

Official Program Outline



MASTER OF SCIENCE IN NURSING IN NURSING INFORMATICS

PROGRAM DESCRIPTION

The Master of Science in Nursing in Nursing Informatics program will provide students with academic knowledge, skills, and expertise in healthcare data management, clinical information systems, healthcare technologies, interoperability, and AI applications in healthcare. Students will integrate nursing science, computer science, and information science to analyze healthcare data, leverage AI-driven tools and analytics, optimize clinical and operational workflows, collaborate with interdisciplinary and community partners, and support data-informed decision-making to improve patient, population, and organizational outcomes. This program is for licensed registered nurses (current, unrestricted license) with a Bachelor of Science in Nursing degree interested in advancing their careers to become nurse informaticists and leaders in healthcare technology, interoperability, AI integration, and data-informed practice.

Prior to enrollment, individuals considering a Master of Science in Nursing program should check with their applicable state board of nursing before enrolling in any graduate nursing program for any specific state requirements.

CORE MSN PROGRAM LEARNING OUTCOMES

Upon completion of this program, the student should be able to:

1. Integrate scientific evidence from nursing and biopsychosocial disciplines, genetics, public health, quality improvement, and organizational sciences when designing and implementing outcome measures in diverse settings and through the lifespan.
2. Demonstrate leadership skills that emphasize ethical and critical decision-making, fiscal responsibility, and inter-professional relationships that promote safe, quality care within a systems framework.
3. Apply methods, tools, performance measures, and evidence-based standards when evaluating quality indicators within an organizational system.
4. Synthesize theories, models, and research findings inherent to nursing practice, education, and management to guide an organization or healthcare system toward achieving successful outcomes.
5. Apply client/patient care technologies and informatics to coordinate and ensure safe quality care and promote effective communication among members of the inter-professional healthcare team.
6. Analyze ethical, legal, and sociocultural factors to influence policy development and healthcare delivery systems that promote the health of individuals and populations.
7. Articulate a leadership role within inter-professional teams through effective communication, collaboration, and consultation with other professionals to manage, coordinate care, and provide safe, quality family-centered and population-based care.
8. Incorporate organizational and culturally sensitive client and population-centered concepts in the planning, delivery, management, and evaluation of direct and indirect evidence-based health promotion care and services to specified individuals, families, and populations.
9. Implement scholarly activities in selected individuals, populations, and systems.

NURSING INFORMATICS PROGRAM LEARNING OUTCOMES

Students are expected to meet all Core MSN program learning outcomes as well as the Nursing Informatics program learning outcomes. Upon completion of this program, the student should be able to:

1. Integrate nursing science, information science, computer science, interoperability principles, and healthcare data exchange processes into professional nursing informatics practice to support system design, communication, and clinical decision-making.
2. Analyze health data to support decision-making, quality improvement, patient outcomes, and population health initiatives while applying principles of data governance, privacy, and security.
3. Evaluate the impact of healthcare technologies, AI, interoperability, and information systems on patient safety, quality of care, care coordination, and organizational outcomes.
4. Design strategies to coordinate healthcare information system implementation, optimization, and governance across interdisciplinary healthcare environments.
5. Apply evidence-based practice, regulatory standards, ethical use of AI and health information, and data management principles to support safe, equitable, and compliant nursing informatics practice.
6. Develop leadership, communication, change management, and interprofessional collaboration strategies to support healthcare innovation, AI adoption, workflow improvement, technology adoption, and data sharing across healthcare and community organizations.

PROGRAM CONTENT

A minimum of 36.00 semester credit hours is required for graduation.

REQUIRED CORE COURSES

All courses, 15.00 semester credit hours, are required.

Course Number	Course Name	Prerequisites/Corequisites	Semester Credit Hours
HA 610	Health Policy and Management	None	3.00
NU 700	Knowledge for Nursing Practice	None	3.00
NU 725	Technology and Nursing Informatics in Advanced Practice	None	3.00
NU 730	Systems-Based Practice	None	3.00
NU 760	Scholarship for Nursing Practice	None	3.00

REQUIRED DIRECT CARE COURSES

All courses, 9.00 semester credit hours, are required.

