NATIONAL UNIVERSITY

ERRATA TO ADDENDUM F

TO THE NATIONAL UNIVERSITY GENERAL **CATALOG 83**

Effective Date July 1, 2021

National University Academic Headquarters
11255 North Torrey Pines Road
La Jolla, CA 92037-1011
(858) 642-8800

GENERAL POLICIES AND PROCEDURES

Attendance Procedures
The academic year is divided into four 12-week quarters, each comprised of three sessions. Students may enroll in classes in most programs any month of the year.

The start-date of a session is the first Monday of the new course term. If the first Monday is a holiday, the start-date of the session will be the first Tuesday. For example, if the first-class meeting offered in the September session meets on Mondays and Wednesdays, and Monday is the holiday, then that first Tuesday is the start-date for the session. The term start date (whether a Monday or Tuesday) is the start date of the session and not the day students meet for their first class. Students are considered officially enrolled in a class at midnight (PST) of the ninth (9th) day of the session.

All students must be officially enrolled in order to attend class and to receive a grade. This means that the course must be added to the student's schedule prior to the ninth (9th) day of the session. University instructors will not permit non- enrolled students to attend a class or be issued a grade. The Office of the Registrar will not post grades for students who are not officially enrolled.

Lack of participation and/or attendance for students taking on-site or online classes does not qualify the student for a refund or consideration for a drop or withdrawal from the class unless the student submits the request within the established timeframe (see refund and course drop and withdrawal policy). Students, whether on-site or online, are responsible for following the published policy on deadlines for drop and withdrawal.

With instructor approval, students may be allowed to make up examinations or class assignments missed due to absence or tardiness. Students must arrange to complete any make-up work with the instructor in advance. Work must be completed prior to the final class session. A grade of incomplete may be issued if the student has attended two-thirds of the course and coursework is not completed by the final class session. Instructors may use their discretion when issuing approval of, and assigning, an incomplete grade.

Any dispute about attendance must be addressed by the student in writing and submitted to the Office of the Registrar within ninety (90) days of grade posting. If extenuating circumstances prevent the submission of the dispute within that time frame, the Office of the Registrar will make a determination about whether the circumstances warrant further consideration. The Office of the Registrar will not consider a dispute that is more than one year old.

Once grades have been issued and credit awarded, neither the coursework nor the grade can be expunged from the student's record. Tuition will not be refunded without extenuating circumstances and approval of the Finance Committee.

STUDENT FINANCIAL AID

Student Eligibility Requirements
To receive financial aid, students must meet all of the federal eligibility requirements.

Students must:

- Have a high school diploma or recognized equivalent of a high school diploma.
- Be a U.S. citizen or an eligible non-citizen.
- Be enrolled in an eligible program (programs less than 36 units and 32 weeks of instruction are not eligible) and have their records evaluated by the Office of the Registrar (excludes non-degree studies and continuing education programs, which do not qualify for federal or state aid).
- Demonstrate financial need as determined by the federal methodology (excludes the federal unsubsidized Stafford Loan Program, Grad PLUS Program and Parent PLUS program).
- Have a valid Social Security Number.
- Maintain satisfactory academic progress (SAP), as defined by the university Financial Aid Office.
- Sign a Statement of Educational Purpose/ Certification Statement.
- Not owe an overpayment on any Title IV educational grant or be in default on a Title IV educational loan unless satisfactory payment arrangements are made to repay or otherwise resolve the overpayment or default.
- Complete the verification process, if selected to do so, by submitting a signed copy of federal tax forms and any other required documents.

A student's eligibility for any of the federal aid programs may be suspended or terminated by a court as part of a conviction for possessing or selling drugs.

ACADEMIC INFORMATION FOR UNDERGRADUATE DEGREES

ADMISSION PROCEDURES

Qualifications
Applicants for admission to an undergraduate program must meet the following requirements:

Freshman Admission Applicants:
- Must have attended a regionally accredited high

school*
- Must have a high school GPA of 2.0

High school applicants who are within six months of completing their high school diploma may be eligible for conditional admission. See Conditional Admission section below.

*Applicants who attended a non-regionally accredited high school or were home schooled must petition for admission approval.

Home Schooled Applicants
Undergraduate students who indicate they received their secondary school instruction through home schooling will be required to submit an official high school transcript with the following information:

- Student's name
- List and description of courses completed by grade level
- Grades earned for the courses completed
- Number of credits earned for each course
- Names of textbooks utilized in courses
- Signed by person who administered curriculum
- Graduation date (if applicable)

Students must also provide a letter from their state Department of Education or local school district confirming home school registration. If the student's home state requires that individuals who were home schooled take an exam to show high school completion, the student must submit official high school proficiency exam test scores to the Office of the Registrar. The student will not be required to submit an official high school transcript if providing official high school proficiency exam test scores.

Students will be considered to be provisionally accepted (see Provisional Acceptance section below) until receipt of the required documentation. Students may be allowed to take courses but should note that final verification of high school completion will be made by the Office of the Registrar at the time official high school transcripts are received. Students who are deemed to not have met the high school completion requirement will be required to submit official high school equivalency test scores prior to continued enrollment.

Transfer Applicants
- Applicants who have not earned an associate's degree from a regionally accredited institution or who have completed fewer than 90 quarter (60 semester) units of transferable college credit (remedial, fail, repeats, and excessive vocational/PE courses are nontransferable) must have graduated from high school, passed a high-school-level proficiency test (standard score for each section must be at least 410 with an overall score of 2250), or received a Certificate of Proficiency from a state Department of Education to be accepted on a provisional basis.
- Applicants transferring from regionally accredited colleges and universities are admitted as degree students if their cumulative Grade Point Average from all schools is 2.0 (C) or better.
- Applicants with a cumulative Grade Point Average below 2.0 may be admitted on probationary status if there is sufficient evidence of potential to complete college studies. See Probationary Admission section below. Students who have not attended a college in the last five years are exempted from this requirement.
- Students who have documents from a foreign country must request a foreign credential pre-evaluation to determine eligibility through their enrollment advisor.

