practice in the expanded role in Massachusetts or other states based on regulatory guidelines.

Adult-Gerontology Acute Care Nurse Practitioner Track

The Adult-Gerontology Acute Care (AG-ACNP) track prepares advanced practice nurses to function in acute or critical care areas as an adult-gerontology acute care nurse practitioner. This track focuses on the direct role component, including the management and delivery of care to acutely ill adult-older adult patients, as well as the core competencies emphasizing teaching/coaching, consultation and research. Graduates of this track are eligible to take the Adult-Gerontology Acute Care Nurse Practitioner certification examination prepared by an approved national organization as accepted by the Board of Registration in Nursing and to apply to practice in the expanded role in Massachusetts or other states based on regulatory guidelines.

Family Nurse Practitioner Track (only available to GEP and DNP students)

The Family Nurse Practitioner (FNP) track prepares advanced practice nurses to function in ambulatory or community-based settings as a family nurse practitioner. The focus of the program is on the delivery of primary care to the individual within the context of the family and community. The direct role component includes the management and delivery of care to children and adults with common episodic or chronic health problems, and the core competencies emphasizing teaching, consultation and research. Graduates of this track are eligible to take the Family Nurse Practitioner certification examination prepared by an approved national organization as accepted by the Board of Registration in Nursing and to apply to practice in the expanded role in Massachusetts or other states based on regulatory guidelines.

Nurse Practitioner Track Outcomes

Consistent with the outcomes of the master's program and upon completion of these nurse practitioner tracks, graduates will be able to use critical thinking, communication, therapeutic intervention and professional role interaction to:

- synthesize knowledge from the biological, psychological, social and nursing sciences as a foundation for advanced practice nursing as an adult-gerontology primary care, adult-gerontology acute care and/or family nurse practitioner;
- assess, intervene and evaluate the responses of patients to acute, chronic and/or critical health/illness states over time in a variety of settings as an adult-gerontology primary care and/or adult-gerontology acute/critical care nurse practitioner;
- utilize the standards of practice and evidence-based literature in the provision of patient care, based on critical analysis and evaluation of theory and research from nursing and related disciplines;
- implement both the direct care and core competencies of the adult-gerontology primary care, adult-gerontology acute care and/or family nurse

practitioner role in interprofessional health care settings;

- assume clinical leadership in health care delivery systems, health policy organizations, and local and national nursing organizations;
- analyze the effect of developmental, economic, cultural, epidemiological, social, political, ethical, legal and spiritual trends influencing the care of children, adults and elders;
- participate in research and other scholarly activities related to clinical nursing; and
- embrace life-long learning through participation and leadership in professional development.

Specialties (Optional)

UMass Worcester (UMW) GSN students are eligible to be enrolled in one of the optional UMass Worcester GSN specialties:

- Cancer Care
- Cardiovascular Care
- Critical Care
- Emergency Care
- Nurse Educator

A specialty consists of 2 three-credit didactic courses and clinical practicum(s). (Exception is Nurse Educator specialty). Students must take the coursework in order to be eligible for the clinical course(s). The clinical practicum requirements per specialty are as follows:

Cancer Care: N/NG 686B	1 Credit (90 clinical hours)
Cardiovascular Care: N/NG 682B	1 Credit (90 clinical hours)
Critical Care: N/NG 643B	1 Credit (90 clinical hours)

Emergency care: 2 Credits (90 clinical
N/NG 724B, hours each, totaling 180
N/NG 725B clinical hours)

Nurse Educator: Optional clinical
component is available

Due to limited clinical practicums available, a maximum number of students will be accepted into each clinical practicum of the specialty.

Prerequisites for the specialty: Permission of Instructor

Cancer Care

The Cancer Care specialty prepares nurses for advanced practice roles in cancer care and education within the adult-older adult patient population. The direct role components emphasize integrating theory, research and practice essential for the advanced practice oncology nurse. The program integrates the physiological and psychosocial components of cancer care.

Courses

Living with Chronic Conditions & Terminal Illness
N/NG685 3 credits
Advanced Practice Oncology Nursing
N/NG686 3 credits
Advanced Practice Oncology Nursing Practicum
N/NG686B 1 credit

Cardiovascular Care

The Cardiovascular Care specialty prepares nurses for advanced practice roles across the continuum of care from acute/critical care settings to ambulatory/community settings. The specialty focuses on health promotion strategies in clinics, hospitals and community-based settings for men and women at risk for experiencing acute and chronic cardiovascular diseases.

Courses

Advanced Practice Cardiovascular Nursing I
N/NG681 3 credits
Advanced Practice Cardiovascular Nursing II

N/NG682 3 credits
Advanced Practice Cardiovascular Nursing Practicum
N/NG682B 1 credit

Critical Care

The Critical Care specialty prepares critical care nurses for the advanced practice nursing role to manage critically ill patients. The specialty focuses on assessment, diagnosis, stabilization, disease management, and prevention of complications of adults and older adults experiencing life threatening diseases and injuries requiring critical care knowledge and skills. Enrollment in this specialty is available to students who have recent nursing experience caring for patients in critical care settings.

Courses

Advanced Practice Critical Care Nursing I
N/NG 643 3 credits
Advanced Practice Critical Care Nursing II
N/NG 644 3 credit
Advanced Practice Critical Care Nursing
Practicum N/NG 643B 1 credit

Emergency Care

The Emergency Care specialty prepares nurses for advanced practice roles in urgent and emergent care management. The specialty includes introductory and advanced care didactic and clinical courses including caring for and management of unstable patients with emergent and life-threatening conditions.

Courses

Advanced Practice Nursing in Emergency Care I
N/NG 724A 3 credits
Advanced Practice Nursing
In Emergency Care Practicum I
N/NG 724B 1 credit
Advanced Practice Nursing in Emergency Care II
N/NG 725A 3 credits
Advanced Practice Nursing in Emergency Care
Practicum II N/NG 725B 1 credit

Nurse Educator

The Nurse Educator specialty prepares nurses for roles in faculty or staff development, providing an opportunity to acquire teaching skills and strategies that address student, program and patient outcomes as well as leadership skills to improve health care.

Courses

Advanced Nursing Science: Teaching and Curriculum Development for Nurse Educators

N/NG620 3 credits

Advanced Nursing Science: Identifying and Measuring Outcomes for Nurse Educators

N/NG623 3 credits

Note: Permission of instructor is required for consideration of an independent study clinical component for this specialty.

Number of Years to Complete

Educational Program

It is expected that students admitted into the Graduate School of Nursing will complete graduation requirements within a specified number of years (not counting time away for an approved leave of absence) depending on their specific educational program as noted below.

Program Track	Maximum years of enrollment for degree completion
GEP to MS	5
BSN to MS	5
MS to DNP	5
MS to PhD	5
GEP or BS to PhD	6
BS to DNP	7
GEP to DNP	8

Graduate Entry Pathway Course Sequences

See Course Descriptions for further information about GEP and other GSN courses.

GEP Adult-Gerontology Primary Care Nurse Practitioner (AG-PCNP)

GEP Year One Pre-licensure (must be taken as full-time student, no part-time option Year 1)

Fall Semester

NG510	Concepts in Professional Nursing	2 credits
NG511	Biomedical Sciences I	5 credits
NG513	Health Assessment and Skills I	2 credits
NG516A	Nursing I: Care of Persons with Acute and Chronic Conditions	5 credits
NG516B	Nursing I: Clinical Care of Persons with Acute and Chronic Conditions	5 credits

Spring Semester

NG512	Biomedical Sciences II	3 credits
NG514	Health Assessment and Skills II	1 credit
NG517A	Nursing II: Care of Persons with Acute and Chronic Conditions	5 credits
NG517B	Nursing II: Clinical Care of Persons with Acute and Chronic Conditions	3 credits
NG518A	Nursing III: Care of the Childbearing and Child Rearing Family	5 credits
NG518B	Nursing III: Clinical Care of the Childbearing and Child Rearing Family	3 credits

Summer Semester

NG519A	Nursing IV: Clinical Capstone: Leadership and Management	3 credits
NG519B	Nursing IV: Clinical Capstone: Internship	7 credits

Pre-licensure Credits 49 credits

Total Costs GEP Year 1 Fee*:

In-state residents	\$38,993
New England regional	\$46,643
Out of state	\$52,493

Note: At completion of pre-licensure credits, GSN qualifying students will receive a Certificate of Completion and may sit for the National Certification Licensing Examination for Registered Nurses.

GEP Year Two (Part-time option: courses taken Year 2 or 3 as denoted by footnotes)

Fall Semester

NG603A	Societal Forces For Advanced Practice Nursing (2)	3 credits
NG603B	IP Population Health Community Service Learning Practicum [CSL] (taken Fall through Spring) (2)	1 credit
NG603C	IP Population Health Clerkship (2)	1 credit
NG604	Translating Scholarship to Practice (3)	3 credits
NG613	Advanced Pathophysiology (2)	3 credits
NG719	Genetics, Genomics, Pharmacogenomics (3)	3 credits

Spring Semester

NG522	Transition to Professional Practice (3)	2 credits
NG603B	Community Service Learning Practicum (2) (continued from Fall)	
NG614	Advanced Pharmacotherapeutics (2)	3 credits

NG615A	Advanced Health Assessment (3)	3 credits
NG615B	Advanced Health Assessment Practicum (3)	1 credit
NG704	Epidemiology (3)	3 credits

Summer Semester

NGXXX	Elective	3 credits
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Full Time Cost*:

In-state residents \$15,786
New England regional \$20,839
Out of state \$23,366

GEP Year Three (part-time option: courses taken Year 4)

Fall Semester

NG630A	Advanced Nursing Science: Adult-Gerontology Primary Care Nurse Practitioner Theory I	6 credits
NG630B	Advanced Nursing Science: Adult-Gerontology Primary Care Nurse Practitioner Clinical Practicum I	4 credits

Spring Semester

NG631A	Advanced Nursing Science: Adult-Gerontology Primary Care Nurse Practitioner Theory II	6 credits
NG631B	Advanced Nursing Science: Adult-Gerontology Primary Care Nurse Practitioner Clinical Practicum II	3 credits

Total Academic Credits	97 credits
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Full Time Cost*:

In-state residents \$10,568
New England regional \$13,893
Out of state \$15,508

*Costs listed are estimates, and that tuition and fees may change at any time without prior notice.

GEP Adult-Gerontology Acute Care Nurse Practitioner Track (AG-ACNP)

GEP Year One Pre-licensure (must be taken as full-time student, no part-time option Year 1)

Fall Semester

NG510	Concepts in Professional Nursing	2 credits
NG511	Biomedical Sciences I	5 credits
NG513	Health Assessment and Skills I	2 credits
NG516A	Nursing I: Care of Persons with Acute and Chronic Conditions	5 credits
NG516B	Nursing I: Clinical Care of Persons with Acute and Chronic Conditions	5 credits

Spring Semester

NG512	Biomedical Sciences II	3 credits
NG514	Health Assessment and Skills II	1 credit
NG517A	Nursing II: Care of Persons with Acute and Chronic Conditions	5 credits
NG517B	Nursing II: Clinical Care of Persons with Acute and Chronic Conditions	3 credits

NG518A	Nursing III: Care of the Childbearing and Child Rearing Family	5 credits
NG518B	Nursing III: Clinical Care of the Childbearing and Child Rearing Family	3 credits
Summer Semester		
NG519A	Nursing IV: Clinical Capstone: Leadership and Management	3 credits
NG519B	Nursing IV: Clinical Capstone: Internship	7 credits
Pre-licensure Credits		49 credits

Total Costs GEP Year 1 Fee*:

In-state residents	\$38,993
New England regional	\$46,643
Out of State	\$52,493

Note: At completion of pre-licensure credits, GSN qualifying students will receive a Certificate of Completion and may sit for the National Certification Licensing Examination for Registered Nurses.

GEP Year Two (part-time option: courses taken Year 2 or 3 as denoted by footnotes)

Fall Semester

NG603A	Societal Forces For Advanced Practice Nursing (3)	3 credits
NG603B	IP Population Health Community Service Learning Practicum [CSL] (taken Fall through Spring) (2)	1 credit
NG603C	IP Population Health Clerkship (2)	1 credit
NG604	Translating Scholarship to Practice (3)	3 credits
NG613	Advanced Pathophysiology (2)	3 credits
NG719	Genetics, Genomics, Pharmacogenomics (3)	3 credits

Spring Semester

NG522	Transition to Professional Practice (2)	2 credits
NG603B	IP Population Health CSL Practicum (2) (continued from Fall)	
NG614	Advanced Pharmacotherapeutics (2)	3 credits
NG615A	Advanced Health Assessment (3)	3 credits
NG615B	Advanced Health Assessment Practicum (3)	1 credit
NG704	Epidemiology (3)	3 credits

Summer Semester

NGXXX	Elective	3 credits
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Full Time Cost*:

In-state residents	\$15,786
New England regional	\$20,839
Out of state	\$23,366

GEP Year Three (part-time option: courses taken Year 4)

Fall Semester

NG640A	Advanced Nursing Science: Adult-Gerontology Acute Care Nurse Practitioner Theory I	6 credits
NG640B	Advanced Nursing Science: Adult-Gerontology Acute Care Nurse Practitioner Clinical Practicum I	4 credits

Spring Semester

NG641A	Advanced Nursing Science: Adult-Gerontology Acute Care Nurse Practitioner Theory II	6 credits
NG641B	Advanced Nursing Science: Adult-Gerontology Acute Care Nurse Practitioner Clinical Practicum II	3 credits
Total Academic Credits		97 credits

Full Time Cost*:

In-state residents \$11,018
 New England regional \$14,343
 Out of state \$15,958

*Costs listed are estimates, and that tuition and fees may change at any time without prior notice.

GEP Family Nurse Practitioner Track

GEP Year One Pre-licensure (must be taken as full-time student, no part-time option Year 1)

Fall Semester

NG510	Concepts in Professional Nursing	2 credits
NG511	Biomedical Sciences I	5 credits
NG513	Health Assessment and Skills I	2 credits
NG516A	Nursing I: Care of Persons with Acute and Chronic Conditions	5 credits
NG516B	Nursing I: Clinical Care of Persons with Acute and Chronic Conditions	5 credits

Spring Semester

NG512	Biomedical Sciences II	3 credits
NG514	Health Assessment and Skills II	1 credit
NG517A	Nursing II: Care of Persons with Acute and Chronic Conditions	5 credits
NG517B	Nursing II: Clinical Care of Persons with Acute and Chronic Conditions	3 credits
NG518A	Nursing III: Care of the Childbearing and Child Rearing Family	5 credits
NG518B	Nursing III: Clinical Care of the Childbearing and Child Rearing Family	3 credits

Summer Semester

NG519A	Nursing IV: Clinical Capstone: Leadership and Management	3 credits
NG519B	Nursing IV: Clinical Capstone: Internship	7 credits

Pre-licensure Credits 49 credits

Total Costs GEP Year 1 Fee*:

In-state residents \$38,893
 New England regional \$46,643
 Out of state \$52,493

Note: At completion of pre-licensure credits, GSN qualifying students will receive a Certificate of Completion and may sit for the National Certification Licensing Examination for Registered Nurses.

GEP Year Two (part-time option: courses taken Year 2 or 3 as denoted by footnotes)

Fall Semester

NG603A	Societal Forces Influencing Graduate Nursing Education & Practice (1)(2)	3 credits
NG603B	IP Population Health Community Service Learning Practicum [CSL] (2) (taken Fall through Spring)	1 credit

NG603C	IP Population Health Clerkship (2)	1 credit
NG604	Translating Scholarship to Practice (3)	3 credits
NG613	Advanced Pathophysiology (2)	3 credits
NG719	Genetics, Genomics, Pharmacogenomics (3)	3 credits

Spring Semester

NG522	Transition to Professional Practice	2 credits
NG603B	IP Population Health CSL (2) (continued from Fall)	
NG614	Advanced Pharmacotherapeutics (2)	3 credits
NG615A	Advanced Health Assessment (3)	3 credits
NG615B	Advanced Health Assessment Practicum (3)	1 credit
NG704	Epidemiology (3)	3 credits

Summer Semester

NGXXX	Elective	3 credits
NG659	ANS: Maternal & Child Care for the FNP	4 credits

Full Time Cost*:

In-state residents \$17,586
New England regional \$23,339
Out of state \$26,206

GEP Year Three (part-time option: courses taken Year 4)

Fall Semester

NG660A	Advanced Nursing Science: Family Nurse Practitioner Theory I	6 credits
NG660B	Advanced Nursing Science: Family Nurse Practitioner Clinical Practicum I	4 credits

Spring Semester

NG661A	Advanced Nursing Science: Family Nurse Practitioner Theory II	6 credits
NG661B	Advanced Nursing Science: Family Nurse Practitioner Clinical Practicum II	4 credits

Total Academic Credits 102 credits

Full Time Cost*:

In-state residents \$11,018
New England regional \$14,518
Out of state \$16,218

*Please note that costs listed are estimates, and that tuition and fees may change at any time without prior notice.