Course Number	Course Name	Prerequisites/Corequisites	Semester Credit Hours
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NU 610	Advanced Health Assessment	NU 700, NU 760	3.00
NU 621	Advanced Pathophysiology	NU 700, NU 760	3.00
NU 636	Advanced Pharmacology	NU 700, NU 760	3.00

REQUIRED SPECIALTY COURSES

All courses, 12.00 semester credit hours, are required.

Course Number	Course Name	Prerequisites/Corequisites	Semester Credit Hours
NU 686	Nursing Informatics Principles and Practice	NU 700, NU 760	3.00
NU 687	Healthcare Informatics Systems, Interoperability, and Data Governance	NU 686	3.00
NU 688	Applied Clinical Informatics and Workflow Optimization	NU 700, NU 760	3.00
NU 689	Professional Practice in Nursing Informatics	NU 688	3.00

DISTRIBUTION OF CONTACT HOURS BY COURSE

Course Number	Lecture Hours	Lab Hours	Clinical Hours	Total Contact Hours	Credits
HA 610	45.00	0.00	0.00	45.00	3.00
NU 610	45.00	0.00	0.00	45.00	3.00
NU 621	45.00	0.00	0.00	45.00	3.00
NU 636	45.00	0.00	0.00	45.00	3.00
NU 686	45.00	0.00	0.00	45.00	3.00
NU 687	45.00	0.00	0.00	45.00	3.00
NU 688	30.00	0.00	45.00	75.00	3.00
NU 689	15.00	0.00	90.00	105.00	3.00
NU 700	45.00	0.00	0.00	45.00	3.00
NU 725	45.00	0.00	0.00	45.00	3.00
NU 730	45.00	0.00	0.00	45.00	3.00
NU 760	45.00	0.00	0.00	45.00	3.00
Totals	495.00	0.00	135.00	630.00	36.00

NEW COURSE DESCRIPTIONS

Course	Course Description
NU 686 Nursing Informatics Principles and Practice	This course introduces students to the role of the nurse informaticist, foundational informatics principles, healthcare technologies, clinical information systems, AI applications, ethical and legal considerations, data literacy, and evidence-based informatics practice. Upon completion, students will demonstrate an understanding of nursing informatics and its application in leveraging information technology to improve patient outcomes.
NU 687 Healthcare Informatics Systems, Interoperability, and Data Governance	This course prepares students to analyze interoperability frameworks, data governance structures, and clinical information systems that drive effective health data management. Students will evaluate the impact of healthcare technologies and AI on quality outcomes, apply systems and workflow design principles, and develop leadership strategies for technology implementation, governance, policy development, and ethical data-sharing initiatives.
NU 688 Applied Clinical Informatics and Workflow Optimization	This course prepares students to apply nursing informatics principles within complex organizational environments, with emphasis on evaluating clinical workflows, information systems, and health data to drive quality improvement and patient-centered outcomes. Students will examine interoperability, data-driven decision-support tools, and stakeholder requirements to inform technology implementation, workflow design, and user education initiatives. Ethical, legal, regulatory, and security standards governing healthcare information and AI are integrated throughout, culminating in the design of evidence-based informatics strategies that support organizational improvement and innovation.
NU 689 Professional Practice in Nursing Informatics	This course prepares advanced practice nurses and nursing informatics professionals to integrate nursing science, information science, and computer science principles within complex healthcare environments. Students evaluate healthcare data, analytics, AI applications, and quality metrics to inform strategic planning and population health initiatives, while assessing the impact of healthcare technologies, AI, and interoperability frameworks on clinical and organizational outcomes. The course addresses interdisciplinary leadership, stakeholder engagement, and the ethical, legal, and governance dimensions of informatics practice. Students apply these competencies to design evidence-based strategies that drive data-sharing, workflow improvement, and organizational transformation.