ORION TECHNICAL COLLEGE

July 16, 2025*

ADDENDUM

to

2024/2025 Academic Catalog

Inserted the following pages:

- ***24-28, 32-40, 43-44, 114, 123-129***

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companies, physician offices, health information vendors, long term care facilities, behavioral health settings or college health settings.

Standard Occupational Classification (SOC) codes* include, but are not limited to, the following:
29-2072.00 – Medical Records Specialists and Health Information Technicians
29-9021.00 - Health Information Technologists and Medical Registrars
43-6013.00 – Medical Secretaries
*Detailed information regarding classifications can be found at www.onetonline.org.

RN to BSN, Bachelor of Science Nursing (Hybrid)

School of Allied Health and Nursing

- This program is offered in a hybrid format. Courses marked with an asterisk (*) are delivered 100% online. All other courses combine online instruction with on-campus learning.
- 120 semester credits (60 transferred credits and 60 credits at Orion Technical College)
- 60 weeks/20 months with continuous enrollment and no interruption to studies
- Graduates of the program receive a Bachelor of Science in Nursing Degree

Program Description

The Registered Nurse to Bachelor of Science in Nursing (RN to BSN) program is a hybrid program designed specifically for registered nurses aiming to advance their qualifications and career opportunities. Two courses include a practicum/clinical component that incorporates both face to-face and simulated experiences. The baccalaureate nursing education equips graduates with the skills and knowledge to practice professional nursing in diverse settings, ranging from hospitals and clinics to community health organizations. Furthermore, it lays a strong foundation for those interested in advanced practice roles or specialization, fostering professional growth and enhanced patient care outcomes. This pathway offers a flexible, accessible format that accommodates the needs of working nurses looking to elevate their practice.

This program is specially designed for students who have completed an associate degree in nursing, giving you the ability to transfer 60 credits from accredited two-year colleges.

Student Learning Outcomes

The program is designed to provide educational opportunities for students to gain the following:

- Deliver safe, quality nursing care to individuals, families, groups, communities, and populations across the lifespan and throughout various care systems.
- Integrate theoretical and scientific knowledge from natural and social sciences, as well as cultural, societal, and liberal arts perspectives, into nursing practice.
- Demonstrate leadership and teamwork skills within care systems to enhance health outcomes.
- Utilize the best evidence from diverse sources to inform practice, make clinical judgments, solve problems, and drive improvements in care systems.
- Exhibit a foundational understanding of how healthcare policy, regulation, resource management, technology, and economics influence nursing practice and quality outcomes.
- Engage in effective interprofessional communication and collaboration to support quality health outcomes.
- Apply health promotion and disease prevention strategies to individuals, families, groups, communities, and populations to support quality health outcomes.
- Uphold professional values essential to the nursing discipline.

Required Program Courses and Course Sequence

The following course are required to complete this program.

Terms/ Wheel Schedule	Course Code	Course Title	Lecture Hours	Lab Hours	Externship	Outside Classwork Hours	Credit Hours
Credits transferred into the program from an accredited institution.							**60**
TERM 1	ENG307	*Interpersonal Communications	45	-	-	90	3.00
	NUR310	Foundations of Professional Nursing	45	-	-	90	3.00
	BIO302 & BIO302L	Human Biology with Lab	45	30	-	90	4.00
	NUR330	Health Assessment for the Nursing Professional	45	-	-	90	3.00
	SOC360	Sociology	45	-	-	90	3.00
TERM 2	NUR320	Evidence Based Nursing Practice	45	-	-	90	3.00
	HUM304	*Culture and Society	45	-	-	90	3.00
	MAT310	Applied Statistics	45	-	-	90	3.00
	NUR340	Community Health Nursing w/ Clinical Component	30	-	45	60	3.00
	NUR390	Issues and Trends in Nursing	45	-	-	90	3.00
TERM 3	NUR370	Health Care Policy, Finance, and Regulatory Environments	45	-	-	90	3.00
	HIS310	*U.S. History	45	-	-	90	3.00
	NUR350	Leadership and Management in Nursing	45	-	-	90	3.00
	NUR360	Healthcare Systems and Quality Improvement	45	-	-	90	3.00
	CHEM301 & CHEM 301L	Organic Chemistry w/ Lab	45	30	-	90	4.00
TERM 4	NUR400	Nursing Ethics	45	-	-	90	3.00
	NUR420	Telehealth and Emerging Technologies in Nursing	45	-	-	90	3.00
	NUR380	*Nursing and Healthcare Informatics	45	-	-	90	3.00
	NUR450	Nursing Capstone w/ Clinical Component	45	-	45	90	4.00
TOTALS			**840**	**60**	**90**	**1680**	**120**

* Denotes that course is held fully online

Orion Technical College reserves the right to change the contents or sequence of courses in the program at any time to maintain occupational and educational standards.

Please see the section in this catalog entitled Course Descriptions for the information related to the course such as description and prerequisites, if any.

Graduate Employment Opportunities

The RN to BSN program prepares graduates for advancement within the nursing profession by building upon their existing clinical experience and expanding their knowledge in leadership, public health, and evidence-based practice. Positions include but are not limited to Charge Nurse, Public Health Nurse, Case Manager, Nurse Supervisor, Home Health Nurse, Occupational Health Nurse, Clinical Nurse Educator, and Quality Improvement Specialist. These positions may be found in hospitals, community health organizations, outpatient care centers, long-term care facilities, government agencies, corporate health departments, and educational institutions.

Informatics, Master of Science in Nursing (Hybrid)

School of Allied Health and Nursing

Program Overview

- This program is offered in a hybrid format. Courses marked with an asterisk (*) are delivered 100% online. All other courses combine online instruction with on-campus learning.
- 33 semester credits required
- 24 months to complete with continuous enrollment and no interruption to studies.
- Graduates will be awarded a Master of Science in Nursing Informatics.

Program Description

The Master's Degree in Nursing Informatics program equips nurses to take on leadership roles in areas such as management, education, forensics, public health, informatics, and clinical practice. This program prepares graduates to thrive in a diverse society and across various healthcare settings. Theoretical courses provide a strong foundational education in a flexible distance-learning format, enabling practicing nurses to achieve their academic, professional, and personal objectives. Practicum courses are conducted in clinical settings, allowing students to apply their knowledge under the guidance of a preceptor.

The Nursing Informatics specialty track is designed for nurses interested in addressing healthcare challenges through technology. This track empowers students to develop innovative solutions by collaborating with computer science professionals. Nursing Informatics students engage in projects they are passionate about, gaining the knowledge and skills to design computer-based solutions for common nursing challenges. Graduates of this track will acquire both the advanced informatics expertise and the technical language necessary to work effectively as part of interdisciplinary teams, excelling as nurse informaticists.

Student Learning Outcomes

Upon completion of this program, graduates will be able to:

- Synthesize knowledge from nursing, public health, and organizational sciences to inform evidence-based care
- Apply leadership and systems-thinking strategies to improve healthcare delivery and patient safety
- Implement quality improvement tools and performance metrics to enhance health outcomes
- Translate research into practice to address clinical challenges and drive innovation
- Utilize informatics systems and emerging technologies to support patient care and data integration
- Advocate for policies that improve healthcare systems and influence nursing practice
- Collaborate effectively within interprofessional teams to coordinate care and improve outcomes
- Design and evaluate culturally responsive clinical prevention strategies for diverse populations
- Develop and implement advanced nursing interventions using informatics and scientific evidence
- Leverage data analytics and decision support tools to promote health and optimize care delivery

Program Outline

The following courses are required for program completion.

Terms	Course Code	Course Title	Weeks	Lecture Hours	Outside Hours	Externship	Credit Hours
Term 1	NUR500	Concepts of Nurse Leadership & Informatics	7.5	45	90	-	3.00
	NUR510	Population Health	7.5	45	90	-	3.00
	NUR520	*Current Trends and Issues in Nursing World	7.5	45	90	-	3.00
Term 2	NUR530	*Organizational Dynamics	7.5	45	90	-	3.00
	NUR540	Financial Management for Nurses	7.5	45	90	-	3.00
	NUR550	Ethics in Nursing	7.5	45	90	-	3.00
Term 3	NUR592	Research Methods in Nursing	7.5	45	90	-	3.00
	NUR572	*Database Management	7.5	45	90	-	3.00

	NUR582	Project Management in Nurse Informatics	7.5	45	90	-	3.00
Term 4	NUR562	*Advanced Concepts in Nurse Informatics	7.5	45	90	-	3.00
	NUR601	Nurse Informatics Capstone Project	7.5	15	30	90	3.00
TOTALS			**82.5**	**465**	**930**	**90**	**33**

* Denotes that course is held fully online

Graduate Employment Opportunities

Graduates of the Master's Degree in Nursing Informatics program are prepared for advanced practice and leadership roles in healthcare systems, government agencies, academic institutions, and technology companies. Career opportunities include positions such as Nurse Informaticist, Clinical Informatics Specialist, Health Information Systems Manager, Clinical Systems Analyst, Healthcare Data Analyst, and Chief Nursing Informatics Officer (CNIO). Graduates are equipped to lead digital transformation initiatives, support clinical decision-making, and improve patient outcomes through the integration of technology and nursing practice.

Nurse Leadership and Management, Master of Science in Nursing (Hybrid)

School of Graduate Studies

Program Overview

- This program is offered in a hybrid format. Courses marked with an asterisk (*) are delivered 100% online. All other courses combine online instruction with on-campus learning.
- 33 semester credits required
- 24 months to complete with continuous enrollment and no interruption to studies.
- Graduates will be awarded a Master of Science in Nursing Informatics.

Program Description

The Master of Science Degree in Nurse Leadership and Management prepares nurses for advanced leadership roles by developing expertise in the critical analysis and evidence-based evaluation of complex organizational and system-level challenges. The curriculum emphasizes evidence-based management, quality improvement, healthcare service integration, and the development of leadership skills to guide collaborative interprofessional teams. Designed for novice and aspiring nurse leaders, the program equips graduates to lead effectively and drive innovation across diverse healthcare settings.

Student Learning Outcomes

Upon completion of this program, graduates will be able to:

- Analyze social, economic, cultural, legal, and political factors that influence nursing practice and healthcare in a global context
- Develop and implement leadership, management, and educational strategies to improve health outcomes, care quality, and patient safety
- Apply nursing research to develop and support evidence-based practice models
- Influence health and public policy through interdisciplinary collaboration to enhance systems of care and community health
- Engage in nursing research and disseminate findings through scholarly presentations and publications
- Synthesize advanced knowledge from the sciences, humanities, and nursing theory to support advanced nursing practice
- Utilize critical thinking to plan, implement, and evaluate healthcare delivery in advanced nursing roles

Program Outline

The following courses are required for program completion.

Terms	Course Code	Course Title	Weeks	Lecture Hours	Outside Hours	Externship	Credit Hours
Term 1	NUR500	Concepts of Nurse Leadership & Informatics	7.5	45	90	-	3.00
	NUR510	Population Health	7.5	45	90	-	3.00
	NUR520	*Current Trends and Issues in Nursing World	7.5	45	90	-	3.00

Term 2	NUR530	*Organizational Dynamics	7.5	45	90	-	3.00
	NUR540	Financial Management for Nurses	7.5	45	90	-	3.00
	NUR550	Ethics in Nursing	7.5	45	90	-	3.00
Term 3	NUR561	Evidenced Based Practice in Nursing and Healthcare	7.5	45	90	-	3.00
	NUR571	*The Role of Nurse Leader in Advanced Quality and Safety	7.5	45	90	-	3.00
	NUR581	Human Resource Management in Healthcare	7.5	45	90	-	3.00
Term 4	NUR591	*Informatics for Nurse Leaders	7.5	45	90	-	3.00
	NUR601	Nurse Leadership and Management Capstone Project	7.5	15	30	90	3.00
TOTALS			**82.5**	**465**	**930**	**90**	**33**

* Denotes that course is held fully online

Graduate Employment Opportunities

Graduates of the Master of Science in Nurse Leadership and Management program are prepared for leadership roles in hospitals, healthcare systems, long-term care facilities, community health organizations, and academic settings. Potential career paths include Nurse Manager, Clinical Nurse Leader, Director of Nursing, Quality Improvement Coordinator, and Nurse Educator. Graduates are equipped to lead teams, improve care delivery, and drive organizational change through evidence-based leadership and management practices

School of Graduate Studies

Artificial Intelligence, Master of Science (Online)

School of Graduate Studies

Program Overview

- This program is offered 100% online
- 30 semester credits required
- 20 months to complete with continuous enrollment and no interruption to studies.
- Graduates will be awarded a Master of Science in Artificial Intelligence

Program Description

The Master of Science in Artificial Intelligence program is an interdisciplinary that prepares students to drive the design, development, and deployment of AI and machine learning (ML) products and services across a broad array of applications and industries to meet contemporary social and technical challenges.

Student Learning Outcomes

Upon completion of this program, graduates will be able to:

- Uses machine learning to solve complex problems
- Creates searchable knowledge stores in unstructured data via data mining
- Contributes to the sustainable development of businesses, organizations, and automated projects
- Design and prototype AI systems utilizing data mining, deep learning, neural networks, and collective intelligence
- Use appropriate tools and platforms to leverage AI to optimize the technology that impacts every day life
- Exhibit effective collaboration and leadership skills.

In addition, graduates will gain proficiency in the following:

- Machine Learning Algorithms
- Deep Learning
- Natural Language Processing
- Computer Vision
- Reinforcement Learning
- Data Preprocessing
- Algorithm Evaluation
- Ethics and Bias Mitigation
- Critical Thinking
- Research and Innovation
- Version Control Programming Python, and familiarity with libraries like TensorFlow, PyTorch and Keras

Program Outline

The following courses are required for program completion.

Terms	Course Code	Course Title	Weeks	Lecture Hours	Credit Hours
TERM 1	IA500	Concepts of Intelligent Systems and Business Analytics	7.5	45	3.0
	IA510	Data Management Systems	7.5	45	3.0
	IA520	Integrated Business Processes	7.5	45	3.0
TERM 2	AI520	AI for Human Interaction	7.5	45	3.0
	AI530	Advanced Machine Learning	7.5	45	3.0
	AI540	Algorithm Design and Analysis	7.5	45	3.0
	AI550	Deep Learning and its Applications	7.5	45	3.0
TERM 3	AI570	Data Mining and Analytics for Business	7.5	45	3.0
	IA580	Research Methodologies	7.5	45	3.0
	AI590	Masters Capstone Project	7.5	45	3.0
TOTALS			**75**	**450**	**30**

Graduate Opportunities

Graduates of this program will be prepared for positions such as Machine Learning Engineer. Data Scientist, Natural Language Processing (NLP) Engineer, Computer Vision Engineer, Deep Learning Engineer, AI Research

Engineer, Robotics Engineer, AI Consultant, AI Product Manager, AI Ethicist, AI Analyst, Autonomous Vehicle Engineer, AI in Healthcare Specialist, Financial Analyst with AI, AI-driven UX/UI Designer, Ai Software Developer, AI Project Manager, AI Entrepreneur/Startup Founder, and AI Education/Trainer. Graduates may also seek professional advancement. Organizations employing graduates include business, medical, government and IT companies in the local, national, and global workforce.

Optional Certifications

Graduates of this program will be prepared to test for the following optional certifications:

- Certified Artificial Intelligence Engineer
- Dell EMC Data Science Certification
- Amazon AWS Big Data Certification
- Certified Artificial Intelligence Professional
- IBM Data Science Professional Certification

Please note that certain certification exams may require additional studies and/or may require work experience in the field in addition to the graduate degree to apply to sit for the exam. The cost of the exams is the responsibility of the student.

Artificial Intelligence, Master of Science (Hybrid)

School of Graduate Studies

Program Overview

- This program is offered in a hybrid format. Courses marked with an asterisk (*) are delivered 100% online. All other courses combine online instruction with on-campus learning.
- 30 semester credits required
- 20 months to complete with continuous enrollment and no interruption to studies.
- Graduates will be awarded a Master of Science in Artificial Intelligence

Program Description

The Master of Science in Artificial Intelligence program is an interdisciplinary that prepares students to drive the design, development, and deployment of AI and machine learning (ML) products and services across a broad array of applications and industries to meet contemporary social and technical challenges.

Student Learning Outcomes

Upon completion of this program, graduates will be able to:

- Uses machine learning to solve complex problems
- Creates searchable knowledge stores in unstructured data via data mining
- Contributes to the sustainable development of businesses, organizations, and automated projects
- Design and prototype AI systems utilizing data mining, deep learning, neural networks, and collective intelligence
- Use appropriate tools and platforms to leverage AI to optimize the technology that impacts every day life
- Exhibit effective collaboration and leadership skills.

In addition, graduates will gain proficiency in the following:

- Machine Learning Algorithms
- Deep Learning
- Natural Language Processing
- Computer Vision
- Reinforcement Learning
- Data Processing
- Algorithm Evaluation
- Ethics and Bias Mitigation
- Critical Thinking
- Research and Innovation
- Version Control Programming Python, and familiarity with libraries like TensorFlow, PyTorch, and Keras

Program Outline

The following courses are required for program completion.

Terms	Course Code	Course Title	Weeks	Lecture Hours	Credit Hours
TERM 1	IA500	*Concepts of Intelligent Systems and Business Analytics	7.5	45	3.0
	IA510	Data Management Systems	7.5	45	3.0
	IA520	Integrated Business Processes	7.5	45	3.0
TERM 2	AI520	*AI for Human Interaction	7.5	45	3.0
	AI530	Advanced Machine Learning	7.5	45	3.0
	AI540	Algorithm Design and Analysis	7.5	45	3.0
TERM 3	AI550	Deep Learning and its Applications	7.5	45	3.0
	AI570	Data Mining and Analytics for Business	7.5	45	3.0
	IA580	*Research Methodologies	7.5	45	3.0
TERM 4	AI590	Masters Capstone Project	7.5	45	3.0
TOTALS			**75**	**450**	**30**

* Denotes that course is held fully online

Graduate Opportunities

Graduates of this program will be prepared for positions such as Machine Learning Engineer. Data Scientist, Natural Language Processing (NLP) Engineer, Computer Vision Engineer, Deep Learning Engineer, AI Research

Engineer, Robotics Engineer, AI Consultant, AI Product Manager, AI Ethicist, AI Analyst, Autonomous Vehicle Engineer, AI in Healthcare Specialist, Financial Analyst with AI, AI-driven UX/UI Designer, Ai Software Developer, AI Project Manager, AI Entrepreneur/Startup Founder, and AI Education/Trainer. Graduates may also seek professional advancement. Organizations employing graduates include business, medical, government and IT companies in the local, national, and global workforce.

Optional Certifications

Graduates of this program will be prepared to test for the following optional certifications:

- Certified Artificial Intelligence Engineer
- Dell EMC Data Science Certification
- Amazon AWS Big Data Certification
- Certified Artificial Intelligence Professional
- IBM Data Science Professional Certification

Please note that certain certification exams may require additional studies and/or may require work experience in the field in addition to the graduate degree to apply to sit for the exam. The cost of the exams is the responsibility of the student.

Business Analytics, Master of Science (Online)

School of Graduate Studies

Program Overview

- This program is offered 100% online
- 30 semester credits required
- 20 months to complete with continuous enrollment and no interruption to studies.
- Graduates will be awarded a Master of Science in Business Analytics

Program Description

The Master of Science in Data Analytics program is a multidisciplinary program that explores data science, analysis skills, and business management to provide you with an understanding of how to interpret data and clearly communicate its meaning. Using advanced statistical techniques and tools in data and information management, students learn to collect and analyze large data sets. Students learn how to apply your computational, analytical and modeling skills to provide decision support to key stakeholders.

Student Learning Outcomes

Upon completion of this program, graduates will be able to:

- Identify and describe complex business problems in terms of analytical models.
- Apply appropriate analytical methods to find solutions to business problems that achieve stated objectives.
- Translate results of business analytic projects into effective courses of action.
- Demonstrate ethical decision-making in structured or unstructured and ambiguous situations.
- Communicate technical information to both technical and non-technical audiences in speech, in writing, and graphically.
- Exhibit effective collaboration and leadership skills.
- Continuous Learning

In addition, graduates will gain proficiency in the following:

- Data Analysis
- Statistical Knowledge
- Data Visualization
- Programming in Python, R, or SQL
- Quantitative Analysis
- Database Management
- Critical Thinking
- Business Acumen
- Ethical Considerations
- Project Management
- Decision Making
- Predictive Analysis
- Problem Solving Skills
- Collaboration
- Continuous Learning

Program Outline

The following courses are required for program completion.

Terms	Course Code	Course Title	Weeks	Lecture Hours	Credit Hours
TERM 1	IA500	Concepts of Intelligent Systems and Business Analytics	7.5	45	3.0
	IA510	Data Management Systems	7.5	45	3.0
	IA520	Integrated Business Processes	7.5	45	3.0
TERM 2	BA520	Business Analytics Methods	7.5	45	3.0
	BA530	Data Engineering	7.5	45	3.0
	BA540	Business Analytics with Data Engineering	7.5	45	3.0
	BA550	Data Analytics and Mining for Business	7.5	45	3.0
TERM 3	BA570	Machine Learning for Business Analytics	7.5	45	3.0
	IA580	Research Methodologies	7.5	45	3.0
	BA590	Masters Capstone Project	7.5	45	3.0
TOTALS			**75**	**450**	**30**

Graduate Employment Opportunities

Graduates of this program will be prepared for positions such as Data Analyst, Business Intelligence Analyst, Data Scientist, Marketing Analyst, Financial Analyst, Supply Chain Analyst, Operations Analyst, Healthcare Analyst, Market Research Analyst, Risk Analyst, E-Commerce Analyst, Customer Insights Analyst, Retail Analyst, Fraud Analyst, and Government Analyst. Graduates may also seek professional advancement. Organizations employing graduates include business, medical, government and IT companies in the local, national, and global workforce.

Optional Certifications

Graduates of this program will be prepared to test for the following optional certifications:

- Certified Business Analytics Professional (CBAP)
- Certified Data Analyst (CDA)
- Snowflake Certified Data Engineer Certification
- Microsoft Azure Data Engineer Certification
- Certified Machine Learning Specialist (CMLS)

Please note that certain certification exams may require additional studies and/or may require work experience in the field in addition to the graduate degree to apply to sit for the exam. The cost of the exams is the responsibility of the student.

Business Analytics, Master of Science (Hybrid)

School of Graduate Studies

Program Overview

- This program is offered in a hybrid format. Courses marked with an asterisk (*) are delivered 100% online. All other courses combine online instruction with on-campus learning.
- 30 semester credits required
- 20 months to complete with continuous enrollment and no interruption to studies.
- Graduates will be awarded a Master of Science in Business Analytics

Program Description

The Master of Science in Data Analytics program is a multidisciplinary program that explores data science, analysis skills, and business management to provide you with an understanding of how to interpret data and clearly communicate its meaning. Using advanced statistical techniques and tools in data and information management, students learn to collect and analyze large data sets. Students learn how to apply your computational, analytical and modeling skills to provide decision support to key stakeholders.

Student Learning Outcomes

Upon completion of this program, graduates will be able to:

- Identify and describe complex business problems in terms of analytical models.
- Apply appropriate analytical methods to find solutions to business problems that achieve stated objectives.
- Translate results of business analytic projects into effective courses of action.
- Demonstrate ethical decision-making in structured or unstructured and ambiguous situations.
- Communicate technical information to both technical and non-technical audiences in speech, in writing, and graphically.
- Exhibit effective collaboration and leadership skills.
- Continuous Learning

In addition, graduates will gain proficiency in the following:

- Data Analysis
- Statistical Knowledge
- Data Visualization
- Programming in Python, R, or SQL
- Database Management
- Critical Thinking
- Business Acumen
- Ethical Considerations
- Project Management
- Decision Making
- Predictive Analysis
- Problem Solving Skills
- Collaboration
- Continuous Learning

- Quantitative Analysis

Program Outline

The following courses are required for program completion.

Terms	Course Code	Course Title	Weeks	Lecture Hours	Credit Hours
TERM 1	IA500	*Concepts of Intelligent Systems and Business Analytics	7.5	45	3.0
	IA510	Data Management Systems	7.5	45	3.0
	IA520	Integrated Business Processes	7.5	45	3.0
TERM 2	BA520	*Business Analytics Methods	7.5	45	3.0
	BA530	Data Engineering	7.5	45	3.0
	BA540	Business Analytics with Data Engineering	7.5	45	3.0
TERM 3	BA550	Data Analytics and Mining for Business	7.5	45	3.0
	BA570	Machine Learning for Business Analytics	7.5	45	3.0
	IA580	*Research Methodologies	7.5	45	3.0
TERM 4	BA590	Masters Capstone Project	7.5	45	3.0
TOTALS			**75**	**450**	**30**

Graduate Employment Opportunities

Graduates of this program will be prepared for positions such as Data Analyst, Business Intelligence Analyst, Data Scientist, Marketing Analyst, Financial Analyst, Supply Chain Analyst, Operations Analyst, Healthcare Analyst, Market Research Analyst, Risk Analyst, E-Commerce Analyst, Customer Insights Analyst, Retail Analyst, Fraud Analyst, and Government Analyst. Graduates may also seek professional advancement. Organizations employing graduates include business, medical, government and IT companies in the local, national, and global workforce.

Optional Certifications

Graduates of this program will be prepared to test for the following optional certifications:

- Certified Business Analytics Professional (CBAP)
- Certified Data Analyst (CDA)
- Snowflake Certified Data Engineer Certification
- Microsoft Azure Data Engineer Certification
- Certified Machine Learning Specialist (CMLS)

Please note that certain certification exams may require additional studies and/or may require work experience in the field in addition to the graduate degree to apply to sit for the exam. The cost of the exams is the responsibility of the student.

Computer Science, Master of Science (Online)

School of Graduate Studies

Program Overview

- This program is offered 100% online
- 30 semester credits required
- 20 months to complete with continuous enrollment and no interruption to studies.
- Graduates will be awarded a Master of Science in Artificial Intelligence.

Program Description

The Master of Science in Computer Science program provides students with a comprehensive understanding of computer systems, programming languages, algorithms, software development, and various aspects of computing technology. It equips students with the skills and knowledge necessary to design, develop, analyze, and implement software applications, systems, and solutions.

Student Learning Outcomes

Upon completion of this program, graduates will be able to:

- Demonstrate technical skills in Python, Java, C++. Java Script, and Ruby
- Develop computer or information systems.
- Coordinate operational activities with external stakeholders.
- Develop organizational goals or objectives.
- Analyze data to inform operational decisions or activities.
- Confer with organizational members to accomplish work activities.
- Direct organizational operations, projects, or services.
- Resolve employee or contractor problems.
- Manage operations, research, or logistics projects.
- Advise customers on technical or procedural issues.
- Develop operating strategies, plans, or procedures.
- Analyze data to determine project feasibility.
- Manage organizational or project budgets.
- Purchase materials, equipment, or other resources.
- Exhibit effective collaboration and leadership skills.

Program Outline

The following courses are required for program completion.

Terms	Course Code	Course Title	Weeks	Lecture Hours	Credit Hours
TERM 1	IA500	Concepts of Intelligent Systems and Business Analytics	7.5	45	3.0
	IA510	Data Management Systems	7.5	45	3.0
	IA520	Integrated Business Processes	7.5	45	3.0
TERM 2	CS520	Algorithm Design and Analysis	7.5	45	3.0
	CS530	Developing Object-Oriented Systems with JAVA	7.5	45	3.0
	CS540	Information Security Planning & Policy	7.5	45	3.0
	CS550	Software Testing and Quality Assurance	7.5	45	3.0
TERM 3	CS570	PEGA Systems	7.5	45	3.0
	IA580	Research Methodologies	7.5	45	3.0
	CS590	Masters Capstone Project	7.5	45	3.0
TOTALS			**75**	**450**	**30**

Graduate Employment Opportunities

Graduates of this program will be prepared for positions such as Software Developer, Web Developer, Data Scientist, Data Analyst, CyberSecurity Analyst/Engineer, Network Engineer, QA Engineer, System Analyst, Game Developer, Devops Engineer, UI/UX Designer, IT Consultant, or Cloud Engineer. Graduates may also seek professional advancement. organizations such as business, medical, and IT companies in the local, national, and global workforce.

Optional Certifications

Graduates of this program will be prepared to test for the following optional certifications:

1. Certified Pega Systems Architect
2. Certified Pega Senior Systems Architect
3. Oracle Certified Professional (OCP) Java Enterprise Edition
4. Oracle Certified Professional (OCP) Java Standard Edition
5. Certified Software Quality Analyst Certification

Please note that certain certification exams may require additional studies and/or may require work experience in the field in addition to the graduate degree to apply to sit for the exam. The cost of the exams is the responsibility of the student.

Computer Science, Master of Science (Hybrid)

School of Graduate Studies

Program Overview

- This program is offered in a hybrid format. Courses marked with an asterisk (*) are delivered 100% online. All other courses combine online instruction with on-campus learning.
- 30 semester credits required
- 20 months to complete with continuous enrollment and no interruption to studies.
- Graduates will be awarded a Master of Science in Artificial Intelligence.

Program Description

The Master of Science in Computer Science program provides students with a comprehensive understanding of computer systems, programming languages, algorithms, software development, and various aspects of computing technology. It equips students with the skills and knowledge necessary to design, develop, analyze, and implement software applications, systems, and solutions.

Student Learning Outcomes

Upon completion of this program, graduates will be able to:

- Demonstrate technical skills in Python, Java, C++. Java Script, and Ruby
- Develop computer or information systems.
- Coordinate operational activities with external stakeholders.
- Develop organizational goals or objectives.
- Analyze data to inform operational decisions or activities.
- Confer with organizational members to accomplish work activities.
- Direct organizational operations, projects, or services.
- Resolve employee or contractor problems.
- Manage operations, research, or logistics projects.
- Advise customers on technical or procedural issues.
- Develop operating strategies, plans, or procedures.
- Analyze data to determine project feasibility.
- Manage organizational or project budgets.
- Purchase materials, equipment, or other resources.
- Exhibit effective collaboration and leadership skills.

Program Outline

The following courses are required for program completion.

Terms	Course Code	Course Title	Weeks	Lecture Hours	Credit Hours
TERM 1	IA500	*Concepts of Intelligent Systems and Business Analytics	7.5	45	3.0
	IA510	Data Management Systems	7.5	45	3.0
	IA520	Integrated Business Processes	7.5	45	3.0
TERM 2	CS520	*Algorithm Design and Analysis	7.5	45	3.0
	CS530	Developing Object-Oriented Systems with JAVA	7.5	45	3.0
	CS540	Information Security Planning & Policy	7.5	45	3.0
TERM 3	CS550	Software Testing and Quality Assurance	7.5	45	3.0
	CS570	PEGA Systems	7.5	45	3.0
	IA580	*Research Methodologies	7.5	45	3.0
TERM 4	CS590	Masters Capstone Project	7.5	45	3.0
TOTALS			**75**	**450**	**30**

* Denotes that course is held fully online

Graduate Employment Opportunities

Graduates of this program will be prepared for positions such as Software Developer, Web Developer, Data Scientist, Data Analyst, CyberSecurity Analyst/Engineer, Network Engineer, QA Engineer, System Analyst, Game Developer, Devops Engineer, UI/UX Designer, IT Consultant, or Cloud Engineer. Graduates may also seek professional advancement. organizations such as business, medical, and IT companies in the local, national, and global workforce.

Optional Certifications

Graduates of this program will be prepared to test for the following optional certifications:

6. Certified Pega Systems Architect
7. Certified Pega Senior Systems Architect
8. Oracle Certified Professional (OCP) Java Enterprise Edition
9. Oracle Certified Professional (OCP) Java Standard Edition
10. Certified Software Quality Analyst Certification

Please note that certain certification exams may require additional studies and/or may require work experience in the field in addition to the graduate degree to apply to sit for the exam. The cost of the exams is the responsibility of the student.

Admissions

Persons interested in obtaining information about Orion Technical College and its program offerings should contact the campus to speak with an Admissions Representative. Admissions Representatives will provide general information about Orion Technical College for the prospective student to determine if a Professional Career Advisory Session (PCAS) is appropriate.

A prospective student interested in obtaining more information about Orion Technical College must participate in a PCAS with an Admissions Representative. During the PCAS, the Admissions Representatives will discuss admissions requirements. Additionally, the Admissions Representative will review educational options, program information, career opportunities, student services and support, educational costs, conduct a tour of the facilities, virtual or otherwise, and have available disclosure information as required by federal, state, and accrediting agencies.

After participating in the PCAS, prospective students who are both qualified and interested in applying to Orion Technical College must complete an Application for Consideration. All Applications for Consideration will be accompanied by an Admissions Representative's recommendation* about the applicant for review by admissions committee members outlining the applicant's strengths and potential challenges associated with their ability to complete the program and be eligible for post-graduation employability.
*While Admissions Representatives are responsible for passing on critical information to the admissions review team, they do not have the authority to determine acceptance.

Undergraduate Admissions Requirements

To be admitted into one of Orion Technical College's undergraduate non-degree or degree programs, applicants must:

1. Be 17 years of age* on or before the first day of classes,
2. Possess a high school diploma (or recognized equivalency certificate)
3. Have a current registered nurse license with completion of their Associate Degree in Nursing or equivalent prior to admission, provide proof of an active RN license, and provide transcripts with proof of completion of their Associate Degree
4. Meet the technical requirements as per Orion Technical College's admission Enrollment Agreement

RN to BSN Program Admissions Requirements

To be admitted into one of Orion Technical College's RN to BSN program, applicants must:

1. Be 18 years of age prior to the start of classes,
2. Provide a valid Driver's License or government issued photo ID
3. Complete the pre-enrollment assessment referred to as the Professional College Advisory Session (PCAS)
4. Complete a technology check (tech-check) to ensure minimum computer and internet resources are available to the applicant.

*Applicants who are 17 will be required to have a parent/guardian cosign the Enrollment Agreement.

Graduate Admissions Requirements (MSAI, MSBA, MSCS)

To be admitted into one of Orion Technical College's graduate degree programs, applicants must:

1. Complete Graduate Admissions Application and pay the non-refundable Application Fee of $50.
2. Have earned a bachelor's degree in a related field from an accredited college or university in the United States or degree equivalent to a U.S. bachelor's degree (outside U.S.) i.e., bachelor's degree in computer science, Information Technology, Software Engineering, Electronics & Communications, Electrical Engineering, Robotics Engineering, Cyber Security, Artificial Intelligence, Communications Engineering, Data Science, Computer Applications, or Computer Engineering. If the prospective student has a degree other than those listed, the College will consider admissions to the program based on the

degree earned and relevant information technology work experience.
Official transcripts are required. The Prospective student must arrange to have an evaluation of the foreign transcript by American Association of Collegiate Registrars and Admissions Officers (AACRAO)'s International Education Services, a member of Association of International Credential Evaluators (AICE), or National Association of Credential Evaluation Services (NACES). The cost for foreign transcript evaluation is the responsibility of the student.

3. Provide Proof of English Language Proficiency (TOEFL/IELTS/PTE/Duolingo Score Report).
   Non-native English speakers who did not complete post-secondary education exclusively in the English language must provide proof of English language proficiency
4. Submit a Professional Resume indicating two years of work experience.
5. GRE optional.

Graduate Admissions Requirements (MSN Programs)

To be admitted into one of Orion Technical College's nursing graduate degree programs, applicants must:

1. Complete Graduate Admissions Application and pay the non-refundable Application Fee of $50.
2. Have an earned Bachelor of Science in Nursing (BSN) from an accredited college or university with a minimum 3.0 GPA
3. Have a valid and unencumbered RN license in the state where you will complete the program
4. Submit official transcripts from all post-secondary institutions
5. Submit a professional resume indicating two years of work experience
6. Interview: Participate in an interview with an admissions advisor
7. Provide Proof of English Language Proficiency (TOEFL/IELTS/PTE/Duolingo Score Report).
   Non-native English speakers who did not complete post-secondary education exclusively in the English language must provide proof of English language proficiency
8. Meet the technical requirements as per Orion Technical College's admission Enrollment Agreement

Technology Requirements

All students regardless of the learning environment (on campus, hybrid, or online) will be required to participate in our LMS and utilize other virtual technology support services and products. Therefore, the student should have knowledge of and be able to:

- Log on to an Internet Service Provider (ISP) and use the World Wide Web to locate information.
- Send and receive emails and attachments.
- Set up audio and video capability with a computer using a USB headset and Webcam.
- Use word-processing programs such as Microsoft Word®.
- Download, save, and browse files. As an added precaution, the college recommends students have access to a spare computer and alternative Internet access in case of severe technical issues incurred by viruses, hardware failure, etc. It is also advisable to regularly back up computer systems to an external drive
- Students will be asked to respond via email through their email account and to attach a word document.
- Applicants must have unrestricted access to a personal computer capable of operating within the College's educational software delivery systems. Minimum internet speeds of 2.0 down and 1.0 up are required.

A prospective student interested in obtaining more information about Orion Technical College must participate in a PCAS with an Admissions Representative. During the PCAS, the Admissions Representatives will discuss admissions requirements. Additionally, the Admissions Representative will review educational options, program information, career opportunities, student services and support, educational costs, conduct a tour of the facilities, virtual or otherwise, and have available disclosure information as required by federal, state, and accrediting agencies.

After participating in the PCAS, prospective students who are both qualified and interested in applying to Orion Technical College must complete an Application for Consideration. All Applications for Consideration will be accompanied by an Admissions Representative's recommendation* about the applicant for review by admissions committee members outlining the applicant's strengths and potential challenges associated with their ability to complete the program and be eligible for post-graduation employability.

*While Admissions Representatives are responsible for passing on critical information to the admissions review team, they do not have the authority to determine acceptance.

Term 4	$7,840.00	$7,840.00	$1,950.00
Term 5	$6,860.00	$6,860.00	
Term 6		$8,330.00	
Term 7		$7,350.00	
Term 8		$6,370.00	
Total Tuition	**$36,750.00**	**$58,800.00**	**$19,500**
Technology Fee, per academic year**			
Year One	$900.00	$900.00	$900.00
Year Two	$900.00	$900.00	$900.00
Year Three		$900.00	
Total Tuition and Fees	**$38,550.00**	**$61,500.00**	**$21,300.00**

*Credit hours may vary by term.
** Non-refundable after the first two weeks of instruction.

Credit Hour Programs	**RN to BSN**	**MSN Informatics MSN Nurse Leadership and Management**	
Semester Credit Hours	60	33	
Cost per Credit Hour	$350	$650	
Credential Awarded	Bachelor of Science in Nursing	Master of Science in Nursing	
Length of Terms	15 week terms	15 week terms	
Number of Terms	Four	Four	
Total Tuition	**$21,000.00**	**$21,450.00**	
Technology Fee, $900.00 per academic year**			
Year One	$900.00	$900.00	
Year Two	$900.00	$900.00	
Total Tuition and Fees	**$22,800.00**	**$23,250.00**	

Payment of Tuition

If a student has a balance with Orion Technical College, after meeting with Student Financial Services, the student will need to schedule tuition payments with the Financial Services Office at 3940 Elmore Ave., Davenport, Iowa 52807, phone (563) 674-6633. Once these tuition payments have been arranged, the student is expected to make payments on time. If the student does not comply with tuition payment arrangements and requirements, the student may be terminated.

Terms for Tuition Payment

The balance of the student's tuition will be due in full on the 1st day of each term unless other specific arrangements are made with the Financial Office at Orion Technical College. In the event a student withdraws from college, the student will be advised of the charges that have been incurred with Orion Technical College.

Methods of Payment

Payments may be made via cash, check or credit/debit card. All payments made by check must include the student's name and ID number. No additional fees applied to credit/debit card transactions.

MA102 College Math *Four (4) semester credits*
This course introduces concepts of algebra including the solving of basic algebraic equations that involve integers, fractions, decimals, and percent. It also introduces the concepts of polynomials and the graphing of two variable equations. Emphasis is on the fundamentals of beginning algebra.

SS1014 Psychology *Three (3) semester credits*
This course provides an overview of the scientific study of human behavior and instills the ability to better understand yourself and others. Topics include history, methodology, perception, motivation, cognition, abnormal behavior, personality theory, social psychology, and other relevant topics.

HUM304 Ethics *Three (3) semester credits*
This course is an introduction to the philosophical study of morality, including the theory of right and wrong behavior, the theory of value (goodness and badness), and the theory of virtue and vice. These concepts will be explored through modern topics.

RN to BSN (Hybrid)

NUR310 Foundations of Professional Nursing *Three (3) semester credits*
This course examines professional nursing from a conceptual and applied perspective, analyzing the evolving roles and responsibilities of the baccalaureate-prepared nurse within complete healthcare systems. Emphasis is placed on critical evaluation of ethical and legal frameworks, professional standards, interprofessional communication, and leadership in patient-centered care. Students engage in reflective analysis of nursing theories and their application to contemporary practice issues.

NUR320 Evidence Based Nursing Practice *Three (3) semester credits*
Focuses on professional nursing practice that is grounded in the translation of current evidence into practice. Developing, evaluating, and applying an evidence-base to address nursing care issues will be explored. Barriers to implementation of evidence-based practice and strategies to address those barriers will be considered from an individual and an organizational perspective. The role of the nurse in affecting evidence-based change in practice will be discussed.

NUR330 Health Assessment for the Nursing Professional *Three (3) semester credits*
This course is designed to develop health assessment skills across the lifespan. Students are introduced to systemic data gathering, analysis, and documentation of health assessment data with emphasis on cultural and lifespan considerations. Throughout this course the importance of communication and interprofessional collaboration across culturally diverse populations is discussed. Assignments focus on physical health, functional capacity, growth and development, psychological, sociocultural, and spiritual health of individuals and families.

NUR340 Community Health Nursing *Three (3) semester credits*
This course is designed to examine the concepts and principles of community and population health nursing, incorporating a practicum component to enhance experiential learning. The course provides an overview of health issues that transcend borders, class, race, ethnicity, and culture. Through the practicum, students will engage in simulated experiences that apply the principles of community health nursing, including public health epidemiology and environmental health. The course addresses the impact of health care policies on social justice and health care disparities, with emphasis on roles, levels of prevention, principles of epidemiology, public health policy, and disaster preparedness. This hands-on component ensures students can effectively translate theoretical knowledge into practice in diverse community health settings.
Prerequisites: NUR310, NUR320, and NUR330

NUR350 Leadership and Management in Nursing *Three (3) semester credits*
This course provides students with an evidence-based study of leadership, collaboration, and coordination in healthcare settings. Students develop an evidence-based paper to deal with key leadership and management issues related to professional goals. Specific strategies for effective time management, priority setting, decision making, career planning, and delegation are introduced. The nursing leadership and management experiential learning component focuses on the roles and functions of the professional nurse in these roles. Topics include focusing on the role of the nurse as both a formal and informal leader in multiple roles of organizing, teaching, decision making, evaluating, and managing conflict.

NUR360 Healthcare Systems and Quality Improvement *Three (3) semester credits*
This course focuses on quality and safety measures that support the improvement process for client care. Explore national safety and quality standards that guide nursing practice and support a culture of client safety. Examine the nurse's role in an interpretational team that promotes safety and error prevention. Considers the relationship between evidence-based practice and national standards of quality and safety to improve patient outcomes. Recognizes the impact of finance, healthcare policies, and regulatory benchmarks on healthcare delivery.

NUR370 Health Care Policy, Finance, and Regulatory Environments *Three (3) semester credits*
This course explores healthcare, financial, and regulatory policies and how these influence nursing practice. Students will observe the process of identifying healthcare issues, the development and reevaluation process pertaining to healthcare policy, and the influence nurses, other healthcare professionals, advocacy groups, and individual citizens can exert onto the process of healthcare policy change. A broader perspective of healthcare is examined including how services are organized and financed. Students will actively engage in the political process as advocates for patients, families, communities and the nursing profession with the primary goal of promoting social justice.

NUR380 Nursing and Healthcare Informatics *Three (3) semester credits*
This course provides a basic understanding of nursing science, computer science, and information science to prepare students to effectively and efficiently use technology to identify, collect, process and manage health care information. The focus of this course is to introduce the principles of health care informatics, communication networks, and health care technology in the assessment, delivery, and evaluation of quality nursing care in a variety of settings. Students learn technology-based health applications which support clinical, administrative, research, and educational decision making to enhance the efficacy of nursing is provided.

NUR390 Issues and Trends in Nursing *Three (3) semester credits*
In this course, students are provided with an overview of the evolution of nursing as a profession and introduced to their new tole as scholar-practitioners. They look at how the American healthcare delivery system has changed, how critical information technology is, and what steps might be taken to improve patient care regarding quality, safety, and health outcomes. Students consider major issues and trends in contemporary nursing and healthcare practice, including the influence of socioeconomic, ethical, legal, and political variables and professional values. Through weekly conversations and assignments, students examine and share their experiences in the context of nursing concerns, such as the nurse shortage, workforce difficulties, healthcare financing, professional organizations, and diversity. Through weekly conversations and assignments, students are encouraged to examine and propose solutions to these nursing issues.

NUR400 Nursing Ethics *Three (3) semester credits*
This course provides an in-depth exploration of ethical principles and moral reasoning as the foundation of nursing practice. The student will analyze ethical issues such as the use of the internet, technology, confidentiality, privacy, refusal of treatment, decisional capacity, abuse, and end of life concepts. Case studies will be used to analyze ethical principles and issues within a variety of practice contexts and from a variety of

perspectives. The ANA Code of Ethics will be used as a framework for examining current issues in healthcare delivery across the age span from reproductive issues to end-of-life care.

NUR420 Telehealth and Emerging Technologies *Three (3) semester credits*
This course explores the integration of telehealth and emerging technologies in nursing practice. Students will examine the principles, applications, and implications of telehealth, including legal, ethical, and cultural considerations. The course emphasizes the role of technology in enhancing patient care, improving access to healthcare services, and supporting clinical decision-making.

NUR450 Nursing Capstone *Four (4) semester credits*
The capstone course is the culmination of the RN-BSN degree program and provides students with the opportunity to demonstrate the competencies they have gained throughout their program. This course includes a practicum component, allowing students to apply their academic and practical knowledge in a real-world clinical setting. Under faculty supervision, students plan and implement a project during the course, developing objectives relevant to the subject, critiquing the literature, and presenting a detailed implementation plan. The practicum enhances the integration of theoretical and hands-on learning, ensuring students are prepared for advanced professional practice.
Prerequisites: NUR310, NUR320, NUR330, NUR340, NUR350, NUR360, NUR370, NUR380, NUR390, NUR400, and NUR420

ENG307 Interpersonal Communication *Three (3) semester credits*
This course includes topics over process and functions of communication, relationship development/management, communication strategies, interpersonal language skills, listening and response skills, and conflict management.

BIO302 & BIO302L Human Biology with Lab *Four (4) semester credits*
This course examines human form and function and the relationship of humans to other living things. Fundamental biological principles as they apply to the human are explored. The course is intended for liberal arts students who do not currently plan to major in the biological or health sciences. The virtual laboratory course supports by allowing students to apply principles through simulated experimental methods.

CHM301 & CHM301L Organic Chemistry with Lab *Four (4) semester credits*
This upper-division course provides an in-depth exploration of the structure, nomenclature, synthesis, and reaction mechanisms of organic compounds with a focus on biochemical relevance to health sciences. Students evaluate complex molecular interactions and pathways in biological systems. Emphasis is placed on advanced applications in healthcare-related chemistry, including pharmaceutical compounds and metabolic processes. The virtual laboratory course supports by allowing students to apply organic chemistry principles through simulated experimental methods.

MAT310 Applied Statistics *Three (3) semester credits*
This course emphasizes the application of statistical methodologies. Students evaluate descriptive and inferential statistical techniques, including probability distributions, hypothesis testing, confidence intervals, correlation, regression analysis, and data interpretation. Focus is placed on analyzing published research and applying statistical findings to support evidence-based decision making.

SOC360 Sociology *Three (3) semester credits*
This upper-division course critically examines the complex social, economic, and structural factors that influence health outcomes across populations. Students analyze the impact of variables such as socioeconomic status, race, education, and geographic location on access to healthcare and overall wellbeing. Emphasis is placed on applying sociological theories and research methods to contemporary health disparities and policy debates.

HIS310 US History *Three (3) semester credits*
This course provides students the opportunity to gain an awareness of the development of American society and government through careful analysis of political, social religious, technological, and military events that have contributed to, or resulted from, the rise and development of the American nation. Specifically, the course will examine the tensions that led to, and resulted from, the Civil War and secessionism, technological and urban transformation, foreign affairs, the natural environment, and others. The time period covered will include the 'Revolution' of 1800 through the end of the Second World War – 1945.

HUM304 Culture and Society *Three (3) semester credits*
This course will take a sociological look at the ways in which social arrangements guide individual behavior and the common human concerns in various cultural contexts.

Nurse Leadership and Management, MSN (Hybrid)

NUR500 Concepts of Nurse Leadership & Informatics *Three (3) semester credits*
This course introduces the student to contemporary theories of leadership, change, complexity science, and organizational structure and design. Students will complete an assessment of their leadership strengths and weaknesses and develop a professional leadership plan which will guide their progress throughout the rest of the program. Topics covered include leadership frameworks, change management paradigms, project management, organizational culture, education, and financial management. Also, the course addresses the integration of technology to improve and support nursing practice. It provides nurses with a foundational understanding of nursing informatics theory, practice, and applications. Topics include the tole of nursing in informatics; use of computer technology for clinical documentation, communication, and workflows; and best practices.

NUR510 Population Health *Three (3) semester credits*
This course focuses on the role of the nurse leader in program planning for health promotion and disease prevention for populations. Students integrate and synthesize concepts associated with quality, health promotion, disease prevention, and chronic health problems within communities, the general population, and specific population groups; issues related to culturally diverse and vulnerable populations. Topics include determinates of health, epidemiology, biostatistics, and advancing equity in access, services, and outcomes for vulnerable populations.

NUR520 Current Trends and Issues in Nursing World *Three (3) semester credits*
This course focuses on current trends and issues in professional nursing, health care delivery, and nursing education. Students will examine concepts of leadership and critically appraise the changing social, geopolitical, and health care environments that influence the nursing profession, nursing practice, and health. Students will develop appropriate strategies to strengthen their capacity to influence and respond to current trends and issues.

NUR530 Organizational Dynamics *Three (3) semester credits*
This course presents an analysis of organizational theories related to health care organizations and the use of leadership, communication, and power to influence health care delivery and policy. It also explores the attitudes and behaviors of individuals and groups in organizations with a focus on change in the workplace. Theories of cooperation, conflict, and innovation are discussed.

NUR540 Financial Management for Nurses *Three (3) semester credits*
This course will develop knowledge and skills used by nurse managers for effective financial management in healthcare. Students will explore financial sources, analyze legislation and reimbursement mechanisms, evaluate business plans, and learn to manage budgets. Topics will include reimbursement systems, coding and payment mechanisms, ethics and legalities of contracting, governmental regulations, budget development, marketing, and interprofessional collaboration.

NUR550 Ethics in Nursing *Three (3) semester credits*
Ethics have a significant impact on the decisions nurses make in their day-to-day work, so it's important for all student nurses to develop their understanding of ethical frameworks as preparation for future practice. This course explains ethical ideas, theories, and concepts in simple to understand terms, focusing on real-life nursing situations in order to make applying these principles to practice easy. This course teaches student nurses to consider their own values, and how ethics fit into who they are and how they behave, helping them to unlock this interesting and complex subject.

NUR561 Evidence Based Practice in Nursing & Healthcare *Three (3) semester credits*
In this course, students will learn about the ethical translation of current evidence in advanced nursing practice and health care. The course stresses the interdependence and fluidity of various approaches to evidence-based practice with an emphasis on developing skills in scientific inquiry and critical analysis. It covers diverse information sources and imparts skills to evaluate information quality, providing a foundation for integrating research evidence and critical thinking into practice.

NUR571 The Role of Nurse Leader in Advanced Quality and Safety *Three (3) semester credits*
Quality and safety strategies, theories, and methods to improve health outcomes are explored. Explores theoretical and methodological foundations for understanding and applying patient safety and quality of care outcomes within the current health care environment. Concepts of healthcare quality and safety are analyzed with a focus on patient and population health outcomes. The role of nurse leaders in leading quality and safety initiatives within organizations is examined.

NUR581 Human Resource Management in Healthcare *Three (3) semester credits*
This course will study the nature of human resource management, staffing the organization, and developing human resources, compensating human resources and managing employee relations in the healthcare environment. Students will be exposed to key concepts, laws, and issues relating to HR management. This course serves as a foundation for all aspects of HR planning and development in hospitals, long term care centers, and outpatient settings. Students will explore the basic functions of HR; the cost of hiring, training, turnover, and credentialing; cultural competence and diversity; as well as the role of outside factors, such as state regulatory bodies, unions, and other stakeholders. Special emphasis is given to affirmative action programs, equal employment opportunity directives, legal decisions, and the practice of industrial relations in the field of American business enterprise today.

NUR591 Informatics for Nurse Leaders *Three (3) semester credits*
This course will enhance students' knowledge and skills related to nursing informatics in a variety of healthcare settings. Students will learn how to use project management principles and technologies to enhance patient-care delivery, management, and clinical decision support. Data, information, and knowledge used in making nursing decisions and implementing nursing actions related to the achievement of nursing outcomes are examined. Research from nursing and other disciplines regarding improving patient outcomes, cost effectiveness and patient safety will be emphasized.

NUR601 Nurse Leadership and Management Capstone Project *Three (3) semester credits*
The capstone course is the culmination of the MSN in Nursing Leadership and Management degree program and provides students with the opportunity to demonstrate the competencies they have gained during their program. The student, with faculty supervision, plans a project that will be implemented in this course. Students will develop objectives relevant to the project, critique the literature, and present a plan for implementation. This project will integrate the academic and practical knowledge the student has acquired in the MSN of Nursing Leadership and Management curriculum.
The course also includes a practicum component where students will apply their project in a real-world healthcare or organizational setting. Under the supervision of a preceptor and faculty mentor, students will engage in hands-on leadership and management activities, evaluate the outcomes of their project,

and refine their skills in leading teams, managing resources, and driving organizational improvements. The practicum ensures students gain practical experience, bridging academic knowledge with leadership and management practice in nursing.
Prerequisite: NUR 500, NUR 510, NUR 520, NUR 530, NUR 540, NUR 550, NUR 561, NUR 571, NUR 581, and NUR 591.

Nursing Informatics, MSN (Hybrid)

NUR500 Concepts of Nurse Leadership & Informatics *Three (3) semester credits*
This course introduces the student to contemporary theories of leadership, change, complexity science, and organizational structure and design. Students will complete an assessment of their leadership strengths and weaknesses and develop a professional leadership plan which will guide their progress throughout the rest of the program. Topics covered include leadership frameworks, change management paradigms, project management, organizational culture, education, and financial management. Also, the course addresses the integration of technology to improve and support nursing practice. It provides nurses with a foundational understanding of nursing informatics theory, practice, and applications. Topics include the tole of nursing in informatics; use of computer technology for clinical documentation, communication, and workflows; and best practices.

NUR510 Population Health *Three (3) semester credits*
This course focuses on the role of the nurse leader in program planning for health promotion and disease prevention for populations. Students integrate and synthesize concepts associated with quality, health promotion, disease prevention, and chronic health problems within communities, the general population, and specific population groups; issues related to culturally diverse and vulnerable populations. Topics include determinates of health, epidemiology, biostatistics, and advancing equity in access, services, and outcomes for vulnerable populations.

NUR520 Current Trends and Issues in Nursing World *Three (3) semester credits*
This course focuses on current trends and issues in professional nursing, health care delivery, and nursing education. Students will examine concepts of leadership and critically appraise the changing social, geopolitical, and health care environments that influence the nursing profession, nursing practice, and health. Students will develop appropriate strategies to strengthen their capacity to influence and respond to current trends and issues.

NUR530 Organizational Dynamics *Three (3) semester credits*
This course presents an analysis of organizational theories related to health care organizations and the use of leadership, communication, and power to influence health care delivery and policy. It also explores the attitudes and behaviors of individuals and groups in organizations with a focus on change in the workplace. Theories of cooperation, conflict, and innovation are discussed.

NUR540 Financial Management for Nurses *Three (3) semester credits*
This course will develop knowledge and skills used by nurse managers for effective financial management in healthcare. Students will explore financial sources, analyze legislation and reimbursement mechanisms, evaluate business plans, and learn to manage budgets. Topics will include reimbursement systems, coding and payment mechanisms, ethics and legalities of contracting, governmental regulations, budget development, marketing, and interprofessional collaboration.

NUR550 Ethics in Nursing *Three (3) semester credits*
Ethics have a significant impact on the decisions nurses make in their day-to-day work, so it's important for all student nurses to develop their understanding of ethical frameworks as preparation for future practice. This course explains ethical ideas, theories, and concepts in simple to understand terms, focusing on real-life

nursing situations in order to make applying these principles to practice easy. This course teaches student nurses to consider their own values, and how ethics fit into who they are and how they behave, helping them to unlock this interesting and complex subject.

NUR562 Advanced Concepts in Nurse Informatics *Three (3) semester credits*
Focuses on advanced concepts in nursing and health informatics practice. Analyzes the health informatics meta structures, relationships between nursing and multidisciplinary standardized terminologies, trends in nursing and health informatics, ethical, privacy and legal issues, and the emerging role for the nurse informaticist. Additional focus on the impact of technological and societal trends on patients and patient outcomes, as well as compliance and regulatory mandates.

NUR572 Database Management *Three (3) semester credits*
This course covers manipulating structured data using different data management techniques, and analyze data requirements. Students learn to design relational databases and use SQL to define, query and update them and explore non-relational schemeless databases, and query them. Standards, such as html, SQL, ODBC and normalization will be stressed in both the theory and practical aspects of this course. Management of data will be supported by nursing informatics framework to meet the scope and standards of practice for Nursing Informatics (ANA, 2015).

NUR582 Project Management in Nurse Informatics *Three (3) semester credits*
This course will prepare students to use formal, state-of-the-art project management techniques in health/nursing informatics projects. Students will learn how to create a comprehensive project management plan which includes: scope, integration, communication, time, cost, risk, quality and human resources management. Issues related to project leadership, human resources, budgeting, and scheduling are discussed while risk identification and risk mitigation tactics are stressed. Case discussions highlight the state-or-the-art for project management practices as applied to health/nursing informatics in contemporary environments.

NUR592 Research Methods in Nursing *Three (3) semester credits*
This course delves into the research process and its application to nursing and nursing practice. Research Methods in Nursing Examines the basic concepts, strategies, and procedures used in conducting and analyzing nursing research. Topics include various research types and methods, with emphasis on statistical methods. Rights and responsibilities toward human subjects are discussed.

NUR602 Nurse Informatics Capstone Project *Three (3) semester credits*
The capstone course is the culmination of the MSN in Nursing Informatics degree program and provides students the opportunity to demonstrate the competencies they have gained during their program. The student, with faculty supervision, plans a project that will be implemented in this course. Students will develop objectives relevant to the project, critique the literature, and present a plan for implementation. This project will integrate the academic and practical knowledge the student has acquired in the MSN of Nursing Informatics curriculum.
Additionally, this course includes a practicum component where students will apply their project in a real-world healthcare or informatics setting. Under the guidance of a preceptor and faculty mentor, students will gain hands-on experience, evaluate outcomes, and refine their skills in nursing informatics. The practicum ensures that students have an opportunity to bridge theory and practice, fostering professional growth and readiness for advanced roles in the field.
Prerequisite: NUR 500, NUR 510, NUR520, NUR 530, NUR 540, NUR 550, NUR 562, NUR 572, NUR 582, and NUR 592.