Admission to the Graduate Entry Pathway

Students who wish to be considered for admission to the Graduate Entry Pathway must submit their application online via NursingCAS (Centralized Application Service). The link is on the Graduate School of Nursing Web site www.umassmed.edu/gsn. The Graduate Entry Pathway application deadline is December 1st all completed application will be reviewed. Qualified applicants will be contacted by the admissions office to schedule an interview. Applicants are reviewed individually on the basis of previous academic achievement, Graduate Record Examination (GRE) scores, professional experience and personal attributes.

Application

Applications to the Traditional Master's Track into the Master of Science program will be considered when all of the following have been received:

- completed application form, including a clear personal statement of professional goals related to track of choice (see application for Instructions);
- non-refundable application fee made payable to the University of Massachusetts;
- official transcripts of college graduation from an accredited institution and all other colleges and universities attended, including prerequisite courses if taken outside of a degree program
- Acceptable results on the GRE revised General Test (Verbal Reasoning, Quantitative Reasoning, and Analytical Writing
- three letters of recommendation from people with whom the applicant has been in contact within the last five years:
- two letters must be academic references from persons with advanced degrees

- one must be a work-related reference from a person who has been in a position to evaluate the applicant's work performance or volunteer activities; and
- current resume including work experience, education and professional activities.

Qualified applicants will be admitted on a space-available basis. Applicants may have to submit course syllabi for evaluation upon request.

Prerequisites

Applicants must have:

- A minimal grade of C or better in the following courses within the last five years:
- two courses in anatomy and physiology with lab;
- one course in microbiology with lab;
- one course in human growth and development across the lifespan;
- one course in nutrition.
- college-level statistics course;
- current CPR Certification for Health Providers (BLS) by the American Heart Association;
- computer competence at the user level, including file management and word processing; and
- proficiency in reading and writing in the English language. Applicants whose native language is not English must supply their Test of English as a Foreign Language (TOEFL) results.

Tuition and Fees, Financial Aid and Academic Policies and Procedures

See page 67.

Traditional Master's Nurse Practitioner & Nurse Educator Tracks

Students in the Traditional Master's, including Pre-master's and Post-master's Certificate options, are eligible for entry into the following given successful completion of prerequisite coursework.

The Traditional Master of Science NP track population foci are:

- Adult-Gerontology Primary Care Nurse Practitioner (AG-PCNP)
- Adult-Gerontology Acute Care Nurse Practitioner, (AG-ACNP)

Or the option of:

- Nurse Educator Track

Master's Program Outcomes

The traditional master's program (including pre-master's) is designed to prepare advanced practice nurses as adult-gerontology primary care or adult-gerontology acute care nurse practitioners. The graduates synthesize and integrate knowledge from the biological, psychological, social and nursing sciences. They also analyze the effect of developmental, economic, cultural, epidemiological, social, political, ethical, legal and spiritual factors influencing the care of patients with an emphasis on vulnerable and diverse populations. The graduates assess, intervene, and evaluate the responses of patients to health/illness states by applying the track competencies of advanced practice. They apply the standards of practice and evidence-based literature to make cost-effective clinical judgments in the context of quality patient outcomes. The graduates also manage health/illness care as a member of an interdisciplinary team implementing preventive and population-based health care in institutions and communities. As advanced practice nurses, they provide clinical leadership within the context of social, economic, political, legal, cultural and ethical forces that affect health care delivery, health policy and professional nursing practice. They contribute to the scholarly advancement of the nursing profession through education, research and clinical practice.

The graduates embrace life-long learning through participation and leadership in professional development.

Adult-Gerontology Primary Care Nurse Practitioner Track

The Adult-Gerontology Primary Care Nurse Practitioner (AG-PCNP) track prepares advanced practice nurses to function in ambulatory or community-based settings as an adult-gerontology primary care nurse practitioner. The focus of the track is on the delivery of primary care to the individual within the context of the family and community. The direct role component includes the management and delivery of care for adult-older adults with common episodic or chronic health problems, and the core competencies emphasizing teaching, consultation and research. Graduates of this track are eligible to take the Adult-Gerontology Primary Care Nurse Practitioner certification examination prepared by an approved national organization as accepted by the Board of Registration in Nursing and to apply to practice in the expanded role in Massachusetts or other states based on regulatory guidelines.

Adult-Gerontology Acute Care Nurse Practitioner Track

The Adult-Gerontology Acute Care Nurse Practitioner (AG-ACNP) track prepares advanced practice nurses to function in acute or critical care areas as an adult-gerontology acute care nurse practitioner. This track focuses on the direct role component, including the management and delivery of care to acutely ill adult-older adult patients, as well as the core competencies emphasizing teaching/coaching, consultation and research. Graduates of this track are eligible to take the Adult-Gerontology Acute Care Nurse Practitioner certification examination prepared by an approved national organization as accepted by the Board of Registration in Nursing and apply to practice in the expanded role in Massachusetts or other states based on regulatory guidelines.

Nurse Practitioner Track Outcomes

Consistent with the outcomes of the master's program and upon completion of these nurse practitioner tracks, graduates will be able to use critical thinking, communication, therapeutic intervention and professional role interaction to:

- synthesize knowledge from the biological, psychological, social and nursing sciences as a foundation for advanced practice nursing as an adult-gerontology primary care nurse practitioner and/or adult-gerontology acute care nurse practitioner;
- assess, intervene and evaluate the responses of patients to acute, chronic and/or critical health/illness states over time in a variety of settings as an adult-gerontology primary care and/or adult-gerontology acute care nurse practitioner;
- utilize the standards of practice and evidence-based literature in the provision of patient care based on critical analysis and evaluation of theory and research from nursing and related disciplines;
- implement both the direct care and core competencies of the adult-gerontology primary care and/or adult-gerontology acute care in interprofessional health care settings;
- assume clinical leadership in health care delivery systems, health policy organizations, and local and national nursing organizations;
- analyze the effects of developmental, economic, cultural, epidemiological, social, political, ethical, legal and spiritual trends influencing the care of children, adults and elders;
- participate in research and other scholarly activities related to clinical nursing; and
- embrace lifelong learning through participation and leadership in professional development.

Nurse Educator Track

In response to forces in nursing and health care, this track prepares a unique graduate who possesses a strong clinical foundation, leadership skills, and extensive knowledge of teaching and learning. This track requires clinical and educational practica.

Nurse Educator Track Outcomes

Consistent with the outcomes of the master's program, and upon completion of the Nurse Educator track, graduates will be able to use critical thinking, communication, therapeutic intervention and professional role interaction to:

- assess, evaluate and provide care in interprofessional environments to adults with actual or potential health deviations;
- teach students or staff to provide patient care based on critical analysis and evaluation of theory and research/evidence from nursing and related disciplines;
- apply appropriate teaching strategies to address the learning needs of a variety of learners in a variety of settings;
- assume clinical leadership roles in nursing schools, care delivery organizations or in local and national professional organizations;
- analyze the effect of social, economic, political, ethical and legal trends on nursing, nursing education and the health care system;
- participate in research and other scholarly activities designed to improve patient outcomes; and
- participate in developing strategies designed to promote and improve system and performance quality.

Specialties

UMass Worcester (UMW) GSN students are eligible to be enrolled in one of the optional UMass Worcester GSN specialties:

- Cancer Care
- Cardiovascular Care
- Critical Care
- Emergency Care
- Nurse Educator

A specialty consists of two three-credit didactic courses and clinical practicum(s). (Exception is Nurse Educator.) Students must take the coursework in order to be eligible for the clinical course(s). The clinical practicum requirements per specialty are as follows:

Cancer Care:	1 credit (90 clinical hours) N/NG 686B
Cardiovascular Care:	1 credit (90 clinical hours) N/NG 682B
Critical Care:	1 credit (90 clinical hours) N/NG 643B
Emergency care:	2 credits (90 clinical N/NG 724B hours each totaling N/NG 725B 180 clinical hours)
Nurse Educator:	Optional clinical component is available for this specialty

Due to limited clinical practicums available, a maximum number of students will be accepted into each clinical portion of the specialty.

Prerequisites for the specialties: Permission of Instructor

Cancer Care

The Cancer Care specialty prepares nurses for advanced practice roles in cancer care and education within the adult-older adult patient population. The direct role components emphasize integrating theory, research and practice essential for the advanced practice oncology nurse. The program integrates the physiological and psychosocial components of cancer care.

Courses

Living with Chronic & Terminal Illness N/NG685	3 credits
Advanced Practice Oncology Nursing N/NG686	3 credits
Advanced Practice Oncology Nursing Practicum N/NG686B	1 credit

Cardiovascular Care

The Cardiovascular Care specialty prepares nurses for advanced practice roles across the continuum of care from acute/critical care settings to ambulatory/community settings. The specialty focuses on health promotion strategies in clinics, hospitals and community-based settings for men and women at risk for experiencing acute and chronic cardiovascular diseases.

Courses

Advanced Practice Cardiovascular Nursing I N/NG681	3 credits
Advanced Practice Cardiovascular Nursing II N/NG682	3 credits
Advanced Practice Cardiovascular Nursing Practicum N/NG682B	1 credit

Critical Care

The Critical Care specialty prepares critical care nurses for the advanced practice nursing role to manage critically ill patients. The specialty focuses on assessment, diagnosis, stabilization, disease management, and prevention of complications of adults and older adults experiencing life threatening diseases and injuries requiring critical care knowledge and skills. Enrollment in this specialty is available to students who have recent nursing experience caring for patients in critical care settings.

Courses

Advanced Practice Critical Care Nursing I N/NG 643	3 credits
Advanced Practice Critical Care Nursing II N/NG 644	3 credit
Advanced Practice Critical Care Nursing Practicum N/NG643B	1 credit

Emergency Care

The Emergency Care specialty prepares nurses for advanced practice roles in urgent and emergent care management. The specialty includes introductory and advanced care didactic and clinical courses including caring for and management of unstable patients with emergent and life-threatening conditions.

Courses

Advanced Practice Nursing in Emergency Care I	
N/NG 724A	3 credits
Advanced Practice Nursing In Emergency Practicum I	
N/NG 724B	1 credit
Advanced Practice Nursing in Emergency Care II	
N/NG 725A	3 credits
Advanced Practice Nursing in Emergency Care Practicum II	
N/NG 725B	1 credit

Nurse Educator

The Nurse Educator specialty prepares nurses for advanced practice roles in faculty or staff development, providing an opportunity to acquire teaching skills and strategies that address student, program and patient outcomes as well as leadership skills to improve health care.

Courses

Advanced Nursing Science: Teaching and Curriculum Development for Nurse Educators	
N/NG620	3 credits
Advanced Nursing Science: Identifying and Measuring Outcomes for Nurse Educators	
N/NG623	3 credits

Note: Permission of instructor is required for consideration of an independent study clinical component for this specialty.

Traditional Master of Science in Nursing Course Sequences

See Course Descriptions for further information about Master of Science courses.

Adult-Gerontology Primary Care Nurse Practitioner Track (AG-PCNP)

Year One (part-time option: courses taken Year 1 or 2 as denoted by footnotes)

Fall Semester

N603A	Societal Forces for APN(1)	3 credits
N603B	IP Population Health Community Service Learning Practicum [CSL](1) (taken Fall through Spring)	1 credit
N604	Translating Scholarship into Practice (2)	3 credits
N613	Advanced Pathophysiology (1)	3 credits
N719	Genetics, Genomics, Pharmacogenomics (2)	3 credits

Spring Semester

N603B	IP Population Health CSL Practicum (1) (continued from Fall)	
N614	Advanced Pharmacotherapeutics (1)	3 credits
N704	Epidemiology (2)	3 credits
NXXX	Elective (2)	3 credits

Summer Semester

N615A	Advanced Health Assessment (2)	3 credits
N615B	Advanced Health Assessment Practicum (2)	1 credit

Full Time Cost*:

In-state residents	\$13,606
New England regional	\$17,786
Out of state	\$20,528

Year Two (part-time option: courses taken Year 3)

Fall Semester

N630A	Advanced Nursing Science: Adult-Gerontology Primary Care Nurse Practitioner Theory I	6 credits
N630B	Advanced Nursing Science: Adult-Gerontology Primary Care Nurse Practitioner Clinical Practicum I	4 credits

Spring Semester

N631A	Advanced Nursing Science: Adult-Gerontology Primary Care Nurse Practitioner Theory II	6 credits
N631B	Advanced Nursing Science: Adult-Gerontology Primary Care Nurse Practitioner Clinical Practicum II	3 credits
Total Academic Credits		45 credits

Full Time Cost*:

In-state residents	\$11,105
New England regional	\$13,085
Out of state	\$18,321

*Please note that costs listed are estimates, and that tuition and fees may change at any time without prior notice.

Adult-Gerontology Acute Care Nurse Practitioner Track (AG-ACNP)

Year One (part-time option: courses taken Year 1 or 2 denoted by footnotes)

Fall Semester

N603A	Societal Forces for APN (1)	3 credits
N603B	IP Population Health Community Service Learning Practicum [CSL](1) (taken Fall through Spring)	1 credit
N604	Translating Scholarship into Practice (2)	3 credits
N613	Advanced Pathophysiology (1)	3 credits
N719	Genetics, Genomics, Pharmacogenomics (2)	3 credits

Spring Semester

N603B	IP Population Health CSL Practicum (1) (continued from Fall)	
N614	Advanced Pharmacotherapeutics (1)	3 credits
N704	Epidemiology (2)	3 credits
NXXX	Elective (2)	3 credits

Summer Semester

N615A	Advanced Health Assessment (2)	3 credits
N615B	Advanced Health Assessment Practicum (2)	1 credit

Full Time Cost*:

In-state residents	\$13,606
New England regional	\$17,786
Out of state	\$20,528

Year Two (part-time option: courses taken Year 3)

Fall Semester

N640A	Advanced Nursing Science: Adult-Gerontology Acute Care Nurse Practitioner Theory I (3)	6 credits
N640B	Advanced Nursing Science: Adult-Gerontology Acute Care Nurse Practitioner Clinical Practicum I (3)	4 credits

Spring Semester

N641A	Advanced Nursing Science: Adult-Gerontology Acute Care Nurse Practitioner Theory II (3)	6 credits
N641B	Advanced Nursing Science: Adult-Gerontology Acute Care Nurse Practitioner Clinical Practicum II (3)	3 credits
Total Academic Credits		45 credits

Full Time Cost*:

In-state residents	\$11,555
New England regional	\$13,535
Out of state	\$18,771

*Please note that costs listed are estimates, and that tuition and fees may change at any time without prior notice.

Nurse Educator Track

Fall Semester

N603A	Societal Forces For APN (1)	3 credits
N603B	IP Population Health Community Service Learning Practicum [CSL](1) (taken Fall through Spring)	1 credit
N604	Translating Scholarship into Practice (2)	3 credits
N613	Advanced Pathophysiology (2)	3 credits

Spring Semester

N603B	IP Population Health CSL (continued from Fall) (1)	
N614	Advanced Pharmacotherapeutics (1)	3 credits
N704	Epidemiology (2)	3 credits
N620	Advanced Nursing Science: Teaching and Curriculum Development for Nurse Educators (2)	3 credits

Summer Semester

N615A	Advanced Health Assessment (2)	3 credits
N615B	Advanced Health Assessment Practicum (2)	1 credit
N623	Advanced Nursing Science: Identifying and Measuring Outcomes for Nurse Educators (1)	3 credits

Full Time Cost*:

In-state residents	\$13,606
New England regional	\$17,786
Out of state	\$20,528

Year Two (part-time option: courses taken Year 3)

Fall Semester

N621B	Advanced Nursing Science: Clinical Practice for Nurse Educators	3 credits
N622	Advanced Nursing Science: Advanced Instructional Methods for Nurse Educators	2 credits
N624	Advanced Nursing Science: Systems Leadership for Nurse Educators	3 credits

Spring Semester

N625B	Advanced Nursing Science: Teaching Practicum for Nurse Educators	3 credits
NXXX	Elective	3 credits
Total Academic Credits		41 credits

Full Time Cost*:

In-state residents	\$7,693
New England regional	\$10,143
Out of state	\$11,333

*Costs listed are estimates, and that tuition and fees may change at any time without prior notice.

Admission to the Traditional Master's

Students who wish to be considered for admission to the Master of Science program must submit their application online via NursingCAS (Centralized Application Service). The link is on the Graduate School of Nursing Web site at www.umassmed.edu/gsn. The GSN has rolling admissions: applications are considered as soon as they are complete. Qualified applicants will be contacted by the admissions office to schedule an interview. Applicants are reviewed individually on the basis of previous academic achievement, Graduate Record Examination (GRE) scores, professional experience and personal attributes.