All applicants must present preliminary evidence of prior education at the required interview with an enrollment advisor. Unofficial transcripts are acceptable.

All applicants to the University must also:

1. Complete an application for admission
2. Execute an enrollment agreement

If the University determines that a student does not meet stated admissions requirements, his/her studies will be interrupted. A policy exception must be approved for the above admissions requirements before the applicant can be accepted for admission to the University.

Probationary Admission
Applicants who have a cumulative Grade Point Average (GPA) below 2.0 may be accepted on probationary status. Students are ineligible for official admission and will not be processed for degree evaluation or financial aid until students have completed a minimum of 4.5 or a maximum of 13.5 quarter units of college level undergraduate courses with a cumulative GPA of 2.0. Students should be aware that remedial courses will not be calculated in cumulative GPA and should not be completed during the probationary period. Students admitted on probationary status are not permitted to schedule more than 13.5 quarter units during the probationary period. If the first required course in a student's degree program is taken using Satisfactory/Unsatisfactory (S/U) grading criteria, the student may schedule the S/U course and additional courses that issue a letter grade. Students are not permitted to enroll in other courses until official grades have been posted to their record and their probationary status has been lifted. Students should be aware that this

may mean a break in enrollment of one term (month) due to the timeframe for submission of grades by instructors. Students who fail to achieve a minimum cumulative GPA of 2.0 during the probationary period are not eligible for admission to the University. Probationary admission students are not eligible for financial aid. Students who have not attended a college for five or more years and have an incoming GPA of less than 2.0 are exempt from this requirement.

ACADEMIC INFORMATION FOR GRADUATE DEGREES AND CREDENTIALS ADMISSION PROCEDURES

Qualifications

Applicants for admission to a graduate or post-baccalaureate program, other than the Doctor of Nursing Practice, must meet one of the following five requirements:

1. Hold a bachelor's degree or higher from a regionally accredited college or university with an overall Grade Point Average of 2.5 or better, or a Grade Point Average of 2.75 or higher within the last 90 quarter units.
2. Hold a bachelor's degree or higher from a regionally accredited college or university with an overall Grade Point Average of 2.0 to 2.49 and a satisfactory score on one of the following tests:
    - » Minimum score of 550 on the Graduate Management Admission Test (GMAT)
    - » Minimum scores of 152 (verbal) and 147 (quantitative) on the Graduate Record Examination (GRE)
    - » Minimum score of 408-413 on the Miller Analogies Test
    - » An approved, standardized program-specific exam
3. Hold a bachelor's degree or higher from a regionally accredited college or university with an overall Grade Point Average of 2.0 to 2.49 and have successfully completed at least 13.5 quarter units of graduate-level coursework with grades of "B" or better at a regionally accredited institution.
4. Holders of a bachelor's degree or higher from a regionally accredited college or university with an overall Grade Point Average of 2.0 to 2.49 may be admitted on a probationary status. See the Probationary Admission section below for additional information. Students who received their bachelor's degree more than five years prior and have not attended a college are exempt from this requirement.
5. Applicants who are within six months of completing a baccalaureate degree may be eligible to apply for admission to National University. See Admission Prior to Completion of a Bachelor's Degree for more information. If an applicant is registered for graduate-level courses and it is determined that they did not complete the bachelor's requirements, the offer of admission will be rescinded.

Probationary Admission

Students whose undergraduate GPA was 2.0 to 2.49 may be accepted on probationary status. Students are ineligible for official admission and will not be processed for degree evaluation or financial aid until they have completed a minimum of 4.5 or a maximum of 13.5 quarter units of graduate study with a cumulative GPA of 3.0. Students admitted on probationary status are not permitted to schedule more than 13.5 quarter units during the probationary period. If the first required course in a student's degree program is taken using Satisfactory/ Unsatisfactory (S/U) grading criteria, the student may schedule the S/U course and additional courses that issue a letter grade. Students are not permitted to enroll in other courses until official grades have been posted to their record and their probationary status has been lifted. Students should be aware that this may mean a break in enrollment of one term (month) due to the timeframe for submission of grades by instructors. Students who fail to achieve a minimum cumulative GPA of 3.00 during the probationary period are not eligible for admission to the University. Probationary admission students are not eligible for financial aid. F-1 students are not eligible for probationary admission. Students who earned their bachelor's degree and have not attended a college in the last five years are exempt from this requirement.

COST AND FEES

TECHNOLOGY FEES

ACC 410A…… $94.00
ACC 654M ……...… $70.00
BIO 100 …… $35.00
CHE 350 ……..…….. $55.00
CSC 445 ……..…….. $64.00

COLLEGE OF LETTERS AND SCIENCES (COLS) ONLINE TECHNOLOGY FEE

CHE 101A ……..……. $243.46
CHE 149A …….. $138.94
CHE 150A ……..……. $207.90
PHS 104A ……..…….. $268.56
PHS 179A ……..……...$273.64

COLLEGE OF LETTERS AND SCIENCES (COLS) MASTER OF ARTS IN COUNSELING PSYCHOLOGY MFT PROGRAM FEE

PSY 611B $445.00

GRADUATE NURSING PROGRAM'S
Master of Science in Nursing
Post-Graduate Family Nurse Practitioner Certificate
Post-Graduate Psychiatric Mental-Health Nurse Practitioner Certificate

FNP 683A $1,330.00
FNP 683C $1,330.00
FNP 684A $1,330.00
FNP 684C $1,330.00
FNP 685A $1,330.00
FNP 685C $1,330.00
FNP 689 ..... $1,330.00
MNP 687..... $1,330.00
MNP 687C $1,330.00
MNP 688A $1,330.00
MNP 688C $1,330.00
MNP 694 ..... $1,330.00
MNP 694C $1,330.00
MNP 697 ..... $1,330.00
NSG 600 ..... $1,330.00
NSG 681 ..... $1,330.00

JFK SCHOOL OF PSYCHOLOGY

ORI 46 Coun Psy Practicum Data Mgmt…… $200.00
ORI 47 Sport Psy Fieldwork Data Mgmnt ……..$195.00

COLLEGE OF LETTERS AND SCIENCES

BACHELOR OF ARTS MAJOR IN HISTORY

Academic Program Director: Duncan Campbell; campbell2@nu.edu

The Bachelor of Arts in History is a broad-based program that has specific goals including: (1) engaging the mind and imagination of those who study history; (2) introducing students to worlds, times, places, and cultures – including their own – in ways they have never before considered; and (3) promoting the acquisition of historical knowledge and critical thinking, reading, writing, and research skills. Upon successful completion of the undergraduate history major, students should be able to demonstrate competency in the vital skills of historical explanation, discernment, and synthesis.

The study of the past broadens our perspective and allows us to discover the essential elements of human existence. The term historian covers a broad range of career options and job settings. In general, historians' study, assess, and interpret the past to determine what happened and why. They examine court documents, diaries, letters, and newspaper accounts; they conduct research, write, teach, evaluate, and make recommendations. They interview individuals and study artifacts and archaeological evidence.

In addition to providing experience in logical argumentation, history courses offer research, writing, and analytical skills necessary for many fulfilling careers. Graduates with a degree in history often become educators themselves and teach in elementary schools, secondary schools, or in postsecondary institutions. Beyond teaching, historians also work as researchers in museums and local historical organizations that deal with cultural resources management and historic preservation and make valuable contributions to government and private think tanks. A history degree is excellent preparation for journalists, ad writers, editors and anyone interested in producing multimedia materials and documentaries. Historians have rewarding careers as information managers such as archivists, records managers, and librarians. Finally, training in history creates a strong intellectual foundation for people interested in advocacy such as lawyers and paralegals, litigation support, legislative staff work, and nonprofit foundations. Positions that attract history majors will likely require some of the following qualifications beyond the Bachelor of Arts in History: experience, extensive knowledge of a particular time period or region, and specialized writing and research skills.

Program Learning Outcomes

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

- Assess the significance of major trends in World History.
- Assess the significance of major trends in U.S. History.
- Analyze a variety of primary sources.
- Analyze secondary sources for their arguments and use of supporting evidence.
- Discuss current concerns, new theories, new evidence, and issues that shape interpretation in history and the social sciences.
- Conduct research in history and the social sciences supported by appropriate primary and secondary source materials.

Degree Requirements

To receive a Bachelor of Arts with a Major in History, students must complete at least 180 quarter units as listed 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 70.5 units of the University General Education requirements. The following courses are degree requirements. In absence of transfer credit, additional general electives may be necessary to satisfy the total units required for the degree. Students should 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.

If the foreign language requirement is not completed in General Education, the equivalent must be completed as preparation for the History major either by testing or by satisfactorily passing two courses in one of the following languages: Arabic, Chinese, French, German, Japanese, Portuguese, Russian, or Spanish. Other languages are acceptable upon approval of the director of the program.

Preparation for the Major

(5 courses; 22.5 quarter units)

ENG 240 *	Advanced Composition *Prerequisite: ENG 100, and ENG 101*
HIS 220A *	United States History I *Prerequisite: ENG 100, and ENG 101*
HIS 220B *	United States History II *Prerequisite: ENG 100, and ENG 101*
HIS 233 *	World Civilizations I *Prerequisite: ENG 100, and ENG 101*
HIS 234 *	World Civilizations II *Prerequisite: ENG 100, and ENG 101*

** May be used to satisfy general education requirements*

Required for the Major

(10 courses; 45 quarter units)

HIS 431	The Ancient World *Prerequisite: ENG 100, ENG 101, and HIS 233*
HIS 432	The Classical World *Prerequisite: ENG 100, ENG 101, and HIS 233*
HIS 433	The Post-Classical World *Prerequisite: ENG 100, ENG 101, and HIS 233*
HIS 434	Modern World, 1500 to Present *Prerequisite: ENG 100, ENG 101, and HIS 234*
HIS 400	Historical Theories & Methods *Prerequisite: ENG 240*
HIS 360	American Colonial Experience *Prerequisite: ENG 100, ENG 101, and HIS 220A*
HIS 361	Making and Sundering of Union *Prerequisite: ENG 100, ENG 101, and HIS 220A*
HIS 362	U.S. Between Wars, 1865-1917 *Prerequisite: ENG 100, ENG 101, and HIS 220B*
HIS 363	U.S. Since World War I *Prerequisite: ENG 100, ENG 101, and HIS 220B*
HIS 499	Capstone Research Project *Prerequisite: ENG 240 or equivalent, HIS 400, and completion of 31.5 quarter units of core courses in the major*

Upper Division Electives
(6 courses; 27 quarter units)

Students must complete a minimum of 27 quarter units of electives to fulfill the upper-division unit requirements to earn the Bachelor of Arts in History. Students can select from the following strongly recommended and recommended electives OR choose from any upper-division course in the College of Letters and Sciences. Three elective courses must be in the History program (HIS). To ensure adequate preparation for the California State Examination for Teachers (CSET), students who wish to become middle-school and high-school history teachers in California should take all of their electives from the strongly recommended list.

Strongly Recommended:

HIS 320	Culture of Global Capitalism *Prerequisite: ENG 100, ENG 101*
SOC 350*	Cultural Diversity *Prerequisite: ENG 100, and ENG 101*
HIS 410	California History *Prerequisite: ENG 100, ENG 101*
PHL 320*	World Religions *Prerequisite: ENG 100, and ENG 101*
POL 540	American Political System
SCI 300*	Geography

Recommended:

GLS 410	Gender and Global Society *Prerequisite: ENG 240*
GLS 420	Ecological Revolutions *Prerequisite: ENG 240*
GLS 430	The Global Economy *Prerequisite: ENG 240*
HIS 325	Modern World Migration *Prerequisite: ENG 100, ENG 101*
HIS 342	History of Modern Middle East *Prerequisite: ENG 100, ENG 101*
HIS 345	Latin American Studies *Prerequisite: ENG 100, ENG 101*
HIS 348	Asian Studies *Prerequisite: ENG 100, ENG 101*
HIS 349	African Studies *Prerequisite: ENG 100, ENG 101*
HIS 490	Guided Study (variable units)
MUS 326*	American Music *Prerequisite: ENG 100, and ENG 101*
SOC 325	Popular Culture *Prerequisite: ENG 100, and ENG 101*
SOC 328	Intercultural Thinking *Prerequisite: ENG 100, and ENG 101*
SOC 336	American Film and Society *Prerequisite: ENG 100, and ENG 101*
GLS 310	Global Communications *Prerequisite: ENG 240*
GLS 330	Film in a Global Context *Prerequisite: ENG 240*
GLS 440	Study Abroad *Prerequisite: HIS 320*

**May be used to satisfy general education requirements*

MASTER OF ARTS IN COUNSELING PSYCHOLOGY
Academic Program Director: Brian Tilley; btilley@nu.edu

The Master of Arts in Counseling Psychology degree provides the academic pathway for students who are committed to the practice of professional counseling. All students must complete the course work in Marriage and Family Therapist (MFT) during their program. The MFT sequence emphasizes marriage and family therapy and is designed for students who are committed to the practice of individual, couples, family, adolescent, and child psychotherapy. This course work meets the academic requirements necessary to sit for the Marriage and Family Therapist (MFT) License mandated by the Board of Behavioral Sciences in the state of California.

Students who are interested in also pursuing the Licensed Professional Clinical Counselor (PCC) pathway will complete three (3) additional courses at the end of their program, or where appropriate in their individual schedule, upon consultation with their Academic Program Director. The PCC pathway is designed to allow students to sit for licensing as both an LMFT and an LPCC (Licensed Professional Clinical Counselor). The PCC courses emphasize counseling techniques and theories, including those related to career development, and is designed for students who are committed to the practice of individual and group counseling. This version of the degree meets the academic requirements to be eligible for licensing as a professional clinical counselor by the Board

of Behavioral Sciences in the state of California.
The degree may not meet requirements in other states. Students should consult the licensing boards of the appropriate states for information about licensure outside of California. The degree also prepares students for the pursuit of doctoral studies in practitioner-oriented programs such as counseling or clinical psychology.

Application Requirements
Students interested in enrolling in this program should contact the appropriate campus for further information regarding the application process.

To be considered for admission, applicants must meet the University graduate admission requirements listed in the general information section of the catalog, as well as the MAC program criteria. All applicants are evaluated for the psychotherapy profession, regardless of career goals. Students must submit an application packet, pass a personal interview, and attend the program orientation before they may begin classes.

Students for whom English is not their primary language must take the Test of English as a Foreign Language (TOEFL) exam and receive one of the below scores before beginning the program:

Paper-based - 550
Computer-based - 213
Internet Based - 79

Students must submit their TOEFL score with their application.

Students should consult the regional faculty to determine at what point in the sequence they may enter the program. Entrance points may differ in each region.

Program Fees

There is a fee of $445.00 assessed during PSY 611B for materials that are integrated into program courses and designed to assist students in the preparation for the California licensing examination for LPCC or LMFT.

For online students, additional fees apply to residency workshops. A fee of $90.00 is assessed during the months when PSY 628 and PSY 611B are offered online. The student's Academic Program Director will inform the student of the residency workshops' location upon acceptance into the program.

Costs for accommodations are not included in the tuition or fees. Students are responsible for arranging their own meals, accommodations, and transportation.

Program Requirements

- Students must complete a minimum of 10 hours of individual, marital, family, and group psychotherapy before taking PSY 611B and another 15 hours before graduation for a total of 25 hours.
- Students must obtain a total of 225 hours (MFT Option) or 280 hours (Combined Option) of face-to-face counseling experience at an approved practicum site with a designated practicum site supervisor during the practicum class.
- Students who do not have an undergraduate degree in psychology must take PSY 501A and PSY 501B as the first two courses in their program.
- Under exceptional circumstances requests for independent studies in courses without experiential clinical work may be considered for approval by the department.
- Students seeking licensure in California must register with the Board of Behavioral Sciences (BBS) after graduation and fulfill all BBS licensing requirements for the license relevant to the student's MAC sequence option.
- Students are also urged to join a professional association. Students in the MFT track should consider joining the California Association of Marriage and Family Therapy and/or the American Association of Marriage and Family Therapists. Students in the PCC track should consider joining the American Counseling Association and/or the California Association for Licensed Professional Clinical Counselors. Students must obtain malpractice insurance, which may be obtained through the relevant association listed above or another professional organization.
- Students must complete all coursework within seven years. Any courses taken more than seven years ago must be repeated.
- In regional offerings of the program where applicable, students in the Master of Arts in Counseling Psychology may choose to take a regular evening course simultaneously with PSY 680A or PSY 680B.

NOTE: The courses in the online version of the program are designed to be completely asynchronous. However, there are two exceptions: the skills development residencies and practicum consultation. The practicum sequence in the online program includes a required video presentation and live consultation with faculty each week. The schedule for these requirements differs by instructor and situation; online students are encouraged to reach out to practicum instructors to learn more about the specifics of the consultations.

The program is guided by the standards of the California Board of Behavioral Sciences for academic training

relevant to licensing as a Marriage and Family Therapist in the State of California (MFT Sequence) or as a Licensed Professional Clinical Counselor (Combined Option), and by contemporary scientific, professional, and public practice. At the completion of the program students will achieve the following outcomes required for successful practice of Marriage and Family Therapy (MFT Sequence) or Professional Clinical Counseling (PCC Sequence).

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

- Demonstrate core psychological concepts and therapeutic skills that underpin counseling, psychotherapy, and mental health counseling.
- Critically evaluate the relevant methods of research used in the study of behavior and their limitations.
- Understand and demonstrate current professional standards of ethics, values, and laws related to the practice of professional psychotherapists.
- Demonstrate cultural competence in addressing the mental health needs of people of diverse backgrounds and circumstances, including an appreciation for the wide cultural diversity among California's multiple diverse communities.
- Evaluate psychological distress and/or impairment, mental disorders, and problems in living in diverse individuals and systems within various mental health settings.
- Develop culturally appropriate strategies, treatment plans, and professional relationships for successful interventions with diverse client groups in various clinical contexts.
- Apply related therapeutic interventions with diverse clients using a variety of psychotherapeutic models.
- Apply a working knowledge of a range of topics important to mental health practice including (but not limited to) psychopharmacology, addictive and compulsive disorders, structured psychological assessment, relational violence, gender and sexuality, and trauma/crisis.
- Understand norms and principles of public mental health work including (but not limited to) case management, collaborative treatment, evidence-based practice, strength-based model, resiliency, and recovery-oriented care to work with clients.
- Integrate professional development through self-reflection emphasizing personal capacities such as self-awareness, integrity, sensitivity, flexibility, insight, compassion, imagination, and personal presence.

Degree Requirements
To receive the Master of Arts in Counseling Psychology, students must complete at least 90 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 if the units were not used in earning another advanced degree. Students for whom English is a second language must take and pass an English Language Proficiency exam prior to beginning any coursework. Students should refer to the section on graduate admission for specific information regarding additional application and evaluation requirements.

Online students have a residency requirement of two, three day meetings (Thursday through Saturday) during the PSY 628 and PSY 611B. These residencies are the only onsite requirement of the online program. The residencies are focused on experiential learning related to the development of psychotherapy skills.

Prerequisites for the Major
(2 courses; 9 quarter units)
Students who hold a bachelor's degree in Psychology may request these courses to be waived. Please contact the Lead Faculty.

PSY 501A	Foundations in Counseling I
PSY 501B	Foundations in Counseling II

Core Requirements I
(6 courses; 27 quarter units)
Students will take classes from this sequence, then take 3 area of specialization courses, Core Course Sequence II.

PSY 605	Lifespan Development *Prerequisite: Bachelor's Degree in Psychology, or PSY 501A, and PSY 501B*
PSY 620	Perspectives on Psychology *Prerequisite: Bachelor's Degree in Psychology, or PSY 501A, and PSY 501B*
PSY 610	Case Management *Prerequisite: Bachelor's Degree in Psychology, or PSY 501A, and PSY 501B*
PSY 611A	Counseling Paradigms I *Prerequisite: Bachelor's Degree in Psychology, or PSY 501A, and PSY 501B*
PSY 612A	Clinical Assessment I
PSY 612B	Clinical Assessment II *Prerequisite: PSY 612A*

MFT Core Requirements II
(3 courses; 13.5 quarter units)

Students interested in becoming a Licensed Marriage and Family Therapist will take these courses between Core Sequence I and III.

PSY 636	Child and Adolescent Therapy
PSY 632A	Family Therapy

PSY 632B	Couples Therapy

Core Requirements III
(11 Courses; 49.5 quarter units)

PSY 627	Legal & Ethical Issues
PSY 611B	Counseling Paradigms II
PSY 680A	Counseling Practicum I *Prerequisite: PSY 611B with a minimum grade of S*
PSY 628	Group Therapy
PSY 637	Cultural Competencies
CHD 640	Treatment of Addictions
PSY 626	Human Sexuality
PSY 679	Psychology of Trauma
PSY 680B	Counseling Practicum II *Prerequisite: PSY 680A*
PSY 678	Clinical Biopsychology
PSY 638	Wellbeing & Wellness

Optional Sequence IV: PCC Option
(3 courses; 13.5 quarter units)
Students interested in becoming a Licensed Professional Clinical Counselor will take these courses after Core Sequence III.

PSY 653	Research and Evaluation
PSY 624A	Testing and Assessment
CED 612	Career & Academic Counseling

COLLEGE OF PROFESSIONAL STUDIES

PROGRAM TERMINATION

- Bachelor of Science Major in Information Technology Management

BACHELOR OF ARTS MANAGEMENT
Academic Program Director: Timothy Pettit; tpettit@nu.edu

The Bachelor of Arts in Management provides students a business related degree with an emphasis on managing organizations and personnel in a multicultural and global setting. To achieve maximum flexibility, the major in management program minimizes prerequisites, enabling students to take the required courses in any sequence. Students are also offered several areas of concentration.

Bachelor of Arts in Management Transition Programs

Students must complete graduate-level coursework taken as part of the BAM degree with a grade of B or better. This coursework, which counts as electives, will not transfer as graduate-level credit to National University or any other institution as it is part of an undergraduate degree program. Grades earned in graduate level courses will be calculated as part of the student's undergraduate grade point average. Students must be within completing their last six courses in their undergraduate program and have a cumulative GPA of at least 3.00 to be eligible. Lastly, students must apply for and begin the appropriate Masters program within six months after completing their final BAM course. Students must complete their Masters program within four years with no break exceeding 12 months.

The Bachelor of Arts in Management/Master of Business Administration (BAM/MBA) Transition Program

Students in the BAM/MBA transition program may take up to three MBA classes as electives during the BAM. Students may choose from any course in the MBA Core curriculum in which all prerequisites are met (MKT 602, IBU 606, MGT 603, MGT 608, ACC 604, ECO 607, FIN 609A). The number of courses required to earn an MBA degree for transition program students is reduced from 12 to as few as 9 courses, depending on classes selected and grades earned.

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

- Describe the basic functions of management on the operations of the organization.
- Employ management theories toward planning, organizing, leading and controlling organizations.
- Apply organizational theories to enact positive change.
- Explain the effect of international business environmental factors on the conduct of global business.
- Apply the principles of ethical decision-making in the everyday conduct of business.

Degree Requirements
To receive a Bachelor of Arts in Management, 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 70.5 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. Refer to the section of 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.

Preparation for the Major
(3 courses; 13.5 quarter units)

ECO 203*	Principles of Microeconomics
ECO 204*	Principles of Macroeconomics
LAW 204	Legal Aspects of Business I

** May be used to meet General Education requirements*

Requirements for the Major
(10 courses; 45 quarter units)

MGT 309	Prin. of Mgmt & Organizations
MKT 302A	Marketing Fundamentals
MGT 351	Process Improvement Management
BIM 400	Info Mgmt in Organizations
IBU 430	Survey of Global Business *Prerequisite: ECO 203, and ECO 204*
LED 400	Introduction to Leadership
ODV 420	Intro to Organizational Behavi
HRM 409B	Survey in HRM & OD
MGT 400	Ethics in Law, Business & Mgmt
MGT 480	Capstone: Strategic Bus Mgt *Prerequisite: To enroll in MGT 480, students must complete all "Preparation for the Major" courses and all other courses listed as "Requirements for the Major."*

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

BAM students can choose Upper-Division electives ONLY from any of the concentrations listed below or appropriate elective courses to satisfy the total upper-division units for the degree in the following prefix areas: ACC, ADR, BKM, ECO, FIN, HRM, LAW, LED, MGT (except MGT 451), MKT, MNS, ODV, and PBM. Other options are invalid.

Non-business Minors are prohibited from satisfying this requirement.

BAM students **CANNOT** take MGT 451.

To see concentration requirements, reference catalog 83

- Concentration in Alternative Dispute Resolution
- Concentration in Business Law
- Concentration in Economics
- Concentration in Entrepreneurship
- Concentration in Human Resource Management
- Concentration in Marketing Concentration
- Concentration in Project Management

BACHELOR OF BUSINESS ADMINISTRATION

Academic Program Director: Nelson Altamirano; naltamirano@nu.edu

The Bachelor of Business Administration (BBA) degree prepares students for career opportunities and advancement in business and industry. Successful completion of lower- and upper-division BBA requirements ensures that graduates comprehend the relationships among marketing, quantitative theory, accounting, economic principles and financial, human and organizational management. The BBA gives students an opportunity to specialize in designated fields by pursuing concentrations and minors, or to choose an individualized set of general BBA electives.

Bachelor of Business Administration Transition Programs
Students in these programs must complete graduate-level coursework taken as part of the BBA degree with a grade of B or better. This coursework, which counts as electives, will not transfer as graduate-level credit to National University or any other institution as it is part of an undergraduate degree program. Grades earned in graduate level courses will be calculated as part of the student's undergraduate grade point average. Students must be within completing their last six courses in their undergraduate program and have a cumulative GPA of at least a 3.00 to be eligible. Lastly, students must apply for and begin the appropriate Masters program within six months after completing their final BBA course. Students must complete their Masters program within four years with no break exceeding 12 months.

Bachelor of Business Administration/Master of Business Administration (BBA/MBA) Transition Program

Students in the BBA/MBA transition program may take up to three MBA classes as electives during the BBA. Students may choose from any course in the MBA Core curriculum in which all prerequisites are met. The number of courses required to earn an MBA degree for transition program students is reduced from 12 to as few as 9 courses, depending on classes selected and grades earned.

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

- Apply ethical and legal principles to a business environment
- Apply skills and knowledge in the areas of business math, economics, accounting, finance, and operations management needed to make sound business decisions
- Apply knowledge in the fields of management, information systems, and marketing to different business environments

- Apply the knowledge acquired in the program for the analysis of strengths, weaknesses, and potential improvements in a business
- Utilize writing, presentation, research and teamwork skills expected of a business-school graduate at the bachelors-level
- Examine a global business perspective based on the knowledge of foreign business environments and cultures

Degree Requirements

To receive a BBA, 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 70.5 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. 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.

Preparation for the Major
(7 courses; 31.5 quarter units)

MNS 205 must be taken if students do not have transfer credits for MNS 205, MTH 215, or MTH 220.

MNS 205 *	Intro to Quantitative Methods
or	
MTH 215 *	College Algebra & Trigonometry *Prerequisite: Accuplacer test placement evaluation, or MTH 12A, and MTH 12B*
or	
MTH 220 *	Calculus I *Prerequisite: MTH 215, or Accuplacer test placement, or MTH 216B*
and	
MTH 210 *	Probability and Statistics *Prerequisite: Accuplacer test placement evaluation, or MTH 12A, and MTH 12B*
ECO 203 *	Principles of Microeconomics
ECO 204 *	Principles of Macroeconomics
ACC 201	Financial Accounting Funds.
ACC 202	Managerial Accounting Funds. *Prerequisite: ACC 201*
LAW 204	Legal Aspects of Business I

** May be used to meet General Education requirements*

Requirements for the Major
(10 courses; 45 quarter units)

MGT 309	Prin. of Mgmt & Organizations
MKT 302A	Marketing Fundamentals
BIM 400	Info Mgmt in Organizations
FIN 310	Business Finance *Prerequisite: ACC 201*
MGT 400	Ethics in Law, Business & Mgmt
MNS 407	Management Science *Prerequisite: MNS 205, and MTH 210*
MGT 451	Production & Ops Management *Prerequisite: MNS 407*
IBU 430	Survey of Global Business *Prerequisite: ECO 203, and ECO 204*
BUS 485A	Capstone Strat Bus Policy I *Prerequisite: MNS 205 or, MTH 215 or, MTH 220 and, MTH 210, ECO 203, ECO 204, ACC 201, ACC 202, LAW 204, BIM 400, MGT 309, MGT 400, FIN 310, MNS 407, MKT 302A, IBU 430, MGT 451*
BUS 485B	Capstone Strat Bus Policy II *Prerequisite: BUS 485A with a minimum grade of C*

Upper-Division Electives
(7 courses; 31.5 quarter units)

BBA students can choose upper-division electives ONLY from any of the concentrations listed below, and/or appropriate elective courses to satisfy the total upper-division units for the degree in the following prefix areas: ACC, BIM, BUS, ECO, FIN, HRM, LAW, LED, LOG, MGT (except MGT 351), MKT, MNS, ODV, HUB, and SCM. Other options are invalid.

Non-business minors are prohibited from satisfying this requirement.

BBA students **CANNOT** take MGT 351.

Recommended Electives

FIN 446	International Financial Mgmt *Prerequisite: FIN 310*
FIN 440	Financial Institutions *Prerequisite: FIN 310*
HRM 409B	Survey in HRM & OD
HRM 432	Recruit, Selection, Promo, Ret
HRM 439	Legal, Reg, & Labor Relation C
LAW 305	Legal Aspects of Business II *Prerequisite: LAW 204*
MGT 422	Team Bldg, Interpers Dynamics
MKT 430	Intro to Global Marketing *Prerequisite: MKT 302A*
MKT 434	Intro to Market Research *Prerequisite: MKT 302A*
MKT 443	Introduction to Advertising *Prerequisite: MKT 302A*

Concentration in Accounting
Academic Program Director: Consolacion Fajardo; cfajardo@nu.edu

This concentration is designed for those majoring in business administration with its broad base of business-related disciplines, but who also wish to gain the intermediate-level accounting knowledge and skills appropriate for careers in the accounting and finance departments of a business, nonprofit, or government entity.

Students are encouraged to seek a nationally recognized accounting designation such as the CMA (Certified Management Accountant) or CFM (Certified in Financial Management). Those who are considering a CPA designation (Certified Public Accountant) are best served by enrolling in the B.S. in Accounting degree program.

Students are strongly advised to contact the above-named Academic Program Director for guidance and recommendations as to academic preparation that will best meet their career objectives.

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

- Use information technologies and computerized accounting software for financial accounting and tax reporting.
- Apply generally accepted accounting principles to measure and report information related to accounting for assets, liabilities, and equities, revenue and expenses, and cash flows of business enterprises and governmental and not-for-profit entities.
- Interpret cost data and prepare managerial accounting reports.

Requirements for the Concentration
(6 courses; 27 quarter units)
Students must successfully complete the required courses as specified below. Note: all students must have successfully completed ACC 201 and ACC 202 with a grade of "C" or better before enrolling in any of the six required accounting courses

ACC 410A	Intermediate Accounting I *Prerequisite: ACC 201*
ACC 410B	Intermediate Accounting II *Prerequisite: ACC 410A*
ACC 410C	Intermediate Accounting III *Prerequisite: ACC 410B*
ACC 432A	Taxation-Individual *Prerequisite: ACC 431*
ACC 433	Managerial Accounting *Prerequisite: ACC 202*
ACC 434	Government and Nonprofit Acct *Prerequisite: ACC 201*

To see additional BBA Concentration requirements, reference Catalog 83.

- Concentration in Alternative Dispute Resolution
- Concentration in Business Law
- Concentration in Economics
- Concentration in Entrepreneurship
- Concentration in Finance
- Concentration in Human Resource Management
- Concentration in Logistics and Supply Chain Management
- Concentration in Marketing
- Concentration in Project Management

BACHELOR OF SCIENCE in ACCOUNTING
Academic Program Director: Consolacion Fajardo; cfajardo@nu.edu

The major in accounting academically prepares students for a wide range of accounting-related careers, including public accounting, corporate accounting, internal audit, accounting in not-for-profit organizations, and job opportunities with state, local, and federal government agencies. The curriculum aligns with content specifications for various professional exams including CPA, CMA, and CIA. All students are advised to contact a full-time faculty member for a brief interview by phone or personal visit for the purpose of reviewing the student's career objectives.

Bachelor of Science in Accounting to Master of Business Administration (BS ACC/MBA) Transition Program

Students who are currently enrolled in the Bachelor of Science in Accounting program, have at least a cumulative GPA of 3.0, and are within six courses of graduation may register for the BS ACC/MBA transition program. Students in the BS ACC/MBA transition program may take up to three MBA classes as electives during the BS ACC. Students can select any three graduate-level accounting courses for which required course prerequisites (if any) have been met, or may select from the following MBA core courses: ECO 607, IBU 606, and MGT 603. Students must complete graduate-level coursework taken as part of the BS ACC degree with a grade of B or better. This coursework, which counts as electives in the BS ACC, will not transfer as graduate-level credit to National University or any other institution as it is part of an undergraduate degree program. Grades earned in graduate level courses will be calculated as part of the student's undergraduate grade point average. Students must apply for and begin the MBA program within six months after completing their final BS ACC course. The number of courses required to earn a MBA degree for transition program students is reduced from 12 to as few as 9 courses, depending on classes selected and grades earned. Students must complete their MBA program within four years with no break exceeding 12

months.

Online Course Availability
All coursework in this program can be taken online. Most online courses offer one or two live voice/visual evening sessions per week, in which instructors orally explain important concepts, visually illustrate problem-solving techniques, and respond to student questions. These sessions are recorded so that students who are unable to attend at the scheduled time can play back the video recording at a convenient time.

Program Disclosure Information
The Bachelor of Science in Accounting program is currently operating using guidelines only from the California Board of Accountancy. For students who wish to become a CPA-, CMA- or CIA-certified please see appropriate organizational website.

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:

- Utilize current technologies for presenting and analyzing accounting information
- Demonstrate mastery of a common body of accounting knowledge
- Develop ethical sensitivity to accounting scenarios
- Employ effective communication of accounting information
- Research issues to support critical assessment of accounting information
- Operate effectively in group settings to enhance student learning

Degree Requirements
To receive a Bachelor of Science with a major in Accounting, 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 70.5 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. Refer to the section of undergraduate admission requirements 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.
Students who have completed the California Community College Associate in Science in Business for Transfer (AS-T) degree by completing the Transfer Model Curriculum (TMC) for business, will have completed the lower division requirements of the University General Education requirements and the Preparation for the Major".

Preparation for the Major
(6 courses; 27 quarter units)

MNS 205*	Intro to Quantitative Methods
or	
MTH 215*	College Algebra & Trigonometry *Prerequisite: Accuplacer test placement evaluation, or MTH 12A, and MTH 12B*
and	
ECO 203*	Principles of Microeconomics
ECO 204*	Principles of Macroeconomics
LAW 204	Legal Aspects of Business I
ACC 201 ^	Financial Accounting Funds.
ACC 202	Managerial Accounting Funds. Prerequisite: ACC 201

**May be used to meet General Education requirements*
^ Eligible for Credit-by-exam waiver: Contact Program Director

Prerequisite for all Accounting Courses
Students must have completed ACC 201 or its equivalent with a minimum grade of "C" within two years of taking any of the following accounting courses, unless a grade of 75 or better is received on an appropriate challenge exam.

Requirements for the Major
(17 courses; 76.5 quarter units)

Business Requirements
(4 courses; 18 quarter units)

BIM 400	Info Mgmt in Organizations
MGT 309	Prin. of Mgmt & Organizations
FIN 310	Business Finance *Prerequisite: ACC 201*
and	
MKT 302A	Marketing Fundamentals
or	
IBU 430	Survey of Global Business *Prerequisite: ECO 203, and ECO 204*
or	
MNS 407 ^	Management Science *Prerequisite: MNS 205*

^ Recommended for students considering the CPA or CMA designation

Accounting Requirements
(13 courses; 58.5 quarter units)

ACC 410A	Intermediate Accounting I *Prerequisite: ACC 201*
ACC 410B	Intermediate Accounting II *Prerequisite: ACC 410A*

ACC 410C	Intermediate Accounting III *Prerequisite: ACC 410B*
ACC 431	Advanced Accounting *Prerequisite: ACC 410C*
ACC 432A	Taxation-Individual *Prerequisite: ACC 431*
ACC 432B	Taxation-Business *Prerequisite: ACC 432A*
ACC 433	Managerial Accounting *Prerequisite: ACC 202*
ACC 434	Government and Nonprofit Acct *Prerequisite: ACC 201*
ACC 436	Applied Tech for Accountants *Prerequisite: ACC 201*
ACC 515	Accounting Ethics
ACC 555	Data Analytics
ACC 435A	Auditing I *Prerequisite: ACC 431*
ACC 435B	Auditing II *Prerequisite: ACC 435A*

BACHELOR OF SCIENCE IN CLINICAL LABORATORY SCIENCE

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 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 70.5 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.

Preparation for the Major

(11 courses; 40.5 quarter units)

BIO 161 *	General Biology 1
BIO 201 *	Human Anatomy and Physiol I *Corequisite: BIO 201A, Recommended: Prior completion of: BIO 100, BIO 100A, CHE 101, CHE 101A*
BIO 201A *	Human Anatomy and Physiol Lab I (1.5 quarter units) *Corequisite: BIO 201* *Recommended: Prior completion of: BIO 100, BIO 100A, CHE 101, CHE 101A or equivalent courses.,*
BIO 203 *	Introductory Microbiology *Corequisite: BIO 203A* *Recommended prior completion of: BIO 201, and BIO 201A, BIO 202, and BIO 202A, BIO 100, and BIO 100A, CHE 101, and CHE 101A or equivalent courses*
BIO 203A *	Introductory Microbiology Lab (1.5 quarter units) *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*
CHE 150	Introductory Organic Chemistry *Prerequisite: CHE 101, and CHE 101A, or CHE 141, and CHE 142, and CHE 143, and CHE 149A*
CHE 150A	Introductory Organic Chem Lab (1.5 quarter units) *Corequisite: CHE 150*

CHE 141	General Chemistry 1 *Prerequisite: MTH 215 or equivalent*
CHE 142 *	General Chemistry 2 *Prerequisite: CHE 141*
CHE 350	Organic Chemistry I *Prerequisite: CHE 142*
PHS 104 *	Introductory Physics *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
CLS 320	Clinical Lab Management
CLS 301	Clinical Biochemistry *Recommended: Prior completion of: CHE 142*
CLS 401	Quantitative Analysis *Recommended: Prior completion of: CHE 142*
CLS 305	Clinical Immunology *Recommended: Prior completion of: CHE 101, BIO 161, BIO 203 or equivalent*
CLS 315	Molecular Diagnostics *Recommended: Prior completion of: BIO 162, and CHE 142*
CLS 310	Clinical Virology *Recommended: Prior completion of: BIO 161, BIO 203 or equivalent, CHE 101*
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*
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*
CLS 495	Clinical Lab Science Capstone *Prerequisite: Must have completed all required core classes.*

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 101*
HSC 300	Legal/Ethical Issues & Health
HSC 310	Issues & Trