ADDENDUM A

TO THE NATIONAL UNIVERSITY GENERAL **CATALOG 84**

Effective January 1, 2022, National University Headquarters will be located at Spectrum Business Park Campus.

National University
Spectrum Business Park
9388 Lightwave Ave,
San Diego, CA. 92123.

The following updates will take effect January 1, 2022.

Technology Fees and Policy Information

The following courses utilize a third-party technology. Accessing the third-party technology is a required component of your course. The technology fee will be applied to the student's account at the time tuition is applied.

BIO 191A $89.99
CHE 101 .... $55.00
NSG 623 .... $11.24

Prior Learning Credit Transfer

National University recognizes knowledge is acquired in many different ways. In addition to the traditional classroom setting, mastery of college-level knowledge and skills may occur as a result of nontraditional learning experiences such as employment, military training and experience, non-collegiate training programs, advanced high school courses, and self-development. The University awards applicable credits earned for nontraditional prior learning, however, credit is not awarded simply for experience but for measurable college-level learning which includes knowledge, skills and competencies students have obtained as a result of their prior learning experiences. College credit may be granted on a case-by-case basis for prior learning only when it can be documented and falls within regular credit course offerings. The maximum number of credits acceptable for non-collegiate learning is a cumulative total of up to 135 quarter units (90 semester units) for an associate or baccalaureate degree. This maximum total is cumulative of all non-collegiate coursework. The credits may be from the following sources:

- A maximum of 22.5 quarter units (15 semester units) may be earned for:
  ◦ Excelsior College Examinations
  ◦ Council for Adult Experiential Learning (CAEL) Portfolio
  ◦ Departmental examinations at National University (Credit by Examination).
- A maximum of 45 quarter units (30 semester units) of lower-division credit may be allowed for clinical courses for a registered nurse who is a graduate of a three-year hospital nursing school. Up to 22.5 quarter units (15 semester units) of additional lower-division credit may be granted for academically equivalent coursework.
- American Council on Education (ACE) Credit Transfer

  ◦ A maximum of 67.5 quarter units (45 semester units) may be earned at the lower-division by College-Level Examination Program (CLEP) examinations.
  ◦ A maximum of 45 quarter units (30 semester units) may be earned at the lower-division level for Advanced Placement Examinations (AP) or International Baccalaureate Examinations (IB).
  ◦ DANTES independent study/credit by examination courses
  ◦ Credit recommended in the National Guide to Credit Recommendations for Non-Collegiate Courses (American Council on Education [ACE])
  ◦ A maximum of up to 135 quarter units (90 semester units) may be allowed for military experience and military schools that have been evaluated by ACE. An additional 9 quarter units of correspondence credit is available to active or veteran Marine Corps students.
  ◦ Local, state, and federal law enforcement training recommended by ACE and such credit as is listed on a transcript from a regionally accredited college.

Program Terminations

Bachelor of Science in Radiation Therapy

Course Terminations

ACC 501 - Accounting Fundamentals
ASL 320 - American Sign Language III
BRO 210 - History of Television
CJA 625 - Security Management & Planning
CJA 655 - Advanced Research Methods
CJA 660 - Drugs, Alcohol & Public Policy
CJA 690 - Research Project Thesis
COM 101 - Intro. to Oral Communication
CYB 471 - Special Topics
CYB 605 - Information Assurance Part I
CYB 611 - Cyber Sec. Mgmt & Cryptography
CYB 699 - Cyber Policy Project
EES 335 - Environmental Science
ENM 605 - Infrastructure Management
FIN 501 - Finance Fundamentals
HUM 501 - Global Civic Culture
MUL 300 - Convergence Media
MUL 305 - Graphic Design and Artistry
MUL 315 - Video Game Design
MUL 399 - Emerging Technologies
MUL 430 - Advanced Design Project
MUL 445 - Digital Project Management
NSG 280 - Human Lifecycle Development
PAD 640 - Public Finance 09/11/2021
PAD 641 - Local Government Budgeting
PAD 642 - Public-Private Financing
PAD 643 - Contract Negotiations
RTT 300 - Medical Imaging
RTT 305 - Patient Care I
RTT 306 - Patient Care II
RTT 310 - Sectional/Topographic Anatomy
RTT 315 - Clinical Concepts I
RTT 316 - Clinical Concepts II
RTT 317 - Clinical Concepts III
RTT 320 - Pro Ethics and Legal Issues
RTT 410 - Clinical Radiation Physics I
RTT 411 - Clinical Radiation Physics II
RTT 415 - Clinical Oncology I
RTT 416 - Clinical Oncology II
RTT 420 - Radiation Biology
RTT 440 - Research in Radiation Therapy
RTT 450 - Quality Management
RTT 455 - Medical Dosimetry
RTT 460 - Operational Issues
RTT 480 - Internship I
RTT 481 - Internship II
RTT 482 - Internship III
RTT 490 - Advanced Capstone
SOC 352 - Modern Chinese Culture

Updated Programs

Bachelor of Arts in Digital Media Design

Status: *Historical-Review all addendums*
Academic Program Director: Scott Campbell; scampbell@nu.edu

The Bachelor of Arts in Digital Media Design consists of courses that prepare students for a broad range of positions requiring a background in digital graphic design, web design, video and audio production and post-production, video gaming, and virtual and augmented reality. Students receive hands-on training from highly qualified instructors, many of which are working in the field, using leading software applications. Successful completion of the program will enable graduates to compete for employment in many areas of digital content creation because they possess a wide range relevant combination of skills and knowledge vital to today's workplace. Students also complete two project-oriented courses on a subject (or subjects) of their choosing. Upon completion of the program, students will have created a professional portfolio of their work.

A graduate in the BA in Digital Media Design will obtain skills and competencies to excel in various fields including, but not limited to video gaming, video and audio production, motion graphics and web. Job opportunities may include Art Director, Web Designer, Game Designer, Video Editor, Journalist, Photographer, Educational and Instructional Designer and Social Media Specialist.

Program Learning Outcomes:
Upon successful completion of this program, students will be able to:

- Develop a personal vision in the creation of original multimedia content.
- Apply the principles of graphic and information design in the generation of digital media projects.
- Demonstrate oral, visual, and written communication skills with clients, project managers, and media production team members.
- Successfully complete all phases of a media production, from the initial planning to the final delivery.
- Explain the cultural and sociological impacts related to media production and distribution.
- Create active and interactive content with graphics and text.
- Complete all phases of an audio/video production.

Degree Requirements:

To receive a Bachelor of Arts degree with a Major in Digital Media Design, students must complete at least 180 quarter units as articulated below, 45 of which must be completed in residence at National University, 76.5 of which must be completed at the upper-division level and a minimum 69 units of the University General Education requirements. The following courses are specific degree requirements. In the absence of transfer credit, students may need to take additional general electives to satisfy the total units for the degree.

Preparation for the Major (2 courses; 9 quarter units)

MUL 201	History of Graphic Design *Historical-Review all addendums* ***Prerequisite:*** *ENG 102 with a minimum grade of C. Students must have proven college level writing skills to be successful in their written assignments in the program.*	4.50
MUL 203	History of Vis. Storytelling *Historical-Review all addendums* ***Prerequisite:*** *ENG 102 with a minimum grade of C. Students must have proven college level writing skills to be successful in their written assignments in the program.; MUL 201 with a minimum grade of C. Students must have proven competency level to be successful in the more advanced subjects in the program.*	4.50

Students must complete all prep for major course.

Requirements for the Major (14 courses; 63 quarter units)

MUL 308	Vector Graphics *Historical-Review all addendums* ***Prerequisite:*** *ENG 102; MUL 201 with a minimum grade of C. Students must have proven competency level to be successful in the more advanced subjects in the program. ; MUL 203 with a minimum grade of C. Students must have proven competency level to be successful in the more advanced subjects in the program.*	4.50
MUL 312	Digital Image Compositing *Historical-Review all addendums* ***Prerequisite:*** *ENG 102 with a minimum grade of C. Students must have proven college level writing skills to be successful in their written assignments in the program.; MUL 201 Students must have proven competency level to be successful in the more advanced subjects in the program. ; MUL 203 Students must have proven competency level to be successful in the more advanced subjects in the program.*	4.50
MUL 316	e-Publishing *Historical-Review all addendums* ***Prerequisite:*** *ENG 102 with a minimum grade of C. Students must have proven college level writing skills to be successful in their written assignments in the program.; MUL 201 with a minimum grade of C. Students must have proven competency level to be successful in the more advanced subjects in the program. and MUL 203 with a minimum grade of C. Students must have proven competency level to be successful in the more advanced subjects in the program.*	4.50
MUL 390	User Interface Design *Historical-Review all addendums* ***Prerequisite:*** *ENG 102 with a minimum grade of C. Students must have proven college level writing skills to be successful in their written assignments in the program.; MUL 201 with a minimum grade of C. Students must have proven competency level to be successful in the more advanced subjects in the program. ; MUL 203 with a minimum grade of C. Students must have proven competency level to be successful in the more advanced subjects in the program.*	4.50
MUL 345	Applied Web Design *Historical-Review all addendums* ***Prerequisite:*** *ENG 102 with a minimum grade of C. Students must have proven college level writing skills to be successful in their written assignments in the program.; MUL 201 with a minimum grade of C. Students must have proven competency level to be successful in the more advanced subjects in the program. ; MUL 203 with a minimum grade of C. Students must have proven competency level to be successful in the more advanced subjects in the program.*	4.50
MUL 353	2-D Design & Interactivity *Historical-Review all addendums* ***Prerequisite:*** *Students must have proven college level writing skills to be successful in their written assignments in the program.; MUL 201 with a minimum grade of C. Students must have proven competency level to be successful in the more advanced subjects in the program. and MUL 203 with a minimum grade of C. Students must have proven competency level to be successful in the more advanced subjects in the program.*	4.50
MUL 309	Camera and Image *Historical-Review all addendums* ***Prerequisite:*** *ENG 102 with a minimum grade of C. Students must have proven college level writing skills to be successful in their written assignments in the program.; MUL 201 with a minimum grade of C. Students must have proven competency level to be successful in the more advanced subjects in the program. ; MUL 203 with a minimum grade of C.*	4.50

	Students must have proven competency level to be successful in the more advanced subjects in the program.	
MUL 365	Digital Video Editing *Historical-Review all addendums* **Prerequisite:** *ENG 102 with a minimum grade of C. Students must have proven college level writing skills to be successful in their written assignments in the program.; MUL 201 with a minimum grade of C. Students must have proven competency level to be successful in the more advanced subjects in the program. and MUL 203 with a minimum grade of C. Students must have proven competency level to be successful in the more advanced subjects in the program.*	4.50
MUL 461	Motion Graphics Vis. Effects I *Historical-Review all addendums* **Prerequisite:** *ENG 102 with a minimum grade of C. Students must have proven college level writing skills to be successful in their written assignments in the program.; MUL 201 with a minimum grade of C. Students must have proven competency level to be successful in the more advanced subjects in the program. ; MUL 203 with a minimum grade of C. Students must have proven competency level to be successful in the more advanced subjects in the program.*	4.50
MUL 465	Motion Graphics Vis Effects II *Historical-Review all addendums* **Prerequisite:** *ENG 102 with a minimum grade of C. Students must have proven college level writing skills to be successful in their written assignments in the program.; MUL 201 with a minimum grade of C. Students must have proven competency level to be successful in the more advanced subjects in the program. ; MUL 203 with a minimum grade of C. Students must have proven competency level to be successful in the more advanced subjects in the program.; MUL 461 with a minimum grade of C. This is an advanced level class, which requires students to complete the prior class in the sequence (MUL 461) before beginning this class.*	4.50
MUL 462	Digital Audio Creation *Historical-Review all addendums* **Prerequisite:** *ENG 102 with a minimum grade of C. Students must have proven college level writing skills to be successful in their written assignments in the program.; MUL 201 with a minimum grade of C. Students must have proven competency level to be successful in the more advanced subjects in the program. ; MUL 203 with a minimum grade of C. Students must have proven competency level to be successful in the more advanced subjects in the program.*	4.50
MUL 372	Foundations of 3-D Design *Historical-Review all addendums* **Prerequisite:** *ENG 102 with a minimum grade of C. Students must have proven college-level writing skills to be successful in their written assignments in the program.; MUL 201 with a minimum grade of C. Students must have proven competency level to be successful in the more advanced subjects in the program. and MUL 203 with a minimum grade of C. Students must have proven competency level to be successful in the more advanced subjects in the program.*	4.50
MUL 375	3-D Modeling for Game Art *Historical-Review all addendums* **Prerequisite:** *ENG 102 with a minimum grade of C. Students must have proven college level writing skills to be successful in their written assignments in the program.; MUL 201 with a minimum grade of C. Students must have proven competency level to be successful in the more advanced subjects in the program. ; MUL 203 with a minimum grade of C. Students must have proven competency level to be successful in the more advanced subjects in the program.*	4.50
MUL 356	Video Game Rendering & AR/VR *Historical-Review all addendums*	4.50

Prerequisite: ENG 102 with a minimum grade of C. Students must have proven college-level writing skills to be successful in their written assignments in the program.; MUL 201 with a minimum grade of C. Students must have proven competency level to be successful in the more advanced subjects in the program. and MUL 203 with a minimum grade of C. Students must have proven competency level to be successful in the more advanced subjects in the program.

Final Project for the Major (2 courses; 9 quarter units)

Prior to beginning the Final Project sequence, students must have completed and passed all requirements for the Major.

MUL 483	Final Project I *Historical-Review all addendums* ***Prerequisite:*** *ENG 102 with a minimum grade of C. Students must have proven college level writing skills to be successful in their written assignments in the program.; MUL 300; MUL 203; MUL 308; MUL 309; MUL 312; MUL 316; MUL 345; MUL 353; MUL 356; MUL 365; MUL 372; MUL 375; MUL 390; MUL 461; MUL 462; MUL 465*	4.50
MUL 485	Final Project II *Historical-Review all addendums* ***Prerequisite:*** *ENG 102 with a minimum grade of C. Students must have proven college-level writing skills to be successful in their written assignments in the program. ; MUL 201; MUL 203; MUL 308; MUL 309; MUL 312; MUL 316; MUL 345; MUL 353; MUL 356; MUL 365; MUL 372; MUL 375; MUL 390; MUL 461; MUL 462; MUL 465*	4.50

Thesis Course (1 course; 4.5 quarter units)

Prior to beginning the Thesis Course sequence, students must have completed and passed all requirements for the Major, as well as the Final Project courses before being placed into this sequence.

MUL 487	Dig Med Dsgn Portfolio, Thesis *Historical-Review all addendums* ***Prerequisite:*** *ENG 102 with a minimum grade of C. Students must have proven college-level writing skills to be successful in their written assignments in the program. ; MUL 201; MUL 203; MUL 308; MUL 309; MUL 312; MUL 316; MUL 345; MUL 353; MUL 356; MUL 365; MUL 372; MUL 375; MUL 390; MUL 461; MUL 462; MUL 465; MUL 483; MUL 485*	4.50

Bachelor of Arts in General Studies

Status: *Historical-Review all addendums*
Academic Program Director: Laine Goldman; lgoldman@nu.edu

The Bachelor of Arts in General Studies (BAGS) is designed to meet the needs of a growing number of students who have completed considerable study in diverse subject areas, both academic and applied. This program allows students to organize their varied explorations into a coherent degree program. The BAGS is unique among academic curricula, for it liberates students from the burden of repeating coursework in order to fulfill traditional degree requirements. The degree allows students to explore a wide variety of disciplines. It integrates both applied study (e.g., business, law, computer science, leadership) and arts and sciences to an extent not currently available in other degree programs. This is particularly important for adults who often interrupt their studies for prolonged periods and return with a different academic focus and career goal. The general studies degree allows nontraditional learners to continue moving forward without retracing a considerable portion of their study.

Program Learning Outcomes:
Upon successful completion of this program, students will be able to:

- Demonstrate critical thinking abilities on scholarly discourses within a specific range of disciplines.
- Demonstrate the ability with parenthetical citations within texts and other references.
- Develop oral and written communication skills.
- Demonstrate consistent proficiency with the mechanics of academic writing.
- Explain the role of education in occupational choices.
- Discuss ethical issues involved in research and academic writing.

Degree Requirements:

To receive a Bachelor of Arts in General Studies degree, students must complete at least 180 quarter units as articulated below, 45 of which must be completed in residence at National University, 76.5 of which must be completed at the upper-division level, and a minimum 69 units of the University General Education requirements. In the absence of transfer credit, additional general electives may be necessary to satisfy total units for the degree. The following courses are specific degree requirements. All students receiving an undergraduate degree in Nevada are required by State Law to complete a course in Nevada Constitution.

In addition to the above general education requirements, two depth areas are required. A depth area for the General Studies degree program is defined as 22.5 upper division quarter units in a given discipline. The first depth area requirement is fulfilled by acquiring 22.5 upper division quarter units in an Arts and Sciences discipline such as natural sciences, mathematics, literature, history, or social science. For example: If a student was pursuing a literature depth area, they would need five courses with a Literature prefix. The second depth area requirement is fulfilled by completing 22.5 upper division quarter units in either a single Applied study or Arts and Science discipline. If a student selects the second depth area in the Applied Studies discipline, such as management, law, accounting, or marketing, all five courses must have the same prefix such as MGT if the management discipline was selected. However, students do have the option of selecting a second depth area in Arts and Sciences rather than Applied Studies. If a second depth area in Arts and Sciences is selected, then students have the option of choosing five courses from various disciplines within the Arts and Sciences area. Students should refer to the section on undergraduate admission procedures for specific information on admission and evaluation.

Requirements for Major (13 courses; 58.5 quarter units)

BGS 301	Intro. to General Studies	4.50
BGS 385	Methods of Research *Discontinued*	4.50
	Prerequisite: *BGS 301 and four additional courses from the major.*	

Depth Area Requirement (10 courses; 45 quarter units)

Each student in the BAGS program is required to complete two depth area requirements of 22.5 upper division quarter units each. Students can choose from a variety of subject areas to satisfy the Arts and Sciences depth area requirements. These courses could be used alone or in combination with courses taken at other institutions. Listed below are examples of subject areas that can be used to fulfill a depth area requirement:

Arts and Sciences (5 courses; 22.5 quarter units)

Literature, Environmental Studies, Fine and Performing Arts (including Art and Music), History, Social Sciences (including Sociology and Political Science), Psychology, Spanish, Arabic, Persian, Chinese, Natural Sciences, Communication, Global Studies, Human Behavior, and Philosophy.

Applied Study (5 courses; 22.5 quarter units)

Students can also use courses from the listed areas to satisfy the depth area requirement in Applied Study. These courses could be used on their own or in combination with related courses at other institutions. Law,

Management, Economics, Accounting, Criminal Justice Administration, Marketing, Public Administration, Leadership, and Finance

Capstone Requirement (1 course; 4.5 quarter units)

BGS 499	Capstone Project *Historical-Review all addendums*	4.50
	Prerequisite: *Completion of other major requirements. Must be taken within last three classes prior to graduation.*	

Upper-Division Electives (3 courses; 13.5 quarter units)

To fulfill their unit requirements, students can choose electives from any 300, 400, or 500 level courses for which they meet prerequisites.

Bachelor of Science in Clinical Laboratory Science

Status: *Historical-Review all addendums*
Academic Program Director: Gabriel Pineda; gpineda@nu.edu

The Bachelor of Science in Clinical Laboratory Sciences provides students with diverse laboratory skills and prepares them for employment in a clinical or research setting. The program is designed to increase knowledge of the human body in health and disease with courses that include biochemistry, virology, immunology, physiology, chemistry, microbiology, hematology, quantitative analysis and molecular diagnostics. Graduates with a degree in clinical laboratory sciences may choose to find employment in areas such as clinical diagnostics, clinical research, medical device industry, or pursue advanced degrees in healthcare related fields of study.

This degree is also designed for students interested in becoming a licensed clinical laboratory scientist in the state of California. Students with this interest should review the requirements to obtain a trainee license from the Laboratory Field Services Branch of the California Department of Health at the website below:

https://www.cdph.ca.gov/Programs/OSPHLD/LFS/Pages/CLS-Trainee.aspx

Program Disclosure Information
The Bachelor of Science in Clinical Laboratory Science program is currently operating using guidelines only from the California Department of Public Health. Students who wish to become a Clinical Lab Scientist must first apply and get a Trainee License, each with its own requirements. Licensure is not guaranteed. Please see the Department of Public Health for each Trainee License requirements. Students who wish to participate in this program who do not reside in California must obtain special permission.

For up-to-date information on program licensure eligibility requirements for a state, please visit:
https://www.nu.edu/licensuredisclosures/

Program Learning Outcomes:
Upon successful completion of this program, students will be able to:

- Assess clinical laboratory practice and procedure by applying the knowledge of technical skills and theory obtained.
- Identify problems in the clinical laboratory and establish a course of action to correct them.
- Distinguish among laboratory methods which use advanced analytical, immunological, microbiological, hematological, and molecular techniques.
- Evaluate laboratory procedure theory, methodology and results.
- Utilize critical thinking skills in Clinical Laboratory situations.
- Conduct research using primary literature sources.
- Produce written work of the standards required by employers in the industry or post graduate programs.

Degree Requirements:

To receive the Bachelor of Science degree with a Major in Clinical Laboratory Science, students must complete at least 180 quarter units as articulated below, 45 of which must be completed in residence at National University. Upper-division level must consist of 76.5 quarter units and General Education must be a minimum of 69 quarter units. Refer to the section on undergraduate admission procedures for specific information regarding admission and evaluation. All students receiving an undergraduate degree in Nevada are required by state law to complete a course in Nevada Constitution.

A maximum of up to (6 courses; 27 quarter units) of Upper-Division Electives may be awarded toward the Bachelor of Science in Clinical Laboratory Sciences degree (MLT to BSCLS), for students who have;

> 1. Graduated with an associate degree in Medical Lab Technician (MLT) from a CA* Laboratory Field Service (LFS) approved MLT training program

<div align="center">**AND**</div>

> 2. Passed and submit associated transcripts and certificates for either of the following with an unexpired license

- a. MLT American Society for Clinical Pathology (ASCP) examination after 6/01/2003

<div align="center">**OR**</div>

- b. MLT American Association of Bioanalysts (AAB) examination after 1/01/2003.

*Individuals who have received an Associate's Degree outside the state of CA in Medical Lab Technician and passed the ASCP or AAB can submit transcripts and certificates to determine eligibility.

Preparation for the Major (11 courses; 40.5 quarter units)

BIO 161	General Biology 1*	4.50
BIO 201	Human Anatomy and Physiol I* *Historical-Review all addendums* **Corequisite:** *BIO 191A, or BIO 201A;* **Recommended: Prior completion of:** *BIO 100; BIO 100A; CHE 101; CHE 101A*	4.50
BIO 201A	Human Anatomy and Physiol Labl* *Historical-Review all addendums* **Corequisite:** *BIO 201;* **Recommended: Prior completion of:** *BIO 100; BIO 100A; CHE 101; CHE 101A or equivalent courses.*	1.50
BIO 203	Introductory Microbiology* *Historical-Review all addendums* **Corequisite:** *BIO 203A Students should take both lecture and lab courses concurrently and with the same instructor to ensure a consistent learning experience. Students who are retaking one of the two courses or present special circumstances should petition for exception to this requisite.;* **Recommended: Prior completion of:** *BIO 100 and BIO 100A; CHE 101 and CHE 101A or equivalent courses; BIO 201 and BIO 201A; BIO 202 and BIO 202A*	4.50
BIO 203A	Introductory Microbiology Lab* *Historical-Review all addendums* **Corequisite:** *BIO 203;* **Recommended: Prior completion of:** *BIO 100; BIO 100A; CHE 101; CHE 101A; BIO 201 and BIO 201A; BIO 202 and BIO 202A*	1.50
CHE 150	Introductory Organic Chemistry *Historical-Review all addendums* **Prerequisite:** *CHE 101 and CHE 101A, or CHE 141 and CHE 142 and CHE 143 and CHE 149A*	4.50
CHE 150A	Introductory Organic Chem Lab *Historical-Review all addendums* **Corequisite:** *CHE 150*	1.50
CHE 141	General Chemistry 1 *Historical-Review all addendums* **Prerequisite:** *MTH 215 or equivalent*	4.50
CHE 142	General Chemistry 2* *Historical-Review all addendums* **Prerequisite:** *CHE 141*	4.50
CHE 350	Organic Chemistry I *Historical-Review all addendums* **Prerequisite:** *CHE 142*	4.50
PHS 104	Introductory Physics* *Historical-Review all addendums*	4.50

Prerequisite: 2 years of high school algebra and MTH 204, or MTH 215, or MTH 216A and MTH 216B

* May be used to meet General Education requirements.

Core Requirements (10 courses; 45 quarter units)

BST 322	Intro to Biomedical Statistics	4.50
CLS 320	Clinical Lab Management	4.50
CLS 301	Clinical Biochemistry *Recommended: Prior completion of:* CHE 142	4.50
CLS 401	Quantitative Analysis *Recommended: Prior completion of:* CHE 142	4.50
CLS 305	Clinical Immunology *Historical-Review all addendums* *Recommended: Prior completion of:* CHE 101; BIO 161; BIO 203 or equivalent	4.50
CLS 315	Molecular Diagnostics *Recommended: Prior completion of:* BIO 162 and CHE 142	4.50
CLS 310	Clinical Virology *Historical-Review all addendums* *Recommended: Prior completion of:* CHE 101; BIO 161; BIO 203 or equivalent	4.50
CLS 405	Clinical Microbiology *Recommended Preparation:* CLS 301 with a minimum grade of B.; CLS 305 with a minimum grade of B.; CLS 315 with a minimum grade of B.	4.50
CLS 410	Clinical Hematology *Recommended Preparation:* CLS 301 with a minimum grade of B.; CLS 315 with a minimum grade of B.; CLS 305 with a minimum grade of B.	4.50
CLS 495	Clinical Lab Science Capstone *Prerequisite: Must have completed all required core classes.*	4.50

Upper-Division Electives (6 courses; 27 quarter units)

Students must complete a minimum of 27 quarter units of upper division electives to fulfill the upper-division unit requirements for the B.S. with a Major in Clinical Laboratory Science. The following courses are strongly recommended:

COM 354	Professional Presentations *Prerequisite: ENG 102*	4.50
HSC 300	Legal/Ethical Issues & Health	4.50
HSC 310	Issues & Trends in Healthcare	4.50
HSC 400	Mgmt for Health Professionals	4.50
HSC 410	Informatics for Health Profs	4.50
HSC 420	Healthcare Research	4.50

Bachelor of Science in Nursing - Generic Entry (B.S.N) (California)

Status: *Historical-Review all addendums*
Academic Program Director: Carol Ann Friedman; cfriedman@nu.edu

The Bachelor of Science in Nursing (BSN) program prepares degree candidates to develop critical thinking, clinical reasoning, leadership skills, inter-professional collaboration, therapeutic communication and proficiency in nursing skills within the framework of trans-cultural nursing. Graduates are able to apply evidenced-base practice to manage the nursing care of culturally diverse clients in a variety of settings. The Bachelor of Science Nursing (BSN)

Generic Entry program at National University is accredited by the Commission on Collegiate Nursing Education (CCNE), 655 K Street NW, Suite 750, Washington, DC 20001, 202-887-6791.

LVNs/Medics accepted for admission to the NU nursing program may be eligible to challenge nursing courses by examination(s) or be considered for equivalency. This challenge course, NSG 328, will evaluate content completed at LVN/Corps School programs to award college-level credit using transcript evaluation, credit-by-examination options, and competency-based education assessment of knowledge proficiency. Students will receive nursing course credits when their LVN/Core School transcripts equivalency criteria (time limit, credit, and content) are met. The time limit equivalency is 7 years or less. If time limit equivalency is not met, students may receive credit through challenge by course examination and skill validation and/or medication dosage examination. Applicants will receive course credit and advanced placement for successfully challenged courses. Co-requisite nursing courses will have to be challenged together. In other to receive credit for challenge courses, students must pass both co-requisite nursing courses. All course challenges by examination must be completed prior to the beginning of the first term in NU nursing program. The student who successfully challenges a course will receive a revised plan of study and must meet NU residency requirements.

Program Learning Outcomes:
Upon successful completion of this program, students will be able to:

- Develop caring, therapeutic nursing relationships with individuals, families, communities and populations.
- Provide safe, quality, effective, culturally competent, person-centered nursing care for individuals across the life span in a variety of settings.
- Participate in the continuous improvement of nursing care quality and safety.
- Use clinical judgment and leadership skills to manage, prioritize, and delegate collaborate patient care in a variety of health care settings.
- Effectively communicate and collaborate with individuals, families, communities, populations, and interdisciplinary teams.
- Demonstrate professional identity by incorporating established standards of practice within the legal and ethical framework of nursing.
- Apply current best evidence-based nursing concepts to achieve desired outcomes.

Degree Requirements:

To receive a Bachelor of Science in Nursing (BSN), students must complete at least 180 quarter units as articulated below, 45 of which must be completed in residence at National University, 76.5 of which must be completed at the upper division level, and the University General Education requirements. In the absence of transfer credit, additional general electives may be necessary to satisfy total units for the degree. The following courses are specific degree requirements.

Required General Education Preparation (21 courses; 84 quarter units)

The following areas of General Education must be completed prior to beginning any Nursing Major core coursework: Area A1, A2, Area B, Area C, Area E, and Area F.

AREA A: ENGLISH COMMUNICATION (9.0 quarter units)

CATEGORY – 1 Writing (1 course; 4.5 quarter units)

ENG 102	Effective College English	4.50

CATEGORY 2 - Speech and Communication(1 course; 4.5 quarter units)

COM 103	Public Speaking	4.50

AREA B: MATHEMATICAL CONCEPTS AND QUANTITATIVE REASONING (1 course; 4.5 quarter units)

BST 322	Intro to Biomedical Statistics	4.50

AREA C: INFORMATION LITERACY AND TECHNOLOGY (1 course; 4.5 quarter units)

ILR 260	Academic Information Literacy ***Prerequisite:*** *ENG 102*	4.50

AREA D: ARTS, HUMANITIES, AND LANGUAGES (4 courses; 18 quarter units)

See the General Education section of the catalog for applicable courses

SPN 340A	Spanish for the Work Place *Historical-Review all addendums*	4.50
SPN 341	Cross-Cultural Communication	4.50

For the remaining 9 units (2 courses), see the General Education section of the catalog for applicable courses.

AREA E: SOCIAL AND BEHAVIORAL SCIENCES (2 courses; 9 quarter units)

PSYC 100	Introduction to Psychology	4.50
SOC 100	Principles of Sociology	4.50

AREA F: PHYSICAL AND BIOLOGICAL SCIENCES (6 courses; 18 quarter units)

BIO 201	Human Anatomy and Physiol I *Historical-Review all addendums* ***Corequisite:*** *BIO 191A, or BIO 201A;* ***Recommended: Prior completion of:*** *BIO 100; BIO 100A; CHE 101; CHE 101A*	4.50
BIO 201A	Human Anatomy and Physiol Lab *Historical-Review all addendums* ***Corequisite:*** *BIO 201;* ***Recommended: Prior completion of:*** *BIO 100; BIO 100A; CHE 101; CHE 101A or equivalent courses.*	1.50
BIO 202	Human Anatomy and Physiol II ***Corequisite:*** *BIO 202A, or BIO 192A;* ***Prerequisite:*** *BIO 201 and BIO 201A*	4.50
BIO 202A	Human Antmy andPhysiol LabII ***Corequisite:*** *BIO 202;* ***Prerequisite:*** *BIO 201; BIO 201A*	1.50
BIO 203	Introductory Microbiology *Historical-Review all addendums* ***Corequisite:*** *BIO 203A Students should take both lecture and lab courses concurrently and with the same instructor to ensure a consistent learning experience. Students who are retaking one of the two courses or present special circumstances should petition for exception to this requisite.;* ***Recommended: Prior completion of:*** *BIO 100 and BIO 100A; CHE 101 and CHE 101A or equivalent courses; BIO 201 and BIO 201A; BIO 202 and BIO 202A*	4.50
BIO 203A	Introductory Microbiology Lab *Historical-Review all addendums* ***Corequisite:*** *BIO 203;* ***Recommended: Prior completion of:*** *BIO 100; BIO 100A; CHE 101; CHE 101A; BIO 201 and BIO 201A; BIO 202 and BIO 202A*	1.50

AREA A-G: GENERAL EDUCATION (1 course; 4.5 quarter units)

SOC 400	Race & Ethnicity in the U.S. ***Prerequisite:*** *ENG 102*	4.50
OR HUB 500	Cross-Cultural Dynamics ***Prerequisite:*** *ENG 102; PSYC 100*	4.50

For the remaining 16.5 quarter units, use General Education section of the catalog for applicable courses or nursing elective courses.

Nursing Core Courses (25 courses; 94.5 quarter units)

NSG 403	Nursing Theories and Models **Prerequisite:** *Admission into the Bachelor of Science in Nursing and completion of all non-nursing pre-requisite courses is required to enroll in this course.*	4.50
NSG 214	Health Assessment **Corequisite:** *NSG 214A;* **Recommended Preparation:** *Admission into the nursing program and completion of required general education preparation with a minimum GPA 2.75*	4.50
NSG 214A	Health Assessment Clinical Lab **Corequisite:** *NSG 214 Admission into the nursing program and completion of required general education preparation with a minimum GPA 2.75.*	1.50
NSG 422	Nursing Research **Prerequisite:** *BST 322*	4.50
NSG 304	Pharmacology in Nursing I *Historical-Review all addendums* **Prerequisite:** *NSG 214; NSG 214A*	4.50
NSG 240	Foundations of Nursing** *Historical-Review all addendums* **Prerequisite:** *NSG 214; NSG 214A; NSG 304; NSG 403; NSG 422;* **Corequisite:** *NSG 240A*	4.50
NSG 240A	Foundations Clinical Lab** *Historical-Review all addendums* **Prerequisite:** *NSG 214; NSG 214A; NSG 304; NSG 403; NSG 422;* **Corequisite:** *NSG 240*	3.50
NSG 245	Medical-Surgical Nursing I** **Prerequisite:** *NSG 240 and NSG 240A;* **Corequisite:** *NSG 245A*	4.50
NSG 245A	Medical-Surgical I Clinical** **Prerequisite:** *NSG 240 and NSG 240A;* **Corequisite:** *NSG 245*	3.50
NSG 330	Medical-Surgical Nursing II** **Prerequisite:** *NSG 214; NSG 214A;* **Corequisite:** *NSG 330A*	4.50
NSG 330A	Medical-Surgical II Clinical** **Prerequisite:** *NSG 214; NSG 214A;* **Corequisite:** *NSG 330*	3.50
NSG 333	Child-bearing Family Nursing** **Prerequisite:** *NSG 330; NSG 330A;* **Corequisite:** *NSG 333A*	4.50
NSG 333A	Child-bearing Family Clinical** **Prerequisite:** *NSG 245; NSG 245A;* **Corequisite:** *NSG 333*	3.50
NSG 334	Pediatric Nursing** **Prerequisite:** *NSG 333 and NSG 333A;* **Corequisite:** *NSG 334A*	4.50
NSG 334A	Pediatric Nursing Clinical** **Prerequisite:** *NSG 333 and NSG 333A;* **Corequisite:** *NSG 334*	3.50
NSG 335	Psychiatric-Mental Health Nur** **Prerequisite:** *NSG 330; NSG 330A;* **Corequisite:** *NSG 335A*	4.50
NSG 335A	Psych-Mental Health Clinical** **Prerequisite:** *NSG 330; NSG 330A;* **Corequisite:** *NSG 335*	3.50
NSG 305	Pathopharmacology in Nursing *Historical-Review all addendums* **Prerequisite:** *NSG 304; NSG 335; NSG 335A Successful Completion of NSG 335 and 335A*	4.50
NSG 460	Community Healthcare I **Corequisite:** *NSG 460A Program requirement.*	4.50
NSG 460A	Community Healthcare I Lab **Corequisite:** *NSG 460*	1.50
NSG 462	Community Healthcare II **Prerequisite:** *NSG 460 and NSG 460A;* **Corequisite:** *NSG 462A*	4.50
NSG 462A	Community Healthcare II Lab **Prerequisite:** *NSG 460 and NSG 460A;* **Corequisite:** *NSG 462*	1.50

NSG 340	Nursing Leadership/Management**	4.50
	Prerequisite: *NSG 335; NSG 335A;* **Corequisite:** *NSG 340A*	
NSG 340A	Leadership/Management Clinical**	1.50
	Prerequisite: *NSG 335; NSG 335A;* **Corequisite:** *NSG 340*	
NSG 440	Professional Issues in Nursing	4.50

**Content required for licensure by CA Board of Registered Nursing

Optional Elective Course

Students may fulfil open units by completing the following courses.

NSG 470A	Work Exp in Clinical Setting	1.00-6.00
	Prerequisite: *NSG 214 course with C or higher; NSG 214A course with C or higher; NSG 240 course with C or higher; NSG 240A course with C or higher; NSG 245 course with C or higher; NSG 245A course with C or higher; NSG 330 course with C or higher; NSG 330A course with C or higher; Students must have and maintain a GPA of 3.0 or higher in all NU nursing courses.*	
NSG 490	Guided Study	0.50-6.00
	Prerequisite: *Admission to nursing program and approve by Chair of Nursing*	

Requirements for LVNs and military students with approved Advanced Placement challenging NSG 245/A and higher (1 course; 4.5 quarter units)

NSG 328	BSN Transition	4.50
	Prerequisite: *Completed a Licensed Vocational Nursing/Licensed Practical Nurse (LVN/LPN) Program and hold a current licensure as an LVN/LPN., or Completed the Corps School/Military Training*	

Bachelor of Science in Nursing (B.S.N) Second Bachelor (California)

Status: *Historical-Review all addendums*
Academic Program Director: Susan Drummond; sdrummond@nu.edu

This program is for individuals with prior earned bachelor's degree (i.e., B.A., B.S.) who wish to be prepared for licensure as a registered nurse earning a Bachelor of Science in Nursing degree. Prepares candidates to develop critical thinking, clinical reasoning, leadership skills, inter-professional collaboration, therapeutic communication and proficiency in nursing skills within the framework of trans-cultural nursing. Graduates are able to apply evidenced-base practice to manage the nursing care of culturally diverse clients in a variety of settings. The Bachelor of Science in Nursing (BSN) Second-Bachelor degree program at National University is accredited by the Commission on Collegiate Nursing Education (CCNE), 655 K Street NW, Suite 750, Washington, DC 20001, 202-887-6791.

LVNs/Medics accepted for admission to the NU nursing program may be eligible to challenge nursing courses by examination(s) or be considered for equivalency. This challenge course, NSG 328, will evaluate content completed at LVN/Corps School programs to award college-level credit using transcript evaluation, credit-by-examination options, and competency-based education assessment of knowledge proficiency. Students will receive nursing course credits when their LVN/Core School transcripts equivalency criteria (time limit, credit, and content) are met. The time limit equivalency is 7 years or less. If time limit equivalency is not met, students may receive credit through challenge by course examination and skill validation and/or medication dosage examination. Applicants will receive course credit and advanced placement for successfully challenged courses. Co-requisite nursing courses will have to be challenged together. In other to receive credit for challenge courses, students must pass both co-requisite nursing courses. All course challenges by examination must be completed prior to the beginning

of the first term in NU nursing program. The student who successfully challenges a course will receive a revised plan of study and must meet NU residency requirements.

Program Learning Outcomes:
Upon successful completion of this program, students will be able to:

- Develop caring, therapeutic nursing relationships with individuals, families, communities and populations.
- Provide safe, quality, effective, culturally competent, person-centered nursing care for individuals across the life span in a variety of settings.
- Participate in the continuous improvement of nursing care quality and safety.
- Use clinical judgment and leadership skills to manage, prioritize, and delegate collaborate patient care in a variety of health care settings.
- Effectively communicate and collaborate with individuals, families, communities, populations, and interdisciplinary teams.
- Demonstrate professional identity by incorporating established standards of practice within the legal and ethical framework of nursing.
- Apply current best evidence-based nursing concepts to achieve desired outcomes.

Degree Requirements:

To receive a Bachelor of Science in Nursing (BSN), students must complete at least 180 quarter units as articulated below, 45 of which must be completed in residence at National University, 76.5 of which must be completed at the upper division level, and the University General Education requirements. In the absence of transfer credit, additional general electives may be necessary to satisfy total units for the degree. The following courses are specific degree requirements. Students should refer to the section on undergraduate admission procedures for specific information on admission and evaluation.

Required for the Major (10 courses; 36 quarter units)

COM 103	Public Speaking	4.50
BST 322	Intro to Biomedical Statistics	4.50
PSYC 100	Introduction to Psychology	4.50
SOC 100	Principles of Sociology	4.50
BIO 201	Human Anatomy and Physiol I *Historical-Review all addendums* ***Corequisite:*** *BIO 191A, or BIO 201A;* ***Recommended: Prior completion of:*** *BIO 100; BIO 100A; CHE 101; CHE 101A*	4.50
BIO 201A	Human Anatomy and Physiol LabI *Historical-Review all addendums* ***Corequisite:*** *BIO 201;* ***Recommended: Prior completion of:*** *BIO 100; BIO 100A; CHE 101; CHE 101A or equivalent courses.*	1.50
BIO 202	Human Anatomy and Physiol II ***Corequisite:*** *BIO 202A, or BIO 192A;* ***Prerequisite:*** *BIO 201 and BIO 201A*	4.50
BIO 202A	Human Anatomy andPhysiol LabII *Historical-Review all addendums* ***Corequisite:*** *BIO 202;* ***Prerequisite:*** *BIO 201; BIO 201A*	1.50
BIO 203	Introductory Microbiology *Historical-Review all addendums* ***Corequisite:*** *BIO 203A Students should take both lecture and lab courses concurrently and with the same instructor to ensure a consistent learning experience. Students who are retaking one of the two courses or present special circumstances should petition for exception to this requisite.;* ***Recommended: Prior completion of:*** *BIO 100 and BIO 100A; CHE 101 and CHE 101A or equivalent courses; BIO 201 and BIO 201A; BIO 202 and BIO 202A*	4.50
BIO 203A	Introductory Microbiology Lab *Historical-Review all addendums*	1.50

Corequisite: BIO 203; Recommended: Prior completion of: BIO 100; BIO 100A; CHE 101; CHE 101A; BIO 201 and BIO 201A; BIO 202 and BIO 202A

Nursing Core Courses (25 courses; 94.5 quarter units)

NSG 403	Nursing Theories and Models *Prerequisite: Admission into the Bachelor of Science in Nursing and completion of all non-nursing pre-requisite courses is required to enroll in this course.*	4.50
NSG 214	Health Assessment *Corequisite: NSG 214A; Recommended Preparation: Admission into the nursing program and completion of required general education preparation with a minimum GPA 2.75*	4.50
NSG 214A	Health Assessment Clinical Lab *Corequisite: NSG 214 Admission into the nursing program and completion of required general education preparation with a minimum GPA 2.75.*	1.50
NSG 422	Nursing Research *Prerequisite: BST 322*	4.50
NSG 304	Pharmacology in Nursing I *Historical-Review all addendums* *Prerequisite: NSG 214; NSG 214A*	4.50
NSG 240	Foundations of Nursing** *Historical-Review all addendums* *Prerequisite: NSG 214; NSG 214A; NSG 304; NSG 403; NSG 422;* *Corequisite: NSG 240A*	4.50
NSG 240A	Foundations Clinical Lab** *Historical-Review all addendums* *Prerequisite: NSG 214; NSG 214A; NSG 304; NSG 403; NSG 422;* *Corequisite: NSG 240*	3.50
NSG 245	Medical-Surgical Nursing I** *Prerequisite: NSG 240 and NSG 240A; Corequisite: NSG 245A*	4.50
NSG 245A	Medical-Surgical I Clinical** *Prerequisite: NSG 240 and NSG 240A; Corequisite: NSG 245*	3.50
NSG 330	Medical-Surgical Nursing II** *Prerequisite: NSG 214; NSG 214A; Corequisite: NSG 330A*	4.50
NSG 330A	Medical-Surgical II Clinical** *Prerequisite: NSG 214; NSG 214A; Corequisite: NSG 330*	3.50
NSG 333	Child-bearing Family Nursing** *Prerequisite: NSG 330; NSG 330A; Corequisite: NSG 333A*	4.50
NSG 333A	Child-bearing Family Clinical** *Prerequisite: NSG 245; NSG 245A; Corequisite: NSG 333*	3.50
NSG 334	Pediatric Nursing** *Prerequisite: NSG 333 and NSG 333A; Corequisite: NSG 334A*	4.50
NSG 334A	Pediatric Nursing Clinical** *Prerequisite: NSG 333 and NSG 333A; Corequisite: NSG 334*	3.50
NSG 335	Psychiatric-Mental Health Nur** *Prerequisite: NSG 330; NSG 330A; Corequisite: NSG 335A*	4.50
NSG 335A	Psych-Mental Health Clinical** *Prerequisite: NSG 330; NSG 330A; Corequisite: NSG 335*	3.50
NSG 305	Pathopharmacology in Nursing *Historical-Review all addendums* *Prerequisite: NSG 304; NSG 335; NSG 335A Successful Completion of NSG 335 and 335A*	4.50
NSG 460	Community Healthcare I *Corequisite: NSG 460A Program requirement.*	4.50
NSG 460A	Community Healthcare I Lab *Corequisite: NSG 460*	1.50
NSG 462	Community Healthcare II	4.50

	Prerequisite: NSG 460 and NSG 460A; **Corequisite:** *NSG 462A*	
NSG 462A	Community Healthcare II Lab	1.50
	Prerequisite: NSG 460 and NSG 460A; **Corequisite:** *NSG 462*	
NSG 340	Nursing Leadership/Management[**]	4.50
	Prerequisite: NSG 335; NSG 335A; **Corequisite:** *NSG 340A*	
NSG 340A	Leadership/Management Clinical[**]	1.50
	Prerequisite: NSG 335; NSG 335A; **Corequisite:** *NSG 340*	
NSG 440	Professional Issues in Nursing	4.50

[**]Content required for licensure by CA Board of Registered Nursing

Elective Course

NSG 470A	Work Exp in Clinical Setting	1.00-6.00
	Prerequisite: NSG 214 course with C or higher; NSG 214A course with C or higher; NSG 240 course with C or higher; NSG 240A course with C or higher; NSG 245 course with C or higher; NSG 245A course with C or higher; NSG 330 course with C or higher; NSG 330A course with C or higher; Students must have and maintain a GPA of 3.0 or higher in all NU nursing courses.	
NSG 490	Guided Study	0.50-6.00
	Prerequisite: Admission to nursing program and approve by Chair of Nursing	

Requirements for LVNs and military students with approved Advanced Placement challenging NSG 245/A and higher (1 course; 4.5 quarter units)

NSG 328	BSN Transition	4.50
	Prerequisite: Completed a Licensed Vocational Nursing/Licensed Practical Nurse (LVN/LPN) Program and hold a current licensure as an LVN/LPN., or Completed the Corps School/Military Training	

Master of Science in Computer Information System

Status: *Discontinued*
Academic Program Director: Patrick Olson; polson@nu.edu

PROGRAM IS CURRENTLY NOT ACCEPTING STUDENTS INTO THE PROGRAM

Computer information systems is often defined as the collective means by which an organization enables the production and distribution of information and knowledge. Such a definition necessarily includes people, processes, computing, and data. While many fields overlap with computer information systems the primary means of differentiation among these fields is to consider the field's dominant perspective. While other fields focus on why or how this field seeks to discover the best solution available now and facilitate future revision when better solutions become available.

The National University offering of this program is specifically guided by the Association for Computing Machinery (ACM) and Association for Information Systems (AIS) curriculum recommendations. To that end, we specifically include courses in eight of the core areas noted in this recommended curriculum.

This program begins with a focus on information in organizations. The program progresses through the examination of the organization and technology environment that contains the organization's information systems. The next step is considering systematic means for information needs assessment and then the construction of managerial tools and organizational systems and architectures. The program ends with an examination of the Philosophy of Information.

Additionally, we require a current topics course (CIS 671) and credit for publication of a student paper (CIS 611) as part of the required courses in the program. There are also additional elective options that allow further

engagement in scholarly publication (CIS 616). The program concludes with a capstone course on the Philosophy of Information (CIS 688).

Admission Requirements

Candidates seeking admission to the program must possess a baccalaureate degree. This program is designed to offer information systems expertise to those from various educational backgrounds. Enrolling students with an undergraduate degree in information systems, information technology, computer science, or software engineering, business meet the program entry requirements. Enrolling students who hold other undergraduate degrees may be enrolled if they secure the approval of the Academic Program Director for the MSCIS.

Program Learning Outcomes:
Upon successful completion of this program, students will be able to:

- Apply the Philosophy of Information.
- Analyze and apply ethical constructs to issues in Information Systems.
- Analyze the technology environment that domains (organizations) and Information Systems are within.
- Apply systematic means for the analysis and improvement of needs assessment.
- Create and operate managerial tools and systems for applying information systems to domains (organizations).
- Create Information Systems tools, systems and architectures.

Degree Requirements:

To receive a Master of Science in Computer Information Systems, student must complete 50.5 quarter units of graduate coursework. A total of 13.5 quarter units of graduate work completed at another regionally accredited institution may be transferred to meet stated requirements in the program provided those units were not used in earning another advanced degree.

Core Requirements (12 courses; 50.5 quarter units)

CIS 601	Principles of Info. Systems	4.50
CIS 621	Systems Development/Deployment *Discontinued*	4.50
CIS 631	Data, Information and Content *Discontinued*	4.50
CIS 641	IT Infrastructure	4.50
CIS 650	IS Management and Operations *Discontinued*	4.50
	Prerequisite: CIS 641 with a minimum grade of B. The grade in CIS 641 must be at least a B as that is the required grade for completion of a Graduate Program.	
CIS 655	Enterprise Architecture *Discontinued*	4.50
	Prerequisite: CIS 650 with a minimum grade of B. The grade in CIS 650 must be at least a B as that is the required grade for completion of a Graduate Program.	
CIS 656	Innov., Org. Change, Entrepre. *Discontinued*	4.50
	Prerequisite: CIS 650 with a minimum grade of B. The grade in CIS 650 must be at least a B as that is the required grade for completion of a Graduate Program.	
CIS 657	Bus Cont and Info Assurance *Discontinued*	4.50
	Prerequisite: CIS 650 with a minimum grade of B. The grade in CIS 650 must be at least a B as that is the required grade for completion of a Graduate Program.	
CIS 659	IS Strategy and Gov *Discontinued*	4.50
	Prerequisite: CIS 650 with a minimum grade of B. The grade in CIS 650 must be at least a B as that is the required grade for completion of a Graduate Program.	
CIS 671	Current Topics	4.50

	Prerequisite: CIS 650 with a minimum grade of B. The grade in CIS 650 must be at least a B as that is the required grade for completion of a Graduate Program.	
CIS 688	Philosophy of Information *Discontinued* *Prerequisite:* All other program requirements must be complete prior to taking this course.	4.50
CIS 611	Student Publications *Discontinued* *Prerequisite:* CIS 650 with a minimum grade of B. The grade in CIS 650 must be at least a B as that is the required grade for completion of a Graduate Program.	1.00

Elective Option

Students who wish to participate in additional scholarly research opportunities may enroll in the following course. Please contact the Program Lead for approval.

CIS 616	Scholarly Publications *Discontinued* *Prerequisite:* CIS 650 with a minimum grade of B. The grade in CIS 650 must be at least a B as that is the required grade for completion of a Graduate Program.	2.00

Master of Science in Health Informatics

Academic Program Director: Patric Schiltz; pschiltz@nu.edu

As healthcare makes dramatic strides to adopt new information and communication technologies, there is a growing demand for health informatics professionals. This rapidly-developing field is only beginning to unlock the vast promise of using electronic-based information to advance health care and ultimately improve the health of individuals and populations. The MS in Health Informatics is a graduate professional degree designed to enhance the practice of health informatics by preparing students for career growth to mid-level and leadership positions within healthcare organizations, technology, and consulting firms. This program is intended for students interested in the effective use of information technologies and systems to improve the quality, safety, efficiency, and affordability of healthcare.

The MS Health Informatics program is a multidisciplinary program incorporating the synergies, faculty, and resources of National University's School of Health Professions. Program study includes coursework related to:

1) Information Systems - leadership and management of healthcare applications; including analysis, design, adoption, and optimization

2) Information Technology - effective use of database and systems administration, computer networks, security, programming, and wireless devices

3) Informatics - the structured language of healthcare, standards, data structures, health information exchange, decision support, care coordination, consumer health, socio-technical aspects of health computing, human-computer interaction, and evidenced-based practice

Along with a broad understanding of health and human services, technology, information systems, leadership, and the culture of healthcare, students apply health informatics knowledge through experiential learning opportunities with case studies, research, simulations, and a capstone project. Graduates are prepared for various roles related to leveraging technology to enhance the collection, communication, exchange, aggregation, analysis, and use of information across the health care ecosystem.

Program Learning Outcomes:
Upon successful completion of this program, students will be able to:

- Evaluate the healthcare delivery system in the US and the impact of social, cultural, political, economic, and environmental factors affecting the management and operation of healthcare organizations.
- Evaluate health data management standards, technologies and methods to improve the quality, efficiency, equity and safety of healthcare practice and organization.
- Develop policies and technologies to protect data integrity and validity, including information privacy and security policies and procedures.
- Develop strategies for improving healthcare delivery and achieving institutional strategic initiatives using information systems and technologies.
- Evaluate leadership principles and practices in health information technology staff development, technology adoption and change management in a healthcare organization.
- Evaluate a healthcare organization's processes and systems to ensure compliance with ethical, legal and regulatory mandates and professional standards of health information technology.
- Apply statistical and research methodologies to implement evidence-based health information technology management practice and healthcare quality improvement.
- Communicate knowledge of health information systems and technology to stakeholders of the healthcare ecosystem.

Degree Requirements:

To receive a MS in Health Informatics degree, students must complete at least 54 quarter units of graduate work. A total of 13.5 quarter units of graduate credit may be granted for equivalent graduate work completed at another institution, as it applies to this degree and provided the units were not used in earning another advanced degree. Refer to the section on graduate admissions requirements for specific information regarding application and evaluation.

Core Requirements (11 courses; 49.5 quarter units)

HCA 600	U.S. Healthcare System	4.50
HTM 552	EHR Meaningful Use	4.50
CIS 601	Principles of Info. Systems	4.50
COH 602	Biostatistics	4.50
HCA 626	Healthcare Information Systems ***Prerequisite:*** *ANA 630*	4.50
HCA 622	Quality Appraisal & Evaluation ***Prerequisite:*** *HCA 600 and HCA 620*	4.50
COH 611	Public Health Research Methods	4.50
HTM 660	System Management and Planning	4.50
HTM 520	Health Information Exchange	4.50
HTM 680	Health Informatics Case Study ***Prerequisite:*** *HTM 520; HTM 552; HTM 660*	4.50
HTM 692	Health Informatics Capstone ***Prerequisite:*** *HTM 680*	4.50

Please note that prerequisites for HCA and COH courses are not required for students in the MS Health Informatics program. HTM prerequisites are required.

Program Elective (1 course; 4.5 quarter units)

LED 604	Leading Change and Adaptation	4.50
COH 613	Public Health Informatics ***Prerequisite:*** *COH 606*	4.50

HCA 663	Healthcare Accounting/Finance	4.50
	Prerequisite: *HCA 628*	
CIS 641	IT Infrastructure	4.50
CIS 671	Current Topics	4.50
	Prerequisite: *CIS 650 with a minimum grade of B. The grade in CIS 650 must be at least a B as that is the required grade for completion of a Graduate Program.*	
HCA 670	Healthcare Leadership	4.50
	Prerequisite: *HCA 624*	

Please note that prerequisites for HCA and COH courses are not required for students in the MS Health Informatics program. HTM prerequisites are required.

Undergraduate Certificate LVN "30-45 Unit" Option

Status: *Historical-Review all addendums*
Academic Program Director: Susan Drummond; sdrummond@nu.edu

Licensed Vocational Nurses (LVNs) who desire to complete the minimum number of units required to take the licensure examination may apply for this option. LVNs who select the "30-45 Unit" Option method to satisfy the requirements for licensure as a Registered Nurse should consult the Chair of the Department of Nursing for an individual program consultation to discuss the advantages and disadvantages of this option.

Departmental Admission Requirements

To be eligible for admission to the "30-45 Unit" certificate, candidates must satisfy all of the following criteria:
• Have completed the National University undergraduate admission process.
• Hold a current, active, unencumbered license to practice as a licensed vocational nurse.
• Have successfully completed the required preparation courses.
• Submit the appropriate nursing program application.
• For advising purposes only, complete the ACCUPLACER math and English tests.

After completing the interview process, successful candidates will be enrolled in classes as spaces become available.

LVNs/Medics accepted for admission to the NU nursing program may be eligible to challenge nursing courses by examination(s) or be considered for equivalency. This challenge course, NSG 328, will evaluate content completed at LVN/Corps School programs to award college-level credit using transcript evaluation, credit-by-examination options, and competency-based education assessment of knowledge proficiency. Students will receive nursing course credits when their LVN/Core School transcripts equivalency criteria (time limit, credit, and content) are met. The time limit equivalency is 7 years or less. If time limit equivalency is not met, students may receive credit through challenge by course examination and skill validation and/or medication dosage examination. Applicants will receive course credit and advanced placement for successfully challenged courses. Co-requisite nursing courses will have to be challenged together. In other to receive credit for challenge courses, students must pass both co-requisite nursing courses. All course challenges by examination must be completed prior to the beginning of the first term in NU nursing program. The student who successfully challenges a course will receive a revised plan of study and must meet NU residency requirements.

Program Learning Outcomes:
Upon successful completion of this program, students will be able to:

• Develop a critical stance on professional issues related to nursing practice, education, and knowledge development by analyzing the historical and contemporary environments in nursing.
• Use computer technologies to augment productivity and to gain access to multiple informational resource services.

Degree Requirements:

Requirements for the Certificate

To receive the "30-45 Unit Option" certificate, students must complete the 44.5 quarter units as outlined below. The following courses are specific certificate requirements.

Required Preparation (6 courses; 18 quarter units)

BIO 201	Human Anatomy and Physiol I *Historical-Review all addendums* ***Corequisite:*** *BIO 191A, or BIO 201A;* ***Recommended: Prior completion of:*** *BIO 100; BIO 100A; CHE 101; CHE 101A*	4.50
BIO 201A	Human Anatomy and Physiol LabI *Historical-Review all addendums* ***Corequisite:*** *BIO 201;* ***Recommended: Prior completion of:*** *BIO 100; BIO 100A; CHE 101; CHE 101A or equivalent courses.*	1.50
BIO 202	Human Anatomy and Physiol II ***Corequisite:*** *BIO 202A, or BIO 192A;* ***Prerequisite:*** *BIO 201 and BIO 201A*	4.50
BIO 202A	Human Anatomy andPhysiol LabII *Historical-Review all addendums* ***Corequisite:*** *BIO 202;* ***Prerequisite:*** *BIO 201; BIO 201A*	1.50
BIO 203	Introductory Microbiology *Historical-Review all addendums* ***Corequisite:*** *BIO 203A Students should take both lecture and lab courses concurrently and with the same instructor to ensure a consistent learning experience. Students who are retaking one of the two courses or present special circumstances should petition for exception to this requisite.;* ***Recommended: Prior completion of:*** *BIO 100 and BIO 100A; CHE 101 and CHE 101A or equivalent courses; BIO 201 and BIO 201A; BIO 202 and BIO 202A*	4.50
BIO 203A	Introductory Microbiology Lab *Historical-Review all addendums* ***Corequisite:*** *BIO 203;* ***Recommended: Prior completion of:*** *BIO 100; BIO 100A; CHE 101; CHE 101A; BIO 201 and BIO 201A; BIO 202 and BIO 202A*	1.50

Nursing Core Courses (7 courses; 26.5 quarter units)

NSG 328	BSN Transition ***Prerequisite:*** *Completed a Licensed Vocational Nursing/Licensed Practical Nurse (LVN/LPN) Program and hold a current licensure as an LVN/LPN., or Completed the Corps School/Military Training*	4.50
NSG 330	Medical-Surgical Nursing II[**] ***Prerequisite:*** *NSG 214; NSG 214A;* ***Corequisite:*** *NSG 330A*	4.50
NSG 330A	Medical-Surgical II Clinical[**] ***Prerequisite:*** *NSG 214; NSG 214A;* ***Corequisite:*** *NSG 330*	3.50
NSG 335	Psychiatric-Mental Health Nur[**] ***Prerequisite:*** *NSG 330; NSG 330A;* ***Corequisite:*** *NSG 335A*	4.50
NSG 335A	Psych-Mental Health Clinical[**] ***Prerequisite:*** *NSG 330; NSG 330A;* ***Corequisite:*** *NSG 335*	3.50
NSG 340	Nursing Leadership/Management[**] ***Prerequisite:*** *NSG 335; NSG 335A;* ***Corequisite:*** *NSG 340A*	4.50
NSG 340A	Leadership/Management Clinical[**] ***Prerequisite:*** *NSG 335; NSG 335A;* ***Corequisite:*** *NSG 340*	1.50

Updated Courses

BGS 499 Capstone Project (4.50)
Prerequisite: BGS 301; Completion of other major requirements. Must be taken within last three classes prior to graduation.
Duration: 4
Course focuses on the preparation of a digital e-portfolio integrating the student's general studies experience, interests, and research while emphasizing their diverse, complementary career capabilities. Grading is H, S or U only.

CIS 641 IT Infrastructure (4.50)
Duration: 4
This course includes a careful analysis of the hardware, software and organization needed to provide IT to a domain (organization) with particular emphasis on networks. It is intended that graduates will be better able to contribute to needs analysis for and design and implementation of effective, technically correct IT infrastructure solutions.

CJA 605 CJ Theory, Practice & Policy (4.50)
Duration: 4
An overview of criminal justice administration, the history of police administration, organizational systems' theory, principles, ideology, and managerial practice that has shaped the criminal justice profession.

CJA 608 Leadership in CJ (4.50)
Recommended: Prior completion of: CJA 605
Duration: 4
Exploration of the theory and application of leadership in various forms. The course will analyze leadership as a complex process and will draw upon diverse positions, ethical considerations and applied approaches, particularly in the area of criminal justice. Leadership will be evaluated from multiple dimensions and perspectives. An examination of emerging forms of 21st century leadership, influence and power, chaos, and collaboration. Students will experience using leadership problem-solving skills with real-life classroom scenarios.

CJA 615 Legal Issues in CJ (4.50)
Recommended: Prior completion of: CJA 608
Duration: 4
An assessment of legal issues, legal terminology and analysis of court decisions involving criminal justice agencies; and exposure to criminal or civil liability involving wrongful death, wrongful termination, police corruption, and discrimination lawsuits.

CJA 624 Professional Ethics in CJ (4.50)
Recommended: Prior completion of: CJA 615
Duration: 4
A study of ethical, legal, and professional controversies, and personal dilemmas and approaches to solving those conflicts. Using a case study format, students evaluate personal values or biases and the abuse of power and authority. The course also examines police or justice practices involving cases of ethical or police policy violations.

CJA 630 Const Law & Criminal Procedure (4.50)
Recommended: Prior completion of: CJA 624
Duration: 4
An exploration of the history of the U.S. Constitution, separation of powers, and the rights and protections of the accused; an exploration of case law, the judicial system and judicial review, and the rights and responsibilities of the government and citizenry.

CJA 645 Advanced Criminological Theory (4.50)
Recommended: Prior completion of: CJA 630
Duration: 4
An overview course that explores the important criminological theories. The course will evaluate and compare the following theories: Classical, Positivist, Trait, Social Disorganization, Differential Association, Strain, Control, Labeling, Radical Choice, Deterrence, and Feminist theories. The course will analyze each theory and its relevance to crime in 21st century America.

MUL 201 Intro to Graphic Design (4.50)
Prerequisite: ENG 102
Duration: 4
The course introduces students to movements and theories of art and graphic design that will be utilized in the creation of digital media assets. The course includes design tools and principles of digital media and their impact on culture.

MUL 203 Intro to Visual Storytelling (4.50)
Prerequisite: ENG 102
Duration: 4
This course is an introduction to visual storytelling where students appreciate and learn visual narrative concepts through project-based assignments. Students also examine the methods, time periods and cultural influences that impact the creation of visual storytelling.

MUL 308 Vector Graphics (4.50)
Prerequisite: ENG 102; MUL 201; MUL 203
Duration: 4
The course covers concepts and tools used to create content through vector drawing tools for web, print, and mobile platforms.

MUL 309 Camera and Image (4.50)
Prerequisite: ENG 102; MUL 201; MUL 203; **Recommended: Prior completion of:** MUL 308; MUL 312; MUL 316; MUL 390; MUL 345; MUL 353
Duration: 4
The course provides a foundation for understanding the mechanisms of still and video cameras and the key features to consider for creating professional level imagery. Topics include composition, the exposure triangle, the rule of thirds, depth of field, montage, camera angle, and lighting.

MUL 312 Digital Image Compositing (4.50)
Prerequisite: ENG 102; MUL 201; MUL 203; **Recommended: Prior completion of:** MUL 308
Duration: 4
Students receive in-depth training in image composition and raster image editing.

MUL 316 Applied Graphic Design (4.50)
Prerequisite: ENG 102; MUL 201 and MUL 203; **Recommended: Prior completion of:** MUL 308; MUL 312
Duration: 4
The course prepares students to create and design digital content for electronic publication.

MUL 345 Applied Web Design (4.50)
Prerequisite: ENG 102; MUL 201; MUL 203; **Recommended: Prior completion of:** MUL 308; MUL 312; MUL 316; MUL 390
Duration: 4
Students will get hands-on training utilizing the principles and techniques of web design within the digital media industry. The course is an in-depth study of effective web page design using structured markup languages, and efficient site architecture. Students will engage in projects in content development, navigation, and usability (ie: UX - user experience) and deployment.

MUL 353 2-D Design & Interactivity (4.50)
*Prerequisite: ENG 102; MUL 201 and MUL 203; **Recommended: Prior completion of:** MUL 308; MUL 312; MUL 316; MUL 390; MUL 345*
Duration: 4
The course provides training in creating scalable and interactive 2-D vector based objects.

MUL 356 Video Gaming AR/VR (4.50)
Prerequisite: ENG 102; MUL 201; MUL 203; MUL 312; MUL 372; MUL 375
Duration: 4
In-depth, hands-on application of game development engines and Augmented and Virtual Reality systems.

MUL 365 Digital Video Editing (4.50)
*Prerequisite: ENG 102; MUL 201 and MUL 203; **Recommended: Prior completion of:** MUL 308; MUL 312; MUL 316; MUL 390; MUL 345; MUL 353; MUL 309*
Duration: 4
The course provides students with in depth experience working with non-linear editing software (NLE) to create engaging and highly effective video projects.

MUL 372 Foundations of 3D (4.50)
*Prerequisite: ENG 102; MUL 201; MUL 203; MUL 312; **Recommended: Prior completion of:** MUL 308; MUL 316; MUL 390; MUL 345; MUL 353; MUL 309; MUL 365; MUL 461; MUL 465; MUL 462*
Duration: 4
Provides students exposure to all phases of video game design from concept to completion. Steps include pre-production, completion of a game design document, prototyping, 3-D modeling, and animation.

MUL 375 3D Modeling for Game Art (4.50)
Prerequisite: ENG 102; MUL 201; MUL 203; MUL 312; MUL 372
Duration: 4
Hands-on application of 3-D graphics and modeling techniques. Produce basic 3-D elements and apply materials, textures and lighting for film, video, print and gaming applications.

MUL 390 User Interface Design (4.50)
*Prerequisite: ENG 102; MUL 201; MUL 203; **Recommended: Prior completion of:** MUL 308; MUL 312; MUL 316*
Duration: 4
Hands-on introduction in the basics of user interface design for various platforms (i.e. web, mobile, etc.). Students will learn all phases of user interface design from conception to final output.

MUL 461 Motion Graphics Vis. Effects I (4.50)
Prerequisite: ENG 102; MUL 201; MUL 203; MUL 365
Duration: 4
A hands-on course in motion graphics and visual effects (VFX) for various media output; the course presents the current software tools used to build and deliver motion graphics and visual effects.

MUL 462 Digital Audio Creation (4.50)
*Prerequisite: ENG 102; MUL 201; MUL 203; **Recommended: Prior completion of:** MUL 308; MUL 312; MUL 316; MUL 390; MUL 345; MUL 353; MUL 309; MUL 365; MUL 461; MUL 465*
Duration: 4
Computer-aided digital audio creation used in DVD, video, and Web authoring. Students learn basic music theory and composition practices applied to digital audio production, utilizing professional software tools used in the field, as well as hardware applications. Covers file management and compression for specific delivery mediums. The course is an exploration into role audio has in digital media and the process of editing and creating digital audio for numerous platforms. Topics include Sound Effects (SFX), musical score, and narration.

MUL 465 Motion Graphics Vis Effects II (4.50)
Prerequisite: ENG 102; MUL 201; MUL 203; MUL 365; MUL 461
Duration: 4
Students will continue their progress from the previous course and build on their competencies. Focus will be on tracking, chroma keying, rotoscoping, and compositing.

MUL 483 Final Project I (4.50)
Prerequisite: ENG 102; MUL 201; MUL 203; MUL 308; MUL 309; MUL 312; MUL 316; MUL 345; MUL 353; MUL 356; MUL 365; MUL 372; MUL 375; MUL 390; MUL 461; MUL 462; MUL 465
Duration: 4
Opportunity to go in-depth on a topic covered in the program. Students will select a topic (with instructor approval) and complete all phases of production (conception, design, development, launch and post assessment).

MUL 485 Final Project II (4.50)
Prerequisite: MUL 483
Duration: 4
Opportunity to go in-depth on a topic covered in the program. Students will select a topic (with instructor approval) and complete all phases of production (conception, design, development, launch and post assessment). The student may use the class as a continuation of the project in MUL 483 or for a new project.

MUL 487 Dig Med Dsgn Portfolio, Thesis (4.50)
Prerequisite: MUL 485
Duration: 8
In this two-month capstone course, students assemble a portfolio of their best work from previous Digital Media Design courses and edit/polish those pieces until they are suitable to show a prospective industry employer. Students will also submit a written thesis documenting their creative journey in the program. Grading is H, S or U only.

NSG 328 BSN Transition (4.50)
Prerequisite: Completed a Licensed Vocational Nursing/Licensed Practical Nurse (LVN/LPN) Program and hold a current licensure as an LVN/LPN., or Completed the Corps School/Military Training
Duration: 8
The purpose of this course is to transition licensed LVNs and if applicable military personnel with medical experience and coursework to registered nursing practice by introducing concepts: professional registered nursing roles, scope of practice, and planning and implementing nursing care. This course implements the utilization of the nursing process based on evidence-based practices to provide holistic care to adult and geriatric populations with stable chronic and acute medical conditions. LVNs/Medics accepted for admission to the NU nursing program may be eligible to challenge nursing courses by examination(s) or be considered for equivalency. This course will evaluate content completed at LVN/Corps School programs to award college-level credit using transcript evaluation, credit-by-examination options, and competency-based education assessment of knowledge proficiency. Students will receive nursing course credits when their LVN/Core School transcripts equivalency criteria (time limit, credit, and content) are met. The time limit equivalency is 7 years or less. If time limit equivalency is not met, students may receive credit through challenge by course examination and skill validation and/or medication dosage examination. Applicants will receive course credit and advanced placement for successfully challenged courses. Co-requisite nursing courses will have to be challenged together. In other to receive credit for challenge courses, students must pass both co-requisite nursing courses. All course challenges by examination must be completed prior to the beginning of the first term in NU nursing program. The student who successfully challenges a course will receive a revised plan of study and must meet NU residency requirements.