Application

Applications to the Traditional Master's into the Master of Science program will be considered when all of the following have been received:

- completed application form, including a clear personal statement of professional goals related to track of choice (see application for instructions);
- non-refundable application fee made payable to the University of Massachusetts;
- official transcripts of college graduation from an accredited institution and all other colleges and universities attended, including prerequisite courses if taken outside of a degree program;
- evidence of a bachelor's degree from a program accredited by the National League for Nursing Accreditation Commission (NLNAC) or the Commission on Collegiate Nursing Education (CCNE);
- Acceptable results on the GRE revised General Test (Verbal Reasoning, Quantitative Reasoning, and Analytical Writing

- three letters of recommendation from people with whom the applicant has been in contact within the last five years:
 - at least one letter of reference must be from a professional nurse who has been recently responsible for evaluating the applicant's professional nursing practice;
 - a second letter of reference must be an academic reference from a person with an advanced degree;
 - and the third letter should be a professional letter of reference related to academic, work or volunteer activities.
- current resume including work experience, education and professional activities.

Qualified applicants will be admitted on a space-available basis. Applicants may have to submit course syllabi for transfer credits for evaluation upon request.

Prerequisites for the Traditional Master's Track

The applicant must have:

- an unrestricted Massachusetts license as a registered nurse;
- a bachelor's degree in nursing earned from a program accredited by the NLNAC or CCNE;
- an undergraduate grade point average of 3.0 (B) or better;
- completed undergraduate courses in: professional nursing leadership, health assessment and concepts/practice in community health (with a grade of C or better);
- college level statistics course (with a grade of C or better);
- current CPR Certification for Health Providers (BLS) by the American Heart Association;

- computer competence at the user level, including file management and word processing; and
- proficiency in reading and writing in the English language. Applicants whose native language is not English must supply their Test of English as a Foreign Language (TOEFL) results.

Tuition and Fees, Financial Aid and Academic Policies and Procedures

See page 67.

The Pre-master's Option

The Pre-master's Option into the Master of Science program is designed for applicants who are registered nurses with an associate's degree or diploma in nursing and a bachelor's degree or higher degree in a field other than nursing. This track offers alternative means of qualifying for admission to the GSN at UMass Worcester, based on transfer of academic courses and course enrollment.

Although the Pre-master's Option does not grant a bachelor's degree in nursing, it can enable students who are nurses with other degrees to meet the criteria for admission into the Master of Science program. The Pre-master's Option does not assign credit equivalencies to the prerequisite coursework because this track does not grant a bachelor's degree in nursing. Instead, the Pre-master's Option grants exemptions for the specific Master of Science program admission requirement of a bachelor's degree in nursing. Accepted students are required to take NG519A Nursing IV: Clinical Capstone: Leadership and Management and NG 603C IP Population Health Clerkship if they have not done so already. See the Master of Science in Nursing Program for further information about the program's curriculum, outcomes, tracks and specialties, course sequences, admissions and selected policies and procedures. See Course Descriptions for detailed information about GSN courses.

Pre-master's Option for Nurse Practitioner Tracks

Adult-Gerontology Primary Care Nurse Practitioner (AG-PCNP)

This pre-master's option is a 45- to 52-credit program designed to meet the needs of the pre-master's-prepared nurse who desires formal education and clinical training in adult-gerontology primary care in order to become eligible to sit for certification and advanced practice licensure as an adult-gerontology primary care nurse practitioner. The plan of study includes all clinically related courses in the existing AG-PCNP curriculum (e.g., N630A and N630B, N631A and N631B) along with required advanced practice master's core courses (e.g., N603A, N603B, N603C, N604, N613, N614, N615A and N615B, N704 and N719).

Adult-Gerontology Acute Care Nurse Practitioner (AG-ACNP)

This pre-master's option is a 45- to 52-credit program designed to meet the needs of the pre-master's-prepared nurse who desires formal education and clinical training in adult gerontology acute care in order to become eligible to sit for certification and advanced practice licensure as an adult-gerontology acute care nurse practitioner. The plan of study includes all clinically related courses in the Master of Science curriculum (e.g., N640A and N640B, N641A and N641B) along with required advanced practice master's core courses (e.g., N603A, N603B, N603C, N604, N613, N614, N615A and N615B, N704 and N719).

Nurse Educator

The Nurse Educator track prepares nurses for advanced practice roles in faculty or staff development, providing an opportunity to acquire teaching skills and strategies that address student, program and patient outcomes as well as leadership skills to improve health care. The plan of study includes all nurse educator related courses in the Master of Science curriculum (e.g., N620,622,623) along with required advanced practice master's core

courses (e.g., N603A, N603B, N603C, N604, N613, N614, N615A and N615B, N704)

Admission to the Pre-master's Option

Students who wish to be considered for admission to the Pre-master's Option must submit their application online via NursingCAS (Centralized Application Service). The link is on the Graduate School of Nursing Web site at www.umassmed.edu/gsn. The GSN has rolling admissions: applications are considered as soon as they are complete. Qualified applicants will be contacted by the admissions office to schedule an interview. Applicants are reviewed individually on the basis of previous academic achievement, Graduate Record Examination (GRE) scores, professional experience and personal attributes.

Application

Applications to the Pre-master's Option into the Master of Science program will be considered when all of the following have been received:

- completed application form, including a clear personal statement of professional goals related to track of choice (see application form);
- non-refundable application fee made payable to the University of Massachusetts;
- official transcripts of college graduation from an accredited institution and all other colleges and universities attended, including prerequisite courses if taken outside of a degree program;
- evidence of an associate's degree or diploma in nursing (NLNAC accredited) and a bachelor's degree or higher degree in a field other than nursing from an accredited program;
- Acceptable results on the GRE revised General Test (Verbal Reasoning, Quantitative Reasoning, and Analytical Writing
- three letters of recommendation from people with whom the applicant has been in contact within the last five years:

- at least one letter of reference must be from a professional nurse who has been recently responsible for evaluating the applicant's professional nursing practice;
- a second letter of reference must be an academic reference from a person with an advanced degree; and
- the third letter should be a professional letter of reference related to academic, work or volunteer activities; and current resume including work experience, education and professional activities.

Qualified applicants will be admitted on a space-available basis. Applicants may have to submit course syllabi for transfer credits for evaluation upon request.

Prerequisites

The applicant must have:

- an unrestricted Massachusetts license as a registered nurse with a degree earned from a program accredited by the National League for Nursing Accrediting Commission (NLNAC);
- an undergraduate grade point average of 3.0 (B) or better;
- completed undergraduate courses in health assessment and nursing leadership (or take prerequisite course NG519A)
- college level statistics course (with a grade of C or better)
- current CPR Certification for Health Providers (BLS) by the American Heart Association;
- computer competence at the user level, including file management and word processing; and
- proficiency in reading and writing in the English language. Applicants whose native language is not English

Tuition and Fees, Financial Aid and Academic Policies and Procedures

See page 67.

Post-master's Certificate Option

The post-master's certificate option is designed for individuals who have previously acquired their master's degree in nursing from a program accredited by the National League for Nursing Accrediting Commission or the Collegiate Commission on Nursing Education.

The Post Master's Certificate has two NP options:

- 1) Masters prepared certified nurse practitioners who seek additional preparation in the population focus of Adult-Gerontology Primary Care or Adult-Gerontology Acute Care,
- 2) Masters prepared nurses who seek initial certification in Adult-Gerontology Primary Care or Adult-Gerontology Acute Care.

A review of student's transcripts and prior course/clinical work is done by the Track Coordinator to ensure that they are consistent with professional nursing standards and guidelines: this determines the appropriate plan of study.

Determination of the required clinical hours and any additional course work needed is discussed with the student prior to matriculation.

The students in the Post Master's Certificate Program are required to complete advanced pathophysiology, advanced pharmacotherapeutics, and advanced health assessment either prior to admission or before the track courses.

The post-master's certificate option allows nurses with master's degrees to expand their nursing competencies in the graduate nursing tracks in order to become Adult-Gerontology Acute Care Nurse Practitioners, Adult-Gerontology Primary Care Nurse Practitioners, and Nurse Educators.

Nurse Practitioner and Nurse Educator Tracks

Adult-Gerontology Primary Care Nurse Practitioner (AG-PCNP) Certificate

This post-master's certificate option is a 19- to 29-credit program designed to meet the needs of the master's-prepared nurse who desires formal

education and clinical training in adult-gerontology primary care in order to become eligible to sit for certification and advanced practice licensure as an adult-gerontology primary care nurse practitioner. The plan of study includes all clinically related courses in the existing AGPCNP curriculum (e.g., N630A and B, N631A and N631B) along with required advanced practice core courses (e.g., N613, N614, N615A and N615B). Similar advanced practice core course content may be demonstrated in the student's previous master's program.

Adult-Gerontology Acute Care Nurse Practitioner (AG-ACNP) Certificate

This post-master's certificate option is a 19- to 29-credit program designed to meet the needs of the master's-prepared nurse who desires formal education and clinical training in adult gerontology acute care in order to become eligible to sit for certification and advanced practice licensure as an adult-gerontology acute care nurse practitioner. The plan of study includes all clinically related courses in the AG-ACNP curriculum (e.g., N640A, N640B, N641A and N641B) along with required advanced practice core courses (e.g., N613, N614, N615A and N615B). Similar advanced practice core course content may be demonstrated in the student's previous master's program.

Nurse Educator Certificate

This post-master's certificate option is a 12- to 22-credit program designed to meet the needs of a master's-prepared nurse who is interested in formal instruction in the theoretical principles and application of nursing education. The plan of study includes course work in theoretical principles and curricular issues (N620), evaluation and outcomes (N623), leadership principles (N624), advanced instructional methods (N622) and a preceptored practicum focusing on the academic nurse educator (N625B).

Admission

Students who wish to be considered for admission to the post-master's certificate option must submit their application online via NursingCAS (Centralized Application Service). The link is on the Graduate

School of Nursing Web site www.umassmed.edu/gsn

The GSN has rolling admissions: applications are considered as soon as they are complete. Qualified applicants will be contacted by the admission office to schedule an interview. Applicants are reviewed individually on the basis of previous academic achievement, professional experience and personal attributes.

Application

Applications to the Post-master's Certificate Option will be considered when all of the following have been received:

- completed application form, including a clear personal statement of professional goals related to track of choice (see application form);
- non-refundable application fee made payable to the University of Massachusetts;
- official transcripts of college graduation from an accredited institution and all other colleges and universities attended, including prerequisite courses if taken outside of a degree program;
- three letters of recommendation from people with whom the applicant has been in contact within the last five years;
- at least one letter of reference must be from a professional nurse who has been recently responsible for evaluating the applicant's professional nursing practice;
- a second letter of reference must be an academic reference from a person with an advanced degree; and
- the third letter should be a professional letter of reference related to academic, work or volunteer activities; and
- current resume including work experience, education and professional activities

Qualified applicants will be admitted on a space-available basis. Applicants may have to submit course syllabi for transfer credits for evaluation upon request.

Prerequisites

- an unrestricted Massachusetts license as a registered nurse;
- a master's degree in nursing from a program accredited by the National League for Nursing Accrediting Commission (NLNAC) or the Collegiate Commission on Nursing Education (CCNE). The applicant is not required to take or repeat the GRE examination;
- a post-graduate grade point average of 3.0 (B) or better;
- completed undergraduate courses in professional nursing leadership, health assessment and concepts/practice in community health;
- statistics (with a grade of C or better);
- demonstrated competency in advanced health assessment through successful completion of clinical performance examination or enrollment in health assessment class;
- provide transcript of advanced pathophysiology and advanced pharmacology courses taken or must take these courses within last 5 years;
- current CPR Certification for Health Providers (BLS) by the American Heart Association;
- computer competence at the user level, including file management and word processing; and
- proficiency in reading and writing in the English language. Applicants whose native language is not English must supply their Test of English as a Foreign Language (TOEFL) results.

Tuition and Fees, Financial Aid and Academic Policies and Procedures

See page 67.

Doctor of Nursing Practice Program

The Doctor of Nursing Practice (DNP) program, established in 2008, is designed to prepare graduates as nurse practitioners and post-master's nurse practitioners and nurse administrators as advanced nursing practice leaders for careers in clinical practice with diverse populations, organizational and systems leadership in health care systems, and clinical nursing education. The program produces advanced practice nurses and provides education to nurse practitioners and administrators as a practice doctorate with the skills to apply principles of population health outcomes and evidence-based practice for improvement and transformation of patient care to clinical situations as interprofessional team members. Graduates are leaders with expert knowledge of practice and administration who will lead and improve nursing practice in Worcester, the commonwealth and beyond.

DNP Summary of Study

The program of study focuses on theory courses and residency experiences and represents a 142 credit curriculum for GEP to DNP Track; a 90-credit curriculum for BS to DNP; and, a 40-credit curriculum for the Post-Master's Track. The DNP program includes the advanced practice track curriculum component of the accelerated and/or master's program (see previous GEP and Master's track descriptions). In addition, GEP to DNP, BS to DNP and Post Master's DNP tracks consist of 22 credits of core courses including epidemiology, informatics, health policy, organizational systems, research and theory; and 18 track credits including residency courses, capstone project courses and electives. Students are also required to successfully complete a professional portfolio. The DNP program is an academically challenging one; therefore, full-time employment while in the program is not recommended.

Tracks to the DNP

GEP to DNP Track for individuals with a bachelor's degree in a field other than nursing leading first to a master's degree then the Doctorate in Nursing Practice (DNP) Pathway.

Bachelor's to DNP Track for individuals with a bachelor's degree in nursing leading first to a master's degree with the family nurse practitioner track then the Doctorate in Nursing Practice (DNP) Pathway.

Post-Master's Track to DNP is for individuals with a master's in nursing as nurse practitioners or nurse administrators.

There are two course sequences in the post-master's DNP program based on entry as:

- Nurse Practitioner
- Nurse Administrator

DNP Tracks

Nurse Practitioner Track

The students in the Nurse Practitioner Track are certified as adult primary care nurse practitioners, adult acute care nurse practitioners, family nurse practitioners, gerontology nurse practitioners, pediatric nurse practitioners and women's health care nurse practitioners. Consistent with the outcomes of the DNP program and upon completion of this track, graduates synthesize principles of population health, finance, health policy, informatics and organizational leadership to lead and transform health care as a nurse practitioner with a practice doctorate. They collaborate as members of interprofessional teams in the management of patients with complex health problems using an evidence-based approach. The graduates translate research findings to clinical practice to enhance the quality of health care and patient outcomes. They will assume positions in health care systems to lead and improve nursing practice as nurse practitioners with a practice doctorate.

The DNP curriculum of the nurse practitioner track provides students with advanced practice nursing leadership experiences. The core and track courses meet the standards established by the American Association of Colleges of Nursing for practice-focused doctoral programs in nursing. The nurse practitioner track also adheres to the competencies established by the National Organization of Nurse

Practitioner Faculties for advanced practice nurses with the DNP. A strong focus is on interprofessional partnerships with the UMW School of Medicine and Graduate School of Biomedical Sciences, Commonwealth Medicine, UMass Correctional Health, UMass Memorial Health Care and the greater Central Massachusetts community.

Nurse Administrator Track

DNP students in the post-master's nurse administrator track are nurse administrators in health care systems. Consistent with the outcomes of the DNP program and upon completion of this track, graduates synthesize principles of population health, finance, health policy, informatics and organizational leadership to lead and transform health care as nurse administrators with a practice doctorate. They collaborate as members of interprofessional teams to manage nursing services that deliver care to patients using an evidence-based approach. Graduates translate research findings to clinical practice to enhance the quality of health care and patient outcomes through nursing services administration. They will assume positions in health care systems to lead and improve nursing practice as nurse administrators with a practice doctorate.

The DNP curriculum of the nurse administrator track provides students with nursing leadership experiences. The core and track courses meet the standards established by the American Association of Colleges of Nursing for practice-focused doctoral programs in nursing. The Nurse Administrator Track adheres to the competencies and standards identified by the American Organization of Nurse Executives and the American Nurses Association for nursing administration. A strong focus is on interprofessional partnerships with the UMW School of Medicine and Graduate School of Biomedical Sciences, Commonwealth Medicine, UMass

Correctional Health, UMass Memorial Health Care and the greater Central Massachusetts community.

DNP Residency

The focus of the DNP residency courses is the development and refinement of leadership skills. Experiences enhance each student's ability to apply theories, standards of practice and evidence-based research findings to the care of increasingly complex patients, leading to improved practice and health care delivery. Each student works with his/her faculty advisor to select a residency practicum site that facilitates the development of leadership skills and completion of the capstone project.

DNP Capstone Project

Each DNP student is required to develop, implement, and evaluate a capstone project that translates research into practice. No student is exempt from this requirement. The capstone project includes three courses or six credits for the development, implementation and evaluation of the project. The student conducts the capstone project under the mentorship of his/her faculty advisor. Each student is expected to complete an oral presentation of the capstone project and to submit a scholarly paper to a peer-reviewed journal.

Professional DNP Portfolio

The focus of the professional DNP portfolio is to demonstrate the attainment of the DNP competencies established by the National Organization of Nurse Practitioner Faculties or the American Organization of Nurse Executives through formative and summative documentation. Each student must successfully meet the requirements of their professional portfolio prior to completing the DNP program.

Doctor of Nursing Practice Course Sequences

See Course Descriptions for more information about DNP courses.

GEP Family Nurse Practitioner to DNP Track

GEP Year One Pre-licensure (must be taken as full-time student, no part-time option Year 1)

Fall Semester

NG510	Concepts in Professional Nursing	2 credits
NG511	Biomedical Sciences I	5 credits
NG513	Health Assessment and Skills I	2 credits
NG516A	Nursing I: Care of Persons with Acute and Chronic Conditions	5 credits
NG516B	Nursing I: Clinical Care of Persons with Acute and Chronic Conditions	5 credit

Spring Semester

NG512	Biomedical Sciences II	3 credits
NG514	Health Assessment and Skills II	1 credit
NG517A	Nursing II: Care of Persons with Acute and Chronic Conditions	5 credits
NG517B	Nursing II: Clinical Care of Persons with Acute and Chronic Conditions	3 credits
NG518A	Nursing III: Care of the Childbearing and Child Rearing Family	5 credits
NG518B	Nursing III: Clinical Care of the Childbearing and Child Rearing Family	3 credits

Summer Semester

NG519A	Nursing IV: Clinical Capstone: Leadership and Management	3 credits
NG519B	Nursing IV: Clinical Capstone: Internship	7 credits

Full Time Cost*:

In-state residents	\$38,993
New England regional	\$46,643
Out of state	\$52,493

Note: At completion of pre-licensure credits, GSN qualifying students will receive a Certificate of Completion and may sit for the National Certification Licensing Examination for Registered Nurses (NCLEX-RN).

GEP Year Two (part-time option: courses taken Year 2 or 3 as denoted by footnotes)

Fall Semester

N603A	Societal Forces For APN (2)	3 credits
N603B	IP Population Health Community Service Learning Practicum [CSL](2) (taken Fall through Spring)	1 credit
N603C	IP Population Health Clerkship (2)	1 credit
N604	Translating Scholarship into Practice (3)	3 credits
N613	Advanced Pathophysiology (2)	3 credits
N719	Genetics, Genomics, Pharmacogenomics (3)	3 credits

Spring Semester

NG522	Transition to Professional Practice	2 credits
N603B	IP Population Health CSL (2) (continued from Fall)	
N614	Advanced Pharmacotherapeutics (2)	3 credits

N615A	Advanced Health Assessment (3)	3 credits
N615B	Advanced Health Assessment Practicum (3)	1 credit
N704	Epidemiology (3)	3 credits

Summer Semester

NXXX	Elective (optional here)	3 credits
N659	ANS: Maternal & Child Care Theory	4 credits

Full Time Cost*:

In-state residents \$15,786
New England regional \$20,839
Out of state \$23,366

GEP Year Three (part-time option: courses taken Year 4)

Fall Semester

N660A	ANS: Family Nurse Practitioner Theory I	6 credits
N660B	ANS: Family Nurse Practitioner Clinical I	4 credits

Spring Semester

N661A	ANS: Family Nurse Practitioner Theory II	6 credits
N661B	ANS: Family Nurse Practitioner Clinical II	4 credits

Summer Semester

N708	Organizational Systems and Health Care Financing (4)	4 credits
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Full Time Cost*:

In-state residents \$13,518
New England regional \$18,068
Out of state \$20,278

GEP Year Four (part-time option: courses taken Year 4 or 5 as denoted by footnotes)

Fall Semester

N705	Trends Influencing the Doctor of Nursing Practice (4)	3 credits
N706	Health Policy for Health Care Professionals (4)	3 credits
N707	Biomedical Informatics (5)	3 credits

Spring Semester

N710	Clinical Scholarship and Analytic Methods (4)	3 credits
N723	Quality & Patient Safety in Health Care Organizations (5)	3 credits
N815	Statistical Analysis of Data (4)	3 credits

Summer Semester

N709	DNP Capstone Project Prospectus (4)	2 credits
Nxxx	Elective	3 credits

Full Time Cost*:

In-state residents \$11,543
New England regional \$15,568
Out of state \$17,523

GEP Year Five (part-time option: courses taken Year 4 or 5 as denoted by footnotes)

Fall Semester

N770	DNP Residency I (5) DNP	3 credits
N772	Capstone Project I (5)	2 credits

Spring Semester

N771	DNP Residency II (5)	3 credits
N773	DNP Capstone Project II (5)	2 credits

Years Four and Five Academic Credits 30 credits

Full Time Cost*:

In-state residents \$5,893
 New England regional \$7,643
 Out of state \$8,493

Total GEP to DNP Program Credits 142 credits

*Please note that costs listed are estimates, and that tuition and fees may change at any time without prior notice.

Doctor of Nursing Practice Nurse Practitioner Track: BS to DNP Track

Year One (part-time option: courses taken Year 1 or 2 as denoted by footnotes)

Fall Semester

N603A	Societal Forces For APN (1)	3 credits
N603B	IP Population Community Service Learning Practicum [CSL] (1) (taken Fall through Spring)	1 credit
N604	Translation of Scholarship Into Practice (1)	3 credits
N613	Advanced Pathophysiology (1)	3 credits
N719	Genetics, Genomics, Pharmacogenomics (1)	3 credits

Spring Semester

N603B	IP Population Health CSL Practicum (1) (continued from Fall)	
N614	Advanced Pharmacotherapeutics (1)	3 credits
N615A	Advanced Health Assessment (2)	3 credits
N615B	Advanced Health Assessment Practicum (2)	1 credit
N704	Principles of Epidemiology (2)	3 credits

Summer Semester

NXXX	Elective	3 credits
N659	ANS: Maternal & Child Care Theory	4 credits

Full Time Cost*:

In-state residents \$15,688
 New England regional \$20,938
 Out of state \$23,488

Year Two (no part-time option for clinical courses taken Year 3 Fall & Spring as below)

Fall Semester

N660A	ANS: Family Nurse Practitioner Theory I	6 credits
N660B	ANS: Family Nurse Practitioner Clinical Practicum I	4 credits

Spring Semester

N661A	ANS: Family Nurse Practitioner Theory II	6 credits
N661B	ANS: Family Nurse Practitioner Clinical Practicum II	4 credits

Summer Semester

N708	Organizational Systems and Health Care Financing (3)	4 credits
NXXX	Elective (3)	3 credits

Years One and Two Academic Credits**57 credits****Full Time Cost*:**

In-state residents	\$13,968
New England regional	\$18,693
Out of state	\$20,988

Year Three (part-time option: courses taken Year 3 or 4 as denoted by footnotes)**Fall Semester**

N705	Trends Influencing the Doctor of Nursing Practice (3)	3 credits
N706	Health Policy for Health Care Professionals (3)	3 credits
N707	Biomedical Informatics (4)	3 credits

Spring Semester

N710	Clinical Scholarship and Analytic Methods (4)	3 credits
N723	Quality & Patient Safety In Healthcare Organizations (4)	3 credits
N815	Statistical Analysis of Data (3)	3 credits

Summer Semester

N709	DNP Capstone Project Prospectus (4)	2 credits
NXXX	Elective (3)	3 credits

Full Time Cost*:

In-state residents	\$11,543
New England regional	\$15,568
Out of state	\$17,523

Year Four (part-time option: courses taken Year 3 or 4 as denoted by footnotes)**Fall Semester**

N774	DNP APN Residency I (4)	4 credits
N772	DNP Capstone Project I (4)	2 credits

Spring Semester

N775	DNP APN Residency II (4)	4 credits
N773	DNP Capstone Project II (4)	2 credits

Years Three and Four Academic Credits**35 credits****Full Time Cost*:**

In-state residents	\$5,893
New England regional	\$7,643
Out of state	\$8,493

Total BS to DNP Credits**92 credits**

Doctor of Nursing Practice: Post-master's Course Sequence for NPs

Year One (part-time option: courses taken Year 1 or 2 as denoted by footnotes)

Fall Semester

N705	Trends Influencing the Doctor of Nursing Practice (2)	3 credits
N706	Health Policy for Health Care Professionals (1)	3 credits
N707	Biomedical Informatics (2)	3 credits

Spring Semester

N704	Principles of Epidemiology (2)	3 credits
N710	Clinical Scholarship and Analytic Methods (2)	3 credits
N723	Quality & Patient Safety In Healthcare Organizations (1)	3 credits
N815	Statistical Analysis of Data (1)	3 credits

Summer Semester

N814	Genomics for Clinical Practice & Research (1)	3 credits
N708	Organizational Systems and Health Care Financing (2)	4 credits
N709	DNP Capstone Project Prospectus (2)	2 credits

Full Time Cost*:

In-state residents	\$14,693
New England regional	\$19,943
Out of state	\$22,493

Year Two (part-time option: courses taken Year 2 or 3 as denoted by footnotes)

Fall Semester

N770	DNP Residency I (3)	3 credits
N772	DNP Capstone Project I (3)	2 credits

Spring Semester

N771	DNP Residency II (3)	3 credits
N773	DNP Capstone Project II (3)	2 credits

Full Time Cost*:

In-state residents	\$5,893
New England regional	\$7,643
Out of state	\$8,493

Total Post-Master's DNP Academic Credits	40 credits
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Doctor of Nursing Practice Post-master's Course Sequence for Nurse Administrator

Year One (part-time option: courses taken Year 1 or 2 as denoted by footnotes)

Fall Semester

N705	Trends Influencing the Doctor of Nursing Practice (2)	3 credits
N706	Health Policy for Health Care Professionals (1)	3 credits
N707	Biomedical Informatics (1)	3 credits
N722	Quality & Patient Safety: Competencies, Strategies, and Methodologies for Advanced Nursing Practice (2)	3 credits

Spring Semester

N704	Principles of Epidemiology (1)	3 credits
N710	Clinical Scholarship and Analytic Methods(2)	3 credits
N723	Quality and Patient Safety in Health Care Organizations (2)	3 credits
N815	Statistical Analysis of Data (1)	3 credits

Summer Semester

N708	Organizational Systems and Health Care Financing (2)	4 credits
N709	DNP Capstone Project Prospectus (2)	2 credits

Full Time Cost*:

In-state residents	\$14,693
New England regional	\$19,943
Out of state	\$22,493

Year Two (part-time option: courses taken Year 2 or 3 as denoted by footnotes)

Fall Semester

N770	DNP Residency I (3)	3 credits
N772	DNP Capstone Project I (3)	2 credits

Spring Semester

N771	DNP Residency II (3)	3 credits
N773	DNP Capstone Project II (3)	2 credits

Full Time Cost*:

In-state residents	\$5,893
New England regional	\$7,643
Out of state	\$8,493

Total Post-Master's DNP Academic Credits	40 credits
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Admission to the Doctor of Nursing Practice Pathway

Students who wish to be considered for admission to the Doctor of Nursing Practice pathway must submit their application online via NursingCAS (Centralized Application Service). The link is on the Graduate School of Nursing Web site www.umassmed.edu/gsn. The GSN has rolling admissions: applications are considered as soon as they are complete. Qualified applicants will be contacted by the admissions office to schedule an interview. Applicants are reviewed individually on the basis of previous academic achievement, Graduate Record Examination (GRE) scores, professional experience and personal attributes.

Application

Applications to the Doctor of Nursing Practice program will be considered when all of the following have been received:

- completed application form, including two personal statements:
 - one addressing goals of study; and
 - a second addressing a residency and capstone project focus that is congruent with that of a faculty member;
- non-refundable application fee made payable to the University of Massachusetts;
- official transcripts from all colleges and universities attended;
- Acceptable results on the GRE revised General Test (Verbal Reasoning, Quantitative Reasoning, and Analytical Writing
- three letters of recommendation from people with whom the applicant has been in contact within the last five years:
 - one from a recent supervisor who can evaluate advanced practice nursing employment experience; and
 - two academic references;
- current resume including work experience, education, professional activities, and publications of scholarly writing;

- one example of scholarly writing (i.e., publication, scholarly paper);
- professional advanced practice nursing portfolio that demonstrates:
 - for the Nurse Practitioner track, attainment of NONPF competencies in the area of nurse practitioner specialization; or
 - for the Nurse Administrator track, attainment of the nurse executive competencies established by the American Organization of Nurse Executives; and
- a clear personal statement of professional goals related to track of choice (see application form).

Qualified applicants will be admitted on a space-available basis. Applicants may have to submit course syllabi for transfer credits for evaluation upon request.

Prerequisites

Applicants must have:

- evidence of unrestricted Massachusetts licensure as a registered nurse and/or nurse practitioner;
- master's degree in nursing from a program accredited by National League of Nursing Accrediting Commission (NLNAC), or the Commission on Collegiate Nursing Education (CCN) or related field (Nurse Administrator Track only);
- a GPA of 3.0 or better in the baccalaureate program and/or certificate of completion program;
- a GPA of 3.2 or better in the Master of Science in Nursing program or Master of Nursing program;
- advanced practice nursing certification as an adult nurse practitioner, adult acute care nurse practitioner, family nurse practitioner, gerontology nurse practitioner, pediatric nurse practitioner or women's health nurse practitioner; and/or experience as a nurse manager or nurse executive (recommended, but

not required, for nurse administrator applicants);

- acceptable verbal and quantitative scores on the GRE (a combined total of at least 1,000 is preferred);
- current CPR Certification for Health Providers (BLS) by the American Heart Association;
- computer competence at the user level, including file management and word processing; and
- proficiency in reading and writing in the English language. Applicants whose native language is not English must supply their Test of English as a Foreign Language (TOEFL) results.

Tuition and Fees, Financial Aid and Academic Policies and Procedures

See page 67.

PhD in Nursing Program

The PhD in Nursing Program prepares researchers for careers in the conduct of clinical and translational research within multidisciplinary settings, and faculty for careers in teaching and research. In addition, the program develops leaders with expert knowledge of complex health problems, who will lead and improve nursing practice in the commonwealth and beyond.

Summary of Study

The PhD in Nursing program is designed to provide intensive mentoring and research socialization of students throughout their course of study. The core and related coursework meet the standards established by the American Association of Colleges of Nursing (AACN) for research-focused PhD programs in nursing and outlined in the Research-Focused Doctoral Program in Nursing: Pathways to Excellence (www.aacn.nche.edu/education-resources/PhDPosition.pdf). In addition, there is a strong focus on interprofessional partnerships with the UMass Worcester School of Medicine, Graduate School of Biomedical Sciences, Commonwealth Medicine, UMass Correctional Health, UMass Memorial Health Care and the greater Central Massachusetts community.

The PhD program consists of a minimum of 57 credit hours, including 12 credits in theory and knowledge of the discipline; 21 credits in research methods and statistics; 6 credits in electives; and 18 credits for dissertation. Students are also required to successfully complete a practicum, comprehensive examination, dissertation proposal defense, and defense of the completed dissertation.

Tracks to the PhD in Nursing degree

The GSN offers several tracks to the PhD:

The GEP to PhD Track admits students who have completed the first year of the GSN's Graduate Entry Pathway Program.

The Bachelor's to PhD Track admits students who are registered nurses with a bachelor's degree.

The Master's to PhD Track admits students with earned master's degrees; in Nursing or related field.

GEP to PhD Track:

The purpose of the GEP to PhD Track is to accelerate the research careers of nurse scientists. The track offers an opportunity for enrolled students to complete the PhD in Nursing in a period of five to six years. Graduates are expected to develop independent programs of research and will receive a PhD in Nursing degree. There is no master's degree offered through this program. Students interested in a clinically focused career are not candidates for this option.

The GEP to PhD Track is open to GSN GEP students only. Students are required to complete 80 credits (23 credits at the master's level and 57 credits at the PhD level) including 18 credits for the dissertation.

Bachelor's to PhD Track

The purpose of the Bachelor's to PhD Track is to accelerate the research careers of nurse scientists. The track offers an opportunity for enrolled students to complete the PhD in Nursing in a period of four to six years. Graduates are expected to

develop independent programs of research and will receive a PhD in Nursing degree. There is no master's degree offered through this program. Students interested in a clinically focused career are not candidates for this option.

The Bachelor's to PhD Track is open to registered nurses with bachelor's degrees. Students are required to complete 77 credits post-baccalaureate including 59 credits of coursework (20 credits at the master's level and 39 at the PhD level) and 18 credits for dissertation.

Master's to PhD Track (open to nurses and non-nurses)

The Master's to PhD Track prepares individuals with a master's degree for careers in the conduct of clinical and translational research within multidisciplinary settings.

The Master's to PhD Track is open to individuals with a master's degree in nursing or a related health field. Students are required to complete a minimum of 57 credits of coursework including 18 dissertation credits.

Requirements for the practicum, comprehensive examination, doctoral dissertation, and continuous enrollment are the same for the Bachelor's to PhD Track as for the Master's to PhD Track. The course sequences vary by track.

Comprehensive Examination

All PhD students must pass the comprehensive examination when they have completed their coursework, before progressing to their dissertation research. The director of the PhD in Nursing program will inform students when they have successfully passed the examination. At his or her discretion, the director of the PhD program may permit students who fail the exam to retake it one time only.

Doctoral Dissertation

Candidates for the PhD degree must complete an acceptable written and oral defense of their dissertation. The dissertation qualifies for acceptance when it satisfies the following criteria:

- demonstrates the candidate's intellectual competence;
- makes an original and valid contribution to nursing science; and
- represents an individual achievement and is the product of independent research.

Candidates conduct their dissertation research under the supervision of dissertation committees. All members of a dissertation committee must approve and sign off on a candidate's dissertation proposal. Candidates then complete the dissertation research; submit an acceptable written dissertation and then with the approval of the committee schedule a final oral examination (defense of dissertation). Attendance at the final oral examination is open to the academic community. However, only the three members of the dissertation committee may cast a vote. A unanimous vote is required for the candidate to pass the final oral examination.

Dissertation Credits

All students must enroll for 18 dissertation credits. No student is exempt from this requirement. Normal tuition rates will apply.

PhD in Nursing Program Course Sequences

See Course Descriptions for further information about PhD courses.

GEP to PhD

GEP Year One Pre-licensure (must be taken as full-time student, no part-time option Year 1)

Fall Semester

NG510	Concepts in Professional Nursing	2 credits
NG511	Biomedical Sciences I	5 credits
NG513	Health Assessment and Skills I	2 credits
NG516A	Nursing I: Care of Persons with Acute and Chronic Conditions	5 credits
NG516B	Nursing I: Clinical Care of Persons with Acute & Chronic Conditions	5 credits

Spring Semester

NG512	Biomedical Sciences II	3 credits
NG514	Health Assessment and Skills II	1 credit
NG517A	Nursing II: Care of Persons with Acute and Chronic Conditions	5 credits
NG517B	Nursing II: Clinical Care of Persons with Acute & Chronic Conditions	3 credits
NG518A	Nursing III: Care of the Childbearing and Child Rearing Family	5 credits
NG518B	Nursing III: Clinical Care of the Childbearing & Child Rearing Family	3 credits

Summer Semester

NG519A	Nursing IV: Clinical Capstone: Leadership and Management	3 credits
NG519B	Nursing IV: Clinical Capstone: Internship	7 credits

Full Time Cost*:

In-state residents \$38,993
New England regional \$46,643
Out of state \$52,493

Year 2

Fall Semester

N603A	Societal Forces Influencing Graduate Nursing	3 credits
N603B	IP Population Health CSL Practicum (taken Fall through Spring)	1 credit
N603C	IP Population Clerkship	1 credit
N 604	Translation of Scholarship Into Practice	3 credits
N613	Advanced Pathophysiology	3 credits

Spring Semester

NG522	Transitions to the Professional Practice	2 credits
N603B	IP Population Health CSL Practicum (continued from Fall)	
N614	Advanced Pharmacotherapeutics	3 credits
N704	Principles of Epidemiology	3 credits

Summer Semester

N814	Genomics for Clinical Practice & Research	3 credits
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Full Time Cost*:

In-state residents \$11,019
New England regional \$14,385
Out of state \$16,982

Year Three

Fall Semester

N800	History and Philosophy of Nursing Science	3 credits
N801	Qualitative Research Methods	3 credits
N810	PhD Practicum (please consult advisor before registering)	1 credit

Spring Semester

N802	Quantitative Research Methods	3 credits
N803	Emerging Nursing Theories	3 credits
N815	Statistical Analysis of Data	3 credits

Summer Semester

N804	Measurement and Instrumentation	3 credits
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Full Time Cost*:

In-state residents \$9,975

New England regional \$12,190

Out of state \$15,401

Year Four

Fall Semester

N805	State of the Discipline	3 credits
N890	Advanced Statistics	3 credits

Spring Semester

N808	Critical Health Policy Issues Seminar	3 credits
N813	PhD Grant & Proposal Writing	2 credits

Summer Semester

N888	Comprehensive Exam	0
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Full Time Cost*:

In-state residents \$6,201

New England regional \$7,849

Out of state \$9,183

Year Five

Fall Semester

N899	Dissertation Credits	9 credits
N809	Dissertation Seminar	0 credits

Spring Semester

N809	Dissertation Seminar	0 credits
N899	Dissertation Credits	9 credits

Full Time Cost*:

In-state residents \$10,480

New England regional \$12,460

Out of state \$17,696

Important Note: In addition to the above core coursework, GEP to PhD students must take AT LEAST THREE 3-credit electives

One elective must be an advanced methods elective. Elective included and will be added in the years they are taken. Electives may be taken concurrently in any semester after approval by the student's faculty advisor. Cost of electives is not included and will be added in the years they are taken.

Bachelor's to PhD Track

Year One

Fall Semester

N603A	Societal Forces For APN (1)	3 credits
N603B	IP Population Health Community Service Learning Practicum [CSL] (taken Fall through Spring)	1 credit
N604	Translation of Scholarship Into Practice	3 credits
N613	Advanced Pathophysiology	3 credits

Spring Semester

N603B	IP Population Health CSL Practicum (continued from Fall)	
N614	Advanced Pharmacotherapeutics	3 credits
N704	Principles of Epidemiology	3 credits

Summer Semester

N814	Genomics for Clinical Practice & Research	3 credits
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Full Time Cost*:

In-state residents	\$9,461
New England regional	\$12,416
Out of state	\$14,563

Year Two

Fall Semester

N800	History and Philosophy of Nursing Science	3 credits
N801	Qualitative Research Methods	3 credits
N810	PhD Practicum (please consult advisor before registering)	1 credit

Spring Semester

N802	Quantitative Research Methods	3 credits
N803	Emerging Nursing Theories	3 credits
N815	Statistical Analysis of Data	3 credits

Summer Semester

N804	Measurement and Instrumentation in Clinical Research	3 credits
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Full Time Cost*:

In-state residents	\$9,975
New England regional	\$12,190
Out of state	\$15,401

Year Three**Fall Semester**

N805	State of the Discipline	3 credits
N890	Advanced Statistics	3 credits

Spring Semester

N808	Critical Health Policy Issues Seminar	3 credits
N813	PhD Grant & Proposal Writing	2 credits

Summer Semester

N888	Comprehensive Exam	0 credits
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Full Time Cost*:

In-state residents \$6,201

New England regional \$7,849

Out of state \$9,183

Year Four**Fall Semester**

N809	Dissertation Seminar	0 credits
N899	Dissertation Credits	9 credits

Spring Semester

N809	Dissertation Seminar	0 credits
N899	Dissertation Credits	9 credits
	Final Oral Defense of Dissertation	0 credits

Total Academic Credits (minimum)	77 credits
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Important Note: In addition to the above core coursework, Bachelor's to PhD students must take AT LEAST THREE 3-credit electives. One elective must be an advanced methods elective. Electives may be taken concurrently in any semester after approval by the student's faculty advisor. Cost of electives is not included and will be added in the years they are taken.

Full Time Cost*:

In-state residents \$10,480

New England regional \$12,460

Out of state \$17,696

*Please note that costs listed are estimates, and that tuition and fees may change at any time without prior notice.

Master's to PhD Track

Year One

Fall Semester

N800	History and Philosophy of Nursing Science	3 credits
N801	Qualitative Research Methods	3 credits
N810	PhD Practicum (please consult advisor before registering)	1 credit

Spring Semester

N802	Quantitative Research Methods	3 credits
N803	Emerging Nursing Theories	3 credits
N815	Statistical Analysis of Data	3 credits

Summer Semester

N804	Measurement and Instrumentation in Clinical Research	3 credits
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Full Time Cost*:

In-state residents	\$9,975
New England regional	\$12,190
Out of state	\$15,401

Year Two

Fall Semester

N805	State of the Discipline	3 credits
N890	Advanced Statistics	3 credits

Spring Semester

N808	Critical Health Policy Issues Seminar	3 credits
N813	PhD Grant & Proposal Writing	2 credits

Summer Semester

N814	Genomics for Clinical Practice & Research	3 credits
N888	Comprehensive Examination	0 credits

Full Time Cost*:

In-state residents	\$7,551
New England regional	\$9,724
Out of state	\$11,313

Year Three

Fall Semester

N899	Dissertation Credits	9 credits
N809	Dissertation Seminar	0 credits

Spring Semester

N899	Dissertation Credits	9 credits
	Final Oral Defense of Dissertation	0 credits

Total Academic Credits (minimum)	77 credits
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Important Note: In addition to the above core coursework, Master's to PhD students must take AT LEAST TWO 3-credit electives. One elective must be an advanced methods elective. Electives may be taken concurrently in any

semester after approval by the student's faculty advisor. Cost of electives is not included and will be added in the years they are taken.

Full Time Cost*:

In-state residents \$10,480

New England regional \$12,460

Out of state \$17,696

*Please note that costs listed are estimates, and that tuition and fees may change at any time without prior notice.

Admission to the PhD in Nursing Program

Students who wish to be considered for admission into the PhD program must submit their application on-line via the Nursing Centralized Application Service (Nursing CAS). The link to the Nursing CAS application is on the Graduate School of Nursing Web site at www.umassmed.edu/gsn. The GSN has rolling admissions: applications are considered as soon as they are complete. Qualified applicants will be contacted by the PhD Program Director to schedule an interview. Admission to the PhD in Nursing Program is based on the faculty's overall appraisal of the applicant's ability to undertake doctoral study and of his or her potential contributions to nursing science. Acceptable verbal and quantitative scores on the GRE and a GPA of 3.0 or better are required. Applicants for GEP to PhD must satisfy all admission requirements for GEP program.

Application to the Bachelor's to PhD Track

Applications to the Bachelor's to PhD program will be considered when all of the following have been received:

- completed application form, including a clear personal statement demonstrating the goal of becoming a nurse scientist;
- non-refundable application fee made payable to the University of Massachusetts;
- official transcripts from all colleges and universities attended;
- a clear personal statement of professional goals (see application form);
- three academic letters of reference;
- Acceptable results on the GRE revised General Test (Verbal Reasoning, Quantitative Reasoning, and Analytical Writing
- identification of a clinical research focus that is congruent with that of a faculty member;
- participation in an admission interview;

- current resume including work experience, education, professional activities, and publications of scholarly writing;

Application to the Master's to PhD Track Applications for the Master's to PhD Track will be considered complete when all of the following have been received:

- completed application form, including a clear personal statement demonstrating the goal of becoming a nurse scientist;
- non-refundable application fee made payable to the University of Massachusetts;
- official transcripts from all colleges and universities attended;
- evidence of current, unrestricted licensure as a registered nurse;
- Acceptable results on the GRE revised General Test (Verbal Reasoning, Quantitative Reasoning, and Analytical Writing
- three letters of recommendation: one from a recent supervisor who can evaluate employment experience; and two academic references;
- identification of a clinical research focus that is congruent with that of a faculty member;
- participation in an admission interview;
- current resume including work experience, education, professional activities and publications of scholarly writing.

PhD Academic Policies and Procedures

For a full description of GSN policies view the GSN Student Handbook at

www.umassmed.edu/gsn/current_students/index.aspx.

Statute of Limitations

Completion of all degree requirements within the statute of limitations: five (5) years for students entering the program with a master's degree and six (6) years for students entering with a baccalaureate degree or from the Graduate Entry Pathway

program. A doctoral student may be granted additional time to complete his/her degree program by the director of the PhD program, provided satisfactory and reasonable progress is being made.

Student Status

Full time students must be registered for a minimum of nine (9) credit hours for that semester by two weeks before the start of the semester and must maintain a minimum enrollment of 9 credit hours during the semester in order to maintain active student status (eligibility for course credit, malpractice insurance, financial aid, etc.).

Students taking less than nine (9) credits per semester are considered part-time. Part-time students must be registered for a minimum of five (5) credit hours each semester to be eligible for financial aid.

Continuous Enrollment

Students are required to maintain continuous enrollment each semester until program requirements are complete. Failure to be properly enrolled may result in the student being administratively withdrawn from the program.

Graduate Entry Pathway students are enrolled full-time, that is, with the full credit load in the Fall, Spring and Summer semesters in the Pre-licensure year.

Maximum Credit Load

A graduate student in the Master's or Doctoral Programs may register for up to 18 credits each semester. Students who wish to register for more than the maximum credit load must secure written permission from their faculty advisor.

Transfer of Credits

Credit for courses equivalent to required GSN courses may be transferred from other institutions with permission. If a doctoral student requests a transfer course to meet an elective requirement, the course **MUST** complement the student's program of study. Students who wish to take an elective at

another University of Massachusetts campus may do so by completing the UMass Graduate Course Exchange Registration Form that is available in the Registrar's Office. The signatures of the GSN faculty research advisor and the faculty of record at the other campus are required. The cross-registration form is returned to the Registrar's Office to ensure continuous enrollment and active student status. For PhD students, transfer of more than 9 credits from other UMass campuses will be evaluated on an individual basis by the Program Director and the faculty research advisor. In all cases involving transfer of a course from another school, the student receives credit for the transfer courses, but the grades are not calculated in the UMW GPA.

Tuition and Fees

Tuition and fees for the 2014-2015 academic year are listed for the Master of Science, Graduate Entry Pathway, Pre-master's Option, Post-master's Certificate, Doctor of Nursing Practice, BSN to PhD Track and PhD in Nursing programs. Please note that these are estimates, and that tuition and fees may change at any time without prior notice.

The cost to individual GSN students can vary depending on their program of study, course selection and applicable fees. Individuals' tuition is based on their residency at the time of application—in state, out of state or New England Regional (NER). Costs also vary according to whether students purchase their health insurance through the school. Course cost also varies, for example, according to whether a course is categorized as a "state" course or a "continuing education" course. Course categorization is based on several factors, including the time of a course's development and onset of the related program or track. For example, all GEP and DNP courses are "continuing education" courses, as are some electives. The estimated tuition and fees displayed here allow prospective students to anticipate their costs.

Financial Aid

See Financial Aid and www.umassmed.edu/financialaid.aspx for complete information.

Academic Policies and Procedures

See Academic Policies and Procedures. For a full description of GSN policies, view the GSN Student Handbook at http://www.umassmed.edu/gsn/current_students/index.aspx

Tuition:

Resident (based on # state course credits)

In State	1-8 cr	\$110/credit
In State	9 or more	\$1,320 total
NE Regional	1-8 cr	\$192.5/credit
NE Regional	9 or more	\$2,310 total
Out of State	1-8 cr	\$410.5/credit
Out of State	9 or more	\$4,928 total

Curriculum Fee:

<5 credits	\$1,078 total
6-8 credits	\$2,156 total
> 9 credits	\$3,223.50

Mandatory Fees:

Equipment Fee	\$325
Health/Counseling Fee	\$673
Student Service Fee	\$195

Continuing Education (per credit):

Prelicensure courses (500 level only)	Total
In State Resident	\$724
NE Regional	\$888
Out of State	\$1,004
Nursing Courses (600 level and up)	
In State	\$450
NE Regional	\$625
Out of State	\$710

Other Fees:

Acute Care Lab fee	\$450
Commencement	\$200
Continuous Registration Fee	\$1,350
Fundamental Critical Care Support Fee	\$285
GEP NCLEX (ATI) Fee	\$1,125
Health Assessment Lab Fee	\$495
Incomplete Fee	\$50
Late Registration Fee	\$50
Standardized Patient Lab Fee (per lab)	\$175
Standardized Patient M/F experience	\$325
Typhon	\$100

Graduate School of Nursing

Course Descriptions

Graduate Entry Pathway Courses

NG510 Concepts in Professional Nursing

This course introduces students to the basic concepts that are the foundation of professional nursing practice. Course content includes role and practice issues in professional nursing and health care: the health care continuum; the bio-psychosocial model of health; health prevention and promotion; legal, regulatory and ethical issues; critical thinking and evidence-based practice; practice guidelines and informatics; principles of teaching/learning; theories of the nurse-patient relationship; and the role of the professional nurse. 2 credits Corequisites: NG511, NG513, and NG516A and B.

NG511 Biomedical Sciences I

Biomedical Sciences I is the first of two courses providing a review of human biochemistry, pathophysiology and pharmacology essential for nursing practice. This course focuses on the changes that occur in the human body when normal structure and/or function are altered by common conditions arising from the natural aging process, injury and disability, and when pharmacological interventions are implemented. 5 credits Corequisites: NG510, NG513, and NG516A and B.

NG512 Biomedical Sciences II

Biomedical Sciences II is the second of two courses providing a review of human biochemistry, pathophysiology, pharmacology and nutrition essential for nursing practice. This course focuses on the changes that occur in the human body when normal structure and/or function are altered by common conditions arising from the natural aging process, disease, injury and disability, and when pharmacological and nutritional interventions are implemented. 3 credits Prerequisites: NG510, NG511, NG513, and NG516A and B. Corequisites: NG514, NG517A and B, and NG518A and B.

NG513 Health Assessment and Skills I

This laboratory course is the first of two that focus on the competencies of technical clinical skills and health assessment necessary to provide safe, quality, patient-centered professional nursing care. 2 credits Corequisites: NG510, NG511, and NG516A and B.

NG514 Health Assessment and Skills II

This laboratory course is the second of two courses that focus on the competencies of technical clinical skills and health assessment necessary to provide safe, quality, patient-centered professional nursing care. 1 credit Prerequisites: NG510, NG511, NG513, and NG516A and B. Corequisites: NG512, NG517A and B, and NG518A and B.

NG516A Nursing I: Care of Persons with Acute and Chronic Conditions

This is the classroom component of NG516B. This course introduces students to the values, knowledge and competencies that are the foundation of safe, skilled, professional and patient-centered nursing care for adults with acute and chronic medical-surgical conditions. The classroom component focuses on the expected presentation, process, and outcomes of selected health conditions in the adult population. 5 credits Corequisites: NG510, NG511, NG513 and NG516B.

NG516B Nursing I: Clinical Care of Persons with Acute and Chronic Conditions

This is the clinical component of NG516A. Students will use critical thinking and effective communication skills to deliver safe, competent, professional and patient-centered nursing care to adults with acute and chronic medical-surgical conditions. Working with clinical faculty and other nursing colleagues, students will assess client needs and develop, implement and evaluate a plan of nursing care to meet expected client-centered outcomes. 5 credits Corequisites: NG510, NG511, NG513 and NG516A.

NG517A Nursing II: Care of Persons with Acute and Chronic Conditions

This course continues the introduction of core concepts of acute and chronic conditions. Emphasis

will be on providing nursing care to individuals and families experiencing selected acute and chronic psychiatric and medical-surgical conditions. The impact of acute and chronic illness on adult developmental stages and transitions will be examined. 5 credits Corequisites: NG514, NG517B, and NG518A and B.

NG517B Nursing II: Clinical Care of Persons with Acute and Chronic Conditions

This course is the clinical component of NG517A and continues the focus of NG516B on the provision of client-centered nursing care to individuals and families in hospital- and community-based settings who are experiencing selected acute and chronic psychiatric and medical-surgical conditions. 3 credits Prerequisites: NG510, NG511, NG513, and NG516A and B. Corequisites: NG514, NG517A, and NG518A and B.

NG518A Nursing III: Care of the Childbearing and Child Rearing Family

This is the classroom component of NG518B. The course presents the values, knowledge and competencies that are the foundation of safe, skilled, professional and patient-centered nursing care of families experiencing normative childbearing and child rearing, and for children experiencing acute and chronic conditions. Emphasis is on all stages of pregnancy, and the experience of hospitalization and adaptation to chronic conditions for children. Life transitions related to childbearing and child rearing experiences will be analyzed. 5 credits Prerequisites: NG510, NG511, NG513, and NG516A and B. Corequisites: NG514, NG517A and B, and NG518B.

NG518B Nursing III: Clinical Care of the Childbearing and Child Rearing Family

This course is the clinical component of NG518A. In this course, students will use critical thinking to make evidence-based clinical judgments for, and develop effective communication skills with, families experiencing normative childbearing and child rearing, and with children experiencing acute and chronic conditions. Working with nursing colleagues

and other members of the interdisciplinary team, students will prioritize and provide nursing care in hospital settings. 3 credits Prerequisites: NG510, NG511, NG513, and NG516A and B. Corequisites: NG514, NG517A and B, NG518A.

NG519A Nursing IV: Clinical Capstone: Leadership and Management

This course focuses on the professional role of the nurse as a collaborator, leader and provider of care with nursing colleagues and other members of the interprofessional health care team, and within the context of complex health care systems. 3 credits Prerequisites: NG510, NG511, NG513, and NG516A and B. Corequisites: NG514, NG517A and B, NG518A and B, and NG519B.

NG519B Nursing IV: Clinical Capstone: Clinical Internship

This clinical course focuses on the professional role of the nurse as a provider of care as part of the interprofessional health care team. Working one-on-one with a nurse preceptor approved by GSN nursing faculty, and with guidance from GSN nursing faculty, students integrate the values, knowledge and competencies of professional nursing into their practice as a manager and provider of safe, competent, patient-centered nursing care, and as a nursing colleague and member of an interprofessional health care team. 7 credits Prerequisites: NG510, NG511, NG513, and NG516A and B. Corequisites: NG514, NG517A and B, NG518A and B, and NG519A.

NG522 Transition to Professional Practice

This course is designed to coincide with students' entry into their first practice role following licensure as a registered nurse. Students will evaluate their professional growth as clinicians and discuss issues related to professional and advanced practice nursing that arise in their practice and in the classroom. 2 credits Prerequisites: Completion of GEP Year One. Corequisites: NG604, NG603B and NG614.

Master of Science Program Courses

Core Courses

N/NG603A Societal Forces Influencing Graduate Nursing Education and Practice

This course explores the dynamic issues and societal forces that require leadership for nursing practice. Included is the regulation of and the authority for graduate nursing practice (licensure, scope of practice, accreditation, certification, credentialing and education) coupled with the issues of advocacy, health disparities, health care economics and financing, health literacy, health policy, technological advancement, medical ethics, and the sociocultural factors influencing the health behaviors and health outcomes of the populations we serve. This course brings to life the Determinants of Health Framework to understand the factors impacting health and health outcomes. Using the Precede-Proceed and/or the Socio-Ecological Model, scientific evidence is researched and applied to reflect the modifiable determinants to improve the health of populations. 3 credits Corequisite: N/NG603B

N/NG603B Interprofessional and Population Health Community Service Learning Practicum and Seminar

This two-semester course provides students with an opportunity to apply interprofessional teamwork skills coupled with knowledge and experience with graduate nursing role development to population health/community service learning experiences with a medically underserved, vulnerable and/or high-risk population/community. Goals and objectives from Healthy People 2020 will provide a basis for student assessment, intervention and evaluation of a specific health promotion or disease prevention strategy or program in the community. 1 credit Corequisite: N/NG603A

NG 603C Interprofessional Population Health Clerkship: Caring for Populations within their Communities - Practicum and Seminar

This two-week population health immersion introduces small teams of medical and graduate nursing students to the application of public health

concepts to populations/communities as a unit of care. Student groups will work with academic and community faculty of a variety of disciplines to assess populations and communities as units of care to identify available and needed resources for the population of focus and advocate for at-risk populations to improve health outcomes. 1 credit Corequisite: N/NG603A.

N/NG604 Translating & Integrating Scholarship into Practice

This is a core course that prepares students to critically examine and seek evidence for practice, ethically translate current evidence and identify gaps in clinical knowledge. This course provides the student with a foundation in nursing research, theory, research ethics, and evidence-based practice approaches. 3 credits

N/NG704 Principles of Epidemiology

This course will provide students with concrete skills to understand and critique the medical literature. Students will learn about the various types of epidemiology study designs including their potential strengths and limitations. Using these skills, students will critique articles from the medical literature. Students will also work in groups to develop an epidemiology study design to address a clinical hypothesis. 3 credits. Pre-Requisites or Co-requisite Course: Matriculated into UMass GSN or permission from the course director

N/NG719 Genetics, Genomics and Pharmacogenomics

This course provides an introduction to fundamentals of genetics, and genomics, including pharmacogenomics. Basic concepts and principles of genetics and genomics will be covered in these lectures, including course assignments involving quizzes and case studies. This course will also discuss integration of the basic concepts to enhance understanding, knowledge, application and utilization of these principles in clinical settings for education and practice. Perspectives on ethical, legal and socioeconomic issues for advanced practice nurses will also be addressed. Implications regarding

personalized medicine and direct-to-consumer testing in regards to patient care and practice will be discussed. 3 credits

Advanced Practice Core Courses

N/NG613 Advanced Pathophysiology

The focus of this course is on the interrelation of human systems and the effect that illness in one body system has on the functions of the whole person. Concepts related to clinical physiology and research literature related to pathophysiology of various body systems are examined. Pertinent literature related to nursing interventions associated with improved physiological status is analyzed. 3 credits

N/NG614 Advanced Pharmacotherapeutics

This course is designed to meet the needs of the advanced practice nurse prescriber in the primary and acute care setting, building upon previous and/or concurrent acquired knowledge from nursing, pathophysiology and other sciences. The development of clinical decision-making skills essential to safe and effective pharmacologic intervention is the focal point of the course. 3 credits

N/NG615A Advanced Health Assessment

This course further develops and integrates the health assessment competencies of interviewing, performing and documenting comprehensive and episodic health histories and physical examinations. Students will identify common symptoms, identify risk factors, incorporate appropriate health promotion and disease prevention strategies, formulate differential diagnoses and begin treatment plans for common acute and chronic illnesses. Critical thinking and clinical decision making is presented within the context of case studies and the comprehensive analysis of patient data and plan formulation. This is the theoretical didactic portion of advanced health assessment and forms a foundation of advanced clinical practice. 3 credits Corequisite: N/NG615B.

N/NG615B Advanced Health Assessment Practicum

This practicum assesses the student's integration of techniques in physical examination through lab practice, performance exams and utilization of standardized patients. The integration of all didactic and performance components, including clinical decision-making skills, are demonstrated through successful role playing, case study analysis and an Objective Structured Clinical Exam (OSCE). 1 credit Corequisite: N/NG615A.

Adult-Gerontology Primary Care Nurse Practitioner Courses

N/NG630A Advanced Nursing Science: Adult-Gerontology Primary Care Nurse Practitioner Theory I

This course is the first of two advanced nursing science theoretical courses for the preparation of the adult-gerontology primary care nurse practitioner. The focus of this course is on the development and refinement of the critical thinking skills necessary to achieve the APN domain and core competencies of the advanced practice nurse. Grounded in theory and evidence-based research, this course enhances the student's knowledge of health promotion and disease prevention and management strategies needed to care for the adult-older adult patient and family experiencing acute, episodic and selected chronic health problems in the ambulatory and community settings. 6 credits Pre requisites: Graduate Core Courses, 603A, 603B, 603C, 604, 704, 719 Graduate Entry Pathway courses, Advanced Pathophysiology 613, Advanced Pharmacotherapeutics 614, Advanced Physical Assessment 615A and 615B or by permission of instructor Corequisite: N/NG630B.

N/NG630B Advanced Nursing Science: Adult-Gerontology Primary Care Nurse Practitioner-Clinical Practicum I

This course is the first of two advanced nursing science clinical courses for the preparation of the adult-gerontology primary care nurse practitioner. The focus is on the development and refinement of the clinical appraisal and diagnostic skills needed by

the advanced practice nurse in ambulatory and community settings. The course enhances the student's ability to apply theories, standards of practice and evidence-based research to the care of adult-older adult patients with acute and chronic health problems. The student implements the role activities of the advanced practice nurse through critical thinking, therapeutic intervention, communication and professional role interaction. 4 credits Corequisite: N/NG630A

N/NG631A Advanced Nursing Science: Adult-Gerontology Primary Care Nurse Practitioner Theory II

This course is the second of two advanced nursing science theoretical courses for the preparation of the adult-gerontology primary care nurse practitioner. The focus is on the refinement and synthesis of critical thinking skills used by the advanced practice nurse to articulate advanced practice nursing domain and core competencies. Grounded in theory and evidence-based practice, the course enhances the student's knowledge and ability to analyze and manage the comprehensive care of the adult-older adult patient and family in ambulatory or community settings, and the professional and environmental issues influencing the health and care of the adult-older adult patient and the role of the advanced practice nurse. 6 credits Prerequisites: N/NG630A and B. Corequisite: N/NG631B.

N/NG631B Advanced Nursing Science: Adult-Gerontology Primary Care Nurse Practitioner Clinical Practicum II

This course is the second of two advanced nursing science clinical courses for the preparation of the adult-gerontology primary care nurse practitioner. The focus is on the development and refinement of the clinical appraisal and diagnostic skills needed by the advanced practice nurse to provide best practices in ambulatory and community settings. Clinical activities assist students to translate and integrate theories, standards of practice and evidence-based research into the assessment and management of acute and chronic health problems

for adult-older adult patients and families in ambulatory and community settings. The student implements activities of the advanced practice nurse through critical thinking, therapeutic intervention, communication and professional role interaction. 3 credits Prerequisites: N/NG630A and B. Corequisite: N/NG631A.

Adult-Gerontology Acute Care Nurse Practitioner Courses

N/NG640A Advanced Nursing Science: Adult-Gerontology Acute Care Nurse Practitioner Theory I

This course is the first of two advanced nursing science theoretical courses for the preparation of the adult-gerontology acute care nurse practitioner. The focus of this course is on the development and refinement of the critical thinking skills necessary to achieve the APN domain and core competencies of the advanced practice nurse. Grounded in theory and evidence-based research, the course enhances the student's knowledge of health promotion and disease prevention and management strategies needed to care for the patient and family experiencing acute and chronic health problems in hospital settings. 6 credits Pre requisites: Graduate Core Courses, 603A, 603B, 603C, 604, 704, 719 Graduate Entry Pathway courses, Advanced Pathophysiology 613, Advanced Pharmacotherapeutics 614, Advanced Physical Assessment 615A and 615B or by permission of instructor Corequisite: N/NG640B.

N/NG640B Advanced Nursing Science: Adult-Gerontology Acute Care Nurse Practitioner Practicum I

This course is the first of two advanced nursing science clinical courses for the preparation of the adult-gerontology acute care nurse practitioner. The focus is on the development and refinement of the clinical appraisal and diagnostic skills needed by the advanced practice nurse to provide best practices in hospital settings. Clinical activities assist students to translate and integrate theories, standards of practice and evidence-based research into the assessment and management of acute and chronic

health problems for adult-older adult patients and families in hospital settings. The student implements activities of the advanced practice nurse through critical thinking, therapeutic intervention, communication and professional role interaction. 4 credits Corequisite: N/NG640A.

N/NG641A Advanced Nursing Science: Adult-Gerontology Acute Care Nurse Practitioner Theory II

This course is the second of two advanced nursing science theoretical courses for the preparation of the adult-gerontology acute care nurse practitioner. The focus is on the refinement and synthesis of critical thinking skills used by the advanced practice nurse to provide advanced practice nursing domain and core competencies. Grounded in theory and evidence-based practice, the course enhances the student's knowledge and ability to analyze and manage the comprehensive care of the patient and family in hospital settings, and the professional and environmental issues influencing the health and care of the patient and the role of the advanced practice nurse. 6 credits Prerequisites: N/NG640A and B Corequisite: N/NG641B.

N/NG641B Advanced Nursing Science: Adult-Gerontology Acute Care Nurse Practitioner Clinical Practicum II

This course is the second of two advanced nursing science clinical courses for the preparation of the adult-gerontology acute care nurse practitioner. The focus is on the development and refinement of the clinical appraisal and diagnostic skills needed by the advanced practice nurse to provide best practices in hospital settings. Clinical activities assist students to translate and integrate theories, standards of practice and evidence-based research into the assessment and management of acute and chronic health problems for adult-older adult patients and families in hospital settings. The student implements activities of the advanced practice nurse through critical thinking, therapeutic intervention, communication and professional role interaction. 3 credits Prerequisites: N/NG640A and B. Corequisite: N/NG641A.

Family Nurse Practitioner Courses

N/NG 659 Advanced Nursing Science: Maternal & Child Care for the FNP

This course is the first of three advanced nursing science theoretical courses for the preparation of the family nurse practitioner. The focus of this course is on the development of critical thinking skills necessary to achieve direct care and core competencies of the family nurse practitioner. This course provides the foundation for the delivery of primary health care to maternal and child patient populations including infants, toddlers, school-age children, and pre-teens. Grounded in family nursing theory and evidence-based research, this course enhances the student's knowledge of health promotion, disease prevention and management strategies needed to care for patients experiencing acute, episodic and selected chronic health problems in ambulatory and community settings. 4 credits. Pre-requisites: Graduate Core Courses, 603A, 603B, 603C, 604, 704, 719 Graduate Entry Pathway courses, Advanced Pathophysiology 613, Advanced Pharmacotherapeutics 614, Advanced Physical Assessment 615A and 615B or by permission of instructor

NG660A Advanced Nursing Science: Family Nurse Practitioner Theory I

This course is the second of three advanced nursing science theoretical courses for the preparation of the family primary care nurse practitioner. The focus of this course is on the development and refinement of the critical thinking skills necessary to achieve the direct care and core competencies of the advanced practice nurse. Grounded in theory and evidence-based research, this course enhances the student's knowledge of health promotion and disease prevention and management strategies needed to care for patients and their families experiencing acute, episodic and selected chronic health problems in ambulatory and community settings. 6 credits Corequisite: NG660B.

NG660B Advanced Nursing Science: Family Nurse Practitioner Clinical Practicum I

This course is the first of two advanced nursing science clinical courses for the preparation of the family nurse practitioner with the practice doctorate. The focus is on the development and refinement of the clinical appraisal and diagnostic skills needed by the advanced practice nurse with the Doctor of Nursing Practice (DNP) in ambulatory and community settings. The course enhances the student's ability to apply theories, standards of practice and evidence-based research to the care of patients with acute and chronic health problems across the life span. The student implements the role activities of the advanced practice nurse through critical thinking, therapeutic intervention, communication and professional role interaction. 4 credits Corequisites: N/NG 660A.

NG661A Advanced Nursing Science: Family Nurse Practitioner Theory II

This course is the third of three advanced nursing science theoretical courses for the preparation of the family nurse practitioner. The focus is on the refinement and synthesis of critical thinking skills used by the advanced practice nurse to provide advanced practice nursing direct care and core competencies. Grounded in theory and evidence-based practice, the course enhances the student's knowledge and ability to analyze and manage the comprehensive care of patients of all ages and the family in ambulatory community settings, and the professional and environmental issues influencing the health and care of the patient and the role of the advanced practice nurse. 6 credits Corequisite: N/NG661B Prerequisites: N/NG660A and B.

NG661B Advanced Nursing Science: Family Nurse Practitioner Clinical Practicum II

This course is the second of two advanced nursing science clinical courses for the preparation of the family nurse practitioner. The focus is on the development and refinement of the clinical appraisal and diagnostic skills needed by the advanced practice nurse to provide best practices in ambulatory and community settings of children and

adults. Clinical activities assist students to translate and integrate theories, standards of practice and evidence-based research into his/her assessment and management of acute and chronic health problems for patients and families in ambulatory and community settings. The student implements activities of the advanced practice nurse through critical thinking, therapeutic intervention, communication and professional role interaction. 4 credits Prerequisites: N/NG660A, N/NG 660B, Corequisite N/NG 661A B

Nurse Educator Courses (for Traditional Master's, GEP, DNP and PhD students)**N/NG 620 Advanced Nursing Science: Teaching and Curriculum Development for Nurse Educators**

This course presents theoretical and evidence-based teaching theories, technologies and skills. Emphasis is placed on contemporary approaches to educating nurses in various settings with different learners. Nurse educator roles, theories of learning, curriculum development and research in nursing education are covered. 3 credits

N/NG 621B Clinical Practicum for Nurse Educators (270 Practicum hours)

This practicum offers the student the opportunity to enhance and refine their clinical appraisal, diagnostic reasoning and therapeutic intervention skills in the clinical area. Special emphasis is placed on the role of nurse educator in the clinical environment. Leadership and educational strategies to promote quality and safety in the clinical environment will be emphasized. 3 credits Prerequisites: N/NG620, Master of Science Year One courses.

N/NG622 Advanced Nursing Science: Advanced Instructional Methods for Nurse Educators

This course provides the student with an opportunity to analyze and apply a variety of classroom and clinical strategies. Emphasis is placed on contemporary student centered approaches including problem-based learning, reflection, distance learning and appropriate integration of technology within the curriculum. 3 credits

Prerequisites for Master of Science students: N/NG620, or taken concurrently with N/NG620 or with permission of course faculty. No prerequisites for PhD students.

N623 Advanced Nursing Science: Identifying and Measuring Outcomes for Nurse Educators

The emphasis of this course is on identifying, measuring and achieving outcomes. Content builds upon Year One student and patient outcome evaluation content. Program outcome evaluation, test development and clinical evaluation strategies are included. Processes designed to promote performance improvement in health care and to enhance the graduate's ability to function effectively in a health care organization are discussed. 3 credits
Prerequisites: N/NG620, or permission of course faculty.

N624 Advanced Nursing Science: Systems Leadership for Nurse Educators

This course examines organizational processes and structures designed to promote positive patient and educational outcomes. Grounded in theory and research, this course gives the student the opportunity to acquire knowledge and critical thinking skills necessary to serve in a leadership role in an educational institution or a health care organization. 3 credits
Prerequisite: N/NG620

N625B Advanced Nursing Science: Academic Teaching Practicum for Nurse Educators (270 Practicum hours)

This practicum offers the student the opportunity to enact the role of the academic nurse educator and begin to synthesize leadership concepts into the academic environment. The prerequisite courses provide a theoretical foundation for the application and synthesis activities that characterize clinical learning and leadership in a practice profession. Philosophical and experiential issues specific to clinical and classroom instruction and leadership in nursing education are emphasized in seminar discussions. 3 credits
Prerequisites for traditional Master of Science students: N/NG620, N/NG621B, N/NG622, N/NG623 and N/NG624.

Elective Courses

N/NG590 Human Physiology

This is a review course on basic principles of physiology that cover the functions of the human body with emphasis on the nervous, endocrine, muscular, cardiovascular, respiratory, digestive, renal and reproductive systems. The course will provide a broad view of the current knowledge on how the human body works and is intended for students in the fields of nursing and other allied health fields. 3 credits

N/NG 643 Advanced Practice Critical Care Nursing I

The focus of this course is to prepare the Adult-Gerontology Acute Care Nurse Practitioner student to provide care for critically ill patients. The focus of this course is on the development and refinement of advanced critical thinking skills necessary to master advanced concepts in critical care. Grounded in theory and evidence-based practice, the course enhances the student's knowledge of diagnostic and collaborative management strategies needed to provide high quality care for adult/older adult patients with common life threatening illnesses and injuries and their families. 3 credits. Pre-requisites: Critical Care Nursing experience and Permission of instructor.

N/NG 643B Advanced Practice Critical Care Nursing Practicum

This course is the clinical practicum of the critical care subtrack to prepare nurse practitioner students to specialize in the care of critically ill patients. The focus is on refining assessment, diagnosis and treatment plans needed by the advanced practice nurse to provide care to critically ill adult patients. The student will integrate evidence-based practice into holistic care plans, developed within the interprofessional team, to provide direct care to critically ill adults/older adults and their families under the guidance of a qualified preceptor. 1 credit.

N/NG 644 Advanced Practice Critical Care Nursing II

This course focuses on the development and refinement of advanced critical thinking skills, and

development of plans of care necessary to address the needs of special populations of critically ill adults-older adults**. Grounded in theory and evidence-based practice, the course enhances the student's mastery of advanced concepts, knowledge of the diagnostics and collaborative management strategies needed to provide high quality care for patients experiencing specific critical illnesses and life threatening injuries, and their families. **Special populations include, but are not limited to patients experiencing: Cardiogenic shock, cardiac surgery, neuro-critical care issues, critical care pregnancy conditions, burns, exposure to toxins & poisons, and immune-compromised patients, etc. 3 credits Pre-requisites: Critical Care Nursing experience and Permission of instructor.

N/NG 652 Military and Veterans' Healthcare

This course will provide the student with an understanding of the experiences, beliefs and health practices within the military culture. Health care concerns related to deployment, re-integration, family and veterans services will be discussed. Strategies to improve the health of military members and veterans in civil society will be presented. 3 credits

N/NG681 Advanced Practice Cardiovascular Nursing I

This course explores the theories of health promotion and disease management pertinent to cardiovascular nursing. It is intended to prepare advanced practice nurses to provide care to cardiovascular patients across health care settings. Health promotion strategies for high-risk cardiovascular patients are explored. Predisposing risk factors along with current treatment modalities for cardiovascular disease are discussed. 3 credits

N/NG682 Advanced Practice Cardiovascular Nursing II

The focus of this course is on the development and refinement of the clinical appraisal needed by the advanced practice nurse to effectively provide education and to manage adults with cardiovascular diseases. Risk factor identification and health promotion strategies incorporating the patient's physiological and psychological responses to cardiovascular health problems and treatments are analyzed through clinical examples. Evidence-based research and the standards of care are synthesized to promote continuity of care throughout the cardiovascular patient's trajectory of illness. 3 credits Prerequisites: N/NG681 or permission of instructor.

N/NG682 B Advanced Practice Cardiovascular Nursing Practicum

This course is the clinical practicum of the cardiac subtrack to prepare nurse practitioner students to specialize in care of adults/older adults with cardiac conditions. The focus is on refining assessment, diagnosis and treatment plans by the advanced practice nurse to provide comprehensive care to adult patients with acute and chronic cardiovascular disease. The student will integrate evidence-based practice into holistic care plans, developed within the interprofessional team, to provide direct care to critically ill adults/older adults and their families under the guidance of a qualified preceptor. 1 credit

N/NG685 Living with Chronic Conditions and Terminal Illness

This course will explore the physical, psychological, social, ethical, spiritual and existential issues raised by the prospect of long-term, disabling, life-shortening conditions and illnesses as well as death and bereavement. It will prepare the participants with the necessary understanding and skills to develop supportive advanced practice nursing care for pediatric, adult and geriatric populations across settings. 3 credits

N/NG686 Advanced Practice Oncology Nursing

This course will focus on cancer care knowledge, decision making and practices for advanced practice nurses caring for cancer patients in ambulatory, hospital and community settings. The course will examine cancer epidemiology, prevention, detection, treatment and professional practice. 3 credits

N/NG 686 B Advanced Practice Nursing in Oncology Practicum

This course is the clinical component for the preparation of the advanced practice oncology nurse practitioner. The focus is on the development and refinement of the clinical appraisal and diagnostic skills needed for advanced practice nurses caring for patients with cancer in a variety of healthcare settings cancer detection, treatment, and survivorship in acute and chronic care will be emphasized. During a 90 hour practicum, the student will implement the role activities of the advanced practice oncology nurse demonstrating critical thinking, carrying out therapeutic interventions, clear communication and professional role interaction. 1 credit

N/NG691 Contemporary Issues in Women's Health

This elective graduate nursing course provides the advanced practice nursing student with a theoretical foundation to provide evidence-based care to women and will focus on a variety of issues specific to their health care. Specific concerns of women across the lifespan and the effects of culture and environment on women's health are analyzed. Gender-based health issues and disparities and the role of the advanced practice nurse in dealing with these issues are examined. 3 credits

N/NG699 Independent/Directed Study

This course is open to all graduate students. Plans for study must be submitted in advance of registration on a form obtained from the Graduate School of Nursing. The student must meet with a faculty member to establish goals and objectives outlining the independent/directed study; the number of credits given for the study will then be determined. The student may take more than one

independent study course, but no more than nine credit hours may be applied toward the degree. 1-3 credits Prerequisite: Permission of instructor and contractual agreement of course objectives and outcomes.

N/NG724A Advanced Practice Nursing in Emergency Care I

This theory course explores the knowledge needed for the Advanced Practice Nurse to work in urgent care settings. The course prepares students to apply knowledge from the biological, physiological, psychological, social and nursing sciences to care for patients with acute illnesses and injuries in an urgent care or observation setting. The course also reviews comprehensive care and evidence based practice for a variety of urgent illnesses and injuries requiring immediate and specialized care. Students will interpret assessment findings and diagnostic test results, and apply clinical practice guidelines. Health promotion and prevention strategies for high risk and/or medically under-served patients are applied within the context of culture, family and community. Students will develop skills needed to manage common injuries seen in urgent care settings. 3 credits. Pre-requisite 615A, 615B. co-requisite: N/NG724B or permission of instructor

N/NG724B Advanced Practice Nursing in Emergency Care Practicum I

This course is the clinical practicum to prepare the advanced practice nurse to care for patients with urgent health needs and acute exacerbations of chronic health problems. The focus of this course is on the development and refinement of clinical assessment and diagnostic skills needed by the advanced practice nurse caring for acute illnesses and injuries in an urgent care setting. This course builds on the student's health assessment skills, and further develops the student's ability to diagnose and manage care of clients with acute health problems. Students will develop management plans congruent with evidence based practice. Students will also have the opportunity to build skills in suturing and other minimally invasive procedures performed in urgent care settings. . 1 credit

Prerequisites: 615B, 615B. Corequisites: NNG724A or permission of instructor.

N/NG725A Advanced Practice Nursing in Emergency Care II

This course focuses on the critically ill, unstable patient with emergent and life-threatening conditions in the emergency department. Comprehensive emergency services to manage complex emergent illnesses/injuries or that require immediate and/or specialized care performed in emergency rooms will be reviewed. In addition, a focus on global public health issues such as toxicologic illness, mass casualty management, disaster planning and pandemic care will be explored. 3 credits. Pre-Requisite: current BLS & ACLS certification, 724 A & 724B, permission of instructor. Co-requisite 725B.

N/NG725B Advanced Practice Nursing in Emergency Care Practicum II

This course is the second clinical practicum to prepare the advanced practice nurse to care for patients with life threatening illnesses/injuries in an emergency department. The focus of this course is on the refinement of clinical appraisal and diagnostic skills needed by the advanced practice nurse in the emergency department caring for critically ill or seriously injured patients. This course enhances the student's ability to apply evidence based practice to the care of clients with emergent acute health problems. The student practices in the role of the advanced practice nurse demonstrating critical thinking, therapeutic interventions, communication and professional role interactions within an interprofessional team. 1 credit. Co-requisite N/NG 725A or permission of instructor

Doctor of Nursing Practice Courses

N704 Principles of Epidemiology

This course will provide students with concrete skills to understand and critique the medical literature. Students will learn about the various types of epidemiology study designs including their potential strengths and limitations. Using these skills, students will critique articles from the medical literature.

Students will also work in groups to develop an epidemiology study design to address a clinical hypothesis. 3 Credits. Pre-Requisites or Co-requisite Course: Matriculated into UMass GSN or permission from the course director

N705 Trends Influencing the Doctor of Nursing Practice

This course explores the trends influencing the role of the DNP in hospitals and community-based settings. The student will develop strategies to address these challenges that are grounded in evidence-based practice. The course enables graduates to serve as leaders in synthesizing clinical nursing knowledge and translating research findings into practice within complex health care settings and community-based organizations. 3 credits
Prerequisite: Matriculated student or permission of instructor

N706 Health Policy for Health Care Professionals

This course enhances students' understanding of health policy and analysis of health care issues within the context of advanced nursing and interprofessional practice. This knowledge is critical for leaders in nursing and other disciplines so they can contribute to the development and evaluation of health policies. The course will examine and critically analyze the health care system in the U.S. It will emphasize the major issues and trends which are the subject of intense public concern and government interest. Students will analyze health policy frameworks and apply them to professional, economic, political and social health care issues. This course will enable graduates to serve as leaders in analyzing the impact of health policies on patients, populations and health care systems. 3 credits
Pre-requisite: Matriculated student or Permission of instructor

N707 Biomedical Informatics

This course offers an overview of the field of biomedical informatics. Concepts from computer and information science are combined with current issues in research, clinical practice, and the use of information systems/technology in health systems

and patient care. The course will provide a broad overview of bioinformatics, standards and the use of technology for electronic health records, decision support systems, security including confidentiality, information retrieval, and public health informatics for patient care and consumer health informatics. 3 credits. Pre-requisite Matriculated student or permission of instructor.

N708 Organizational Systems and Health Care Financing

This course expands the student's understanding of systems theory and health care economics. The student will explore current global, technological, socioeconomic and organizational factors that have an impact on the delivery of high quality health care. The course expands upon expert clinical knowledge and enables students to engage with other interprofessional team members in developing and evaluating contemporary approaches to clinical practice within health care organizations. 4 credits

N709 DNP Capstone Project Prospectus

This course requires the refinement of the scholarly capstone prospectus for the preparation of advanced practice nurse with the practice doctorate. The focus of this course is on the integration of research findings in developing an advanced practice nursing activity to improve patient focused organizational outcomes. This course will also integrate information from the DNP core and elective courses to formulate a prospectus that demonstrates the translation of research to evidence-based practice. 2 Credits. Pre requisites or Co-requisite course: N704 N705 N706 N707 N708 N710 N815.

N 710 Clinical Scholarship & Analytic Methods

This course expands the students' understanding of clinical scholarship, analytic methods, evidence based models and performance science within the context of advanced nursing practice. This course will enable graduates to serve as leaders in synthesizing clinical nursing knowledge and translation of research findings into practice in complex health settings and community-based

organizations. Through the application of new knowledge and use of performance science methods, students will be able to evaluate outcomes of practice, reduce variation in care across settings and improving health outcomes. 3 Credits. Pre requisites or Co-requisite course: N704 N705 N706 N707 N708 N710 N815

N722 Quality and Patient Safety: Competencies, Strategies and Methodologies for the Advanced Practice Nurse

This course focuses on core quality and safety competencies for the advanced practice nurse. Contemporary performance improvement methodologies, the utility of large public data sets, and the concept of reporting transparency will be discussed. Strategies to improve the quality of care and patients outcomes within the health care environment are explored. The role and requisite competencies of the DNP in leading innovative quality and patient safety initiatives will be addressed. 3 credits

N723 Quality and Patient Safety in Health Care Organizations

This course prepares the advanced practice nurse with the DNP with the knowledge, theory and organizational science concepts necessary to design and evaluate performance improvement in health care organizations related to quality and safety. 3 credits

N770 Doctor of Nursing Practice Residency I

This course is the first of two advanced nursing science residency courses for the preparation of advanced practice nurses with the practice doctorate. The focus is on development and refinement of the leadership skills needed by the advanced practice nurse. The course enhances the student's ability to apply theories, standards of practice and evidence-based research to the care of the increasingly complex patients to improve practice and health care delivery. The student implements the role activities of the advanced practice nurse through critical thinking, therapeutic intervention, communication and professional

interaction. 3 credits Prerequisites: Completion of DNP Year One courses and concurrent enrollment in N722.

N771 Doctor of Nursing Practice Residency II

This course is the second of two advanced nursing science residency courses for the preparation of advanced practice nurses with the practice doctorate. The focus is on the refinement and synthesis of the leadership skills needed by these advanced practice nurses. This course enhances the student's ability to translate evidence-based research and clinical scholarship to decrease risk and improve health care outcomes for patients. The student implements the role activities of the advanced practice nurse through critical thinking, therapeutic intervention, communication and professional interaction. 3 credits Prerequisites: Completion of DNP Year One courses, N770 and concurrent enrollment in N772.

N772 Doctor of Nursing Practice Capstone Project I

This course requires the development of a scholarly capstone project for the preparation of advanced practice nurses with the practice doctorate. The focus is on the identification and implementation of a specific activity that uses evidence to improve patient-focused organizational outcomes. The scholarly capstone project integrates knowledge from the DNP core and track courses, electives and clinical residency experience in the formulation of a capstone project that demonstrates advanced practice nursing leadership at the practice doctorate level. 2 credits Prerequisites: Completion of DNP Year One courses and concurrent enrollment in N770.

N773 Doctor of Nursing Practice Capstone Project II

This course requires the completion of a scholarly capstone project for the preparation of advanced practice nurses with the practice doctorate. The focus is on the completion of a specific activity that uses evidence to improve patient-focused organizational outcomes. This scholarly capstone project is derived from the DNP track courses and electives including clinical residency experiences.

The scholarly capstone project demonstrates the student's attainment of the program outcomes and provides evidence of the student's knowledge and expertise as an advanced practice nurse at the practice doctorate level. 2 credits Prerequisites: Completion of DNP Year One courses, N772 and concurrent enrollment in N771.

N774

DNP APN Residency I

Doctor of Nursing Practice Advanced Practice Nursing Residency I

This course is the first of two advanced nursing science residency courses for the preparation of advanced practice nurse with the practice doctorate. The focus of this course is on development and refinement of the leadership skills needed by the nurse practitioner with the Doctor of Nursing Practice (DNP). This course enhances the student's ability to apply theories, standards of practice and evidence-based research to the care of the increasingly complex patients to improve practice and health care delivery across settings. The student implements the role activities of the advanced practice nurse through critical thinking, therapeutic intervention, communication, and professional interaction. Prerequisites: Matriculated student in the Graduate School of Nursing Completion of the graduate core, advanced practice core, FNP specialty courses, and N 709 DNP Capstone Project Prospectus Co-requisites: N 772 DNP Capstone Project I 4 credit hours

N775 DNP APN Residency II

Doctor of Nursing Practice Advanced Practice Nursing Residency

This course is the second of two advanced nursing science residency courses for the preparation of the advanced practice nurse with the practice doctorate. The focus of this course is on the refinement and synthesis of the leadership skills needed by these advanced practice nurses with the Doctor of Nursing Practice (DNP). This course enhances the students' ability to translate evidence-based research and clinical scholarship to decrease risk and improve health care outcomes for patients. The student

implements the role activities of the advanced practice nurse through critical thinking, therapeutic intervention, communication, and professional interaction.

Prerequisites: Matriculated student in the Graduate School of Nursing

Completion of the graduate core, advanced practice core, FNP specialty courses, N 709 DNP Capstone Project Prospectus, and N 772 DNP Capstone Project I, and N DNP Advanced practice Nursing Residency I

Co-requisites: N 773 DNP Capstone Project II
4 credit hours

N795 Independent/Directed Study

This course is open to DNP students. The goal of independent study is to complement the DNP student's program in a way that helps him/her develop additional knowledge and skills as an advanced practice nurse with a practice doctorate.

Plans for study must be submitted in advance of registration on the Independent Study Advance Registration form obtained from the Graduate School of Nursing. The student must meet with the faculty member of record to establish written goals, objectives and evaluation criteria for the independent study. Upon establishing the goals and objectives, the number of credits will be determined by the faculty member in consultation with the DNP program director. The student may take more than one independent study, but no more than six credit hours may be applied toward the DNP degree. 1 to 6 credits, by arrangement with the faculty.

N815 Statistical Analysis of Data

This course provides the student with an introduction to inferential statistics. Emphasis is placed on practical application, rather than mathematical theory. Topics discussed include t-tests, analysis of variance (ANOVA), analysis of covariance (ANCOVA), repeated measures ANOVA and mixed ANOVA, multivariate analysis of variance (MANOVA), correlations and scatter plots and regression analyses. 3 credits

DNP Family Nurse Practitioner Courses

NG760A Advanced Nursing Science for the DNP:

Family NP Theory I

This course is the first of two advanced nursing science theoretical courses for the preparation of the family nurse practitioner with the practice doctorate. The focus of this course is on the development and refinement of the critical thinking skills necessary to achieve the domain, core competencies and essentials of the advanced practice nurse with the Doctor of Nursing Practice (DNP). Grounded in theory and evidence-based research, the course enhances the student's knowledge of health promotion and disease prevention and management strategies needed to care for the patient and family experiencing acute and chronic health problems in ambulatory and community settings. 8 credits

Prerequisites: Graduate Core Courses, Advanced Pathophysiology, Advanced Pharmacology and Advanced Health Assessment. **Corequisite:** NG760B.

NG 760B Advanced Nursing Science for the DNP:

Family Nurse Practitioner Clinical Practicum I

This course is the second of three advanced nursing science clinical courses for the preparation of the family nurse practitioner with the practice doctorate. The focus is on the development and refinement of the clinical appraisal and diagnostic skills needed by the advanced practice nurse with the Doctor of Nursing Practice (DNP) in ambulatory and community settings. The course enhances the student's ability to apply theories, standards of practice and evidence-based research to the care of patients with acute and chronic health problems. The student implements the role activities of the advanced practice nurse through critical thinking, therapeutic interventions, communication and professional role interaction. 4 credits

Prerequisites: Graduate Core Courses, Advanced Pathophysiology, Advanced Pharmacology and Advanced Health Assessment. **Corequisite:** NG760A.

**NG761A Advanced Nursing Science for the DNP:
Family NP Theory II**

This course is the second of two advanced nursing science theoretical courses for the preparation of the family nurse practitioner with the practice doctorate. The focus of this course is on the development and refinement of the critical thinking skills necessary to achieve the domain, core competencies, and essentials of the advanced practice nurse with the Doctorate of Nursing Practice (DNP). Grounded in theory and evidence-based research, the course enhances the student's knowledge of health promotion and disease prevention and management strategies needed to care for the patient and family experiencing acute and chronic health problems in ambulatory and community settings. 8 credits Prerequisites: Graduate Core Courses, Advanced Pathophysiology, Advanced Pharmacology, Advanced Health Assessment, and NG760A ,NG 760B. Corequisite: NG761B.

**NG761B Advanced Nursing Science for the DNP:
Family Nurse Practitioner Clinical Practicum II**

This course is the second of two advanced nursing science clinical courses for the preparation of the family nurse practitioner with the practice doctorate. The focus is on the development and refinement of the clinical appraisal and diagnostic skills needed by the advanced practice nurse with the Doctor of Nursing Practice (DNP) in ambulatory and community settings. The course enhances the student's ability to apply theories, standards of practice and evidence-based research to the care of patients with acute and chronic health problems. The student implements the role activities of the advanced practice nurse through critical thinking, therapeutic interventions, communication and professional role interaction. 3 credits Prerequisites NG760, NG760 B. Corequisite: NG761A.

PhD Courses

N800 History and Philosophy of Nursing Science

This course is designed to prepare students to systematically analyze epistemological, ontological and metatheoretical perspectives in the philosophy of science, while also considering the implications for scientific inquiry, theory development and knowledge development in nursing. 3 credits Prerequisites: PhD program matriculation or permission of instructor.

N801 Qualitative Research Methods

The focus of this course is on the use of qualitative research methods to build substantive knowledge in nursing. Issues in qualitative research are identified and discussed, and critical analysis of traditional and emerging designs debated. Selected qualitative research designs are presented and the philosophical underpinnings and specific data collection and analysis methods associated with each design are identified, discussed, compared, contrasted and analyzed. Research from nursing and other fields is critiqued. Experiential learning methods and techniques include design, preparation and presentation of a research project. 3 credits Prerequisites: PhD program matriculation or permission of instructor.

N802 Quantitative Research Methods

This course provides students with an advanced study of research designs and methods used in quantitative nursing research. Analysis of quantitative methods that are currently used in biomedical, behavioral, social and nursing sciences are explored. 3 credits Prerequisites: N800 and N801, or permission of instructor.

N803 Theory

This course focuses on the critical analysis of theories, concepts, frameworks, and models for research. Emphasis is on analysis, including application of criteria for evaluating concepts in research and theory development. 3 credits Prerequisites: N800 and N801, or permission of faculty of record.

N804 Measurement and Instrumentation in Clinical Research

This is an advanced, graduate-level course that focuses on measurement theory and the processes of instrument evaluation, refinement and development. This course explores the use of quantitative and qualitative procedures to measure clinically important variables. In addition, emphasis is posited upon the interaction of conceptual, methodological, cultural and pragmatic considerations that are essential to understand when measuring variables among clinical populations. 3 credits Prerequisites: N801 and N802, or permission of instructor.

N805 State of the Discipline

This course explores nursing phenomena and strategies as conceptualized in current nursing research. Emphasis is on the extent and nature of potential synthesis of knowledge across traditional boundaries. To effectively advance knowledge and improve nursing practice, it is essential to be at the forefront of the current state of substantive knowledge in the discipline. The intent of this course is to provide students with the opportunity to analyze and synthesize selected aspects of this knowledge, particularly as it informs their individual research interests. 3 credits Prerequisites: N800, N801, N802 and N803, or permission of instructor.

N808 Critical Health Policy Issues Seminar

This seminar provides students with advanced knowledge for health policy analysis and appraisal of critical health care issues that is essential to the leadership of nurse researchers, educators and advanced practitioners whose roles require participation in policy development and advocacy. Specifically, students evaluate common frameworks for policy analysis and apply these frameworks to a range of prominent, contemporary health care issues within social, political and economic contexts to develop and advocate for policy recommendations based on evidence and reasoned argument. 3 credits Prerequisites: N800, N801, N802, N803 and N805,

or permission of instructor.

N809 Dissertation Seminar

The purpose of the dissertation seminar is to assist students who have completed their course work and passed the comprehensive examination to sustain momentum in the completion of their dissertation proposal. The seminar provides regular, organized opportunities for students to present dissertation proposal work in progress to peers and faculty mentors. This seminar is designed to augment (not replace) the one-to-one advising that each student receives from his/her dissertation advisor.

Dissertation seminar is designed to run concurrently with N899 dissertation advisement. A minimum of two semesters of dissertation seminar is required. Participation beyond two semesters is required for all students until proposal completion. 0 credits Prerequisite: Must pass the comprehensive examination.

N810 Doctoral Practicum

This is an advanced graduate-level course which provides students with a mentored practicum experience in at least one of five key areas: research, leadership, education, scientific integrity, scholarship and team science. The practicum experience is highly individualized and designed to develop expertise in a selected area of PhD scholarship. 1 credit.

N812 Health Literacy in Research and Practice

This course focuses on examining and analyzing the concept of health literacy, with an emphasis on the relationship of health literacy to one's ability to manage and optimize their health. The association of health literacy to health disparities and health outcomes will be explored. Challenges in conducting health literacy research and challenges inherent in providing quality care to those with limited health literacy will be examined. Evidence based individual and organizational approaches to mitigate the effects of limited health literacy will be addressed. 3 credits Open to all graduate students.

N813 PhD Grant & Proposal Writing

This course emphasizes a synthesis of the course content in the PhD program through development of a formal grant proposal. It explores the elements of grant writing, proposal development and ethical considerations related to human subjects' research. Students will be guided in the development of an individual grant proposal eligible for submission to a funding sponsor. 2 credits

N814 Genomics for Clinical Practice & Research

This course provides the foundation to use genetics and genomic concepts in advanced practice and clinical research. The principles of human and molecular genetics including variations, patterns of inheritance and multifactorial inheritance will be discussed. Gene action and expression, cytogenetics, the Human Genome Project, genetics terminology and basic principles of laboratory methods used in genetics and genomics will be examined. The evolving principles of epigenetics, nutrigenomics, and pharmacogenomics in patient care and research will be explored with attention given to the associated ethical, legal and social implications. Inherited and acquired health conditions will be used to illustrate the impact of genetics and genomics on nursing practice and on opportunities for research. 3 credits

N815 Statistical Analysis of Data

This course provides the student with an introduction to inferential statistics. Emphasis is placed on practical application, rather than mathematical theory. Topics include t-tests, analysis of variance (ANOVA), analysis of covariance (ANCOVA), repeated measures ANOVA and mixed ANOVA, multivariate analysis of variance (MANOVA), correlations and scatter plots and regression analyses. 3 credits

N816 Scholarly Writing in Nursing and Interprofessional Journals Course

This course prepares the student for the writing, editing, and reviewing skills required for scholarly writing. The student will prepare and submit a scholarly manuscript to a peer-reviewed nursing or interprofessional journal. N816 discusses the key elements of scholarly writing including development a query letter, preparation of a scholarly paper, determination of authorship, and identification of ethical considerations. Strategies of reading critically, synthesis of the literature, use of appropriate vocabulary, and revising the manuscript will be discussed. Each student will engage in peer review of writing summaries and manuscripts. Credit: 1 Pre requisites: Graduate of a PhD or DNP Program or permission of instructor.

N890 Advanced Statistics

This course builds on N815 Statistical Analysis of Data to provide in-depth instruction on practical applications of multivariate data analysis, focusing on statistical issues and techniques that students are likely to encounter in their research. Topics include pre-analysis data screening, assessment of model fit for analysis of variance and covariance (ANOVA/ANCOVA) and linear regression, model selection techniques, repeated measures ANOVA, multivariate analysis of variance (MANOVA) and logistic regression. 3 credits Prerequisites: N815 or permission of instructor.

N895 Independent/Directed Study

This course is open to PhD students. The goal of independent study is to complement the PhD student's program in a way that helps him/her develop additional knowledge and skills that could not be reasonably gained with a traditional course offering. Plans for study must be submitted in advance of registration on the Independent Study Advance Registration form obtained from the Graduate School of Nursing.

The student must meet with the faculty member of record to establish written goals, objectives and evaluation criteria for the independent study. Upon establishing the goals and objectives, the number of credits will be determined by the faculty member in consultation with the PhD program director. The student may take more than one independent study, but no more than nine credit hours may be applied toward the PhD degree. 1 to 3 credits Prerequisite: Agreement with course faculty.

N899 Dissertation Credits

Students are required to take a minimum of 18 dissertation credits. Most students elect to take three to six credits per semester for one to two years until completion of the dissertation. This component of the PhD program requires students to work independently on a research study in close collaboration with their dissertation advisor and committee members. N809 Dissertation Seminar is taken concurrently with dissertation credits until the oral defense of the dissertation proposal is completed. Prerequisites: completion of all required and elective PhD coursework, and passing the comprehensive examination.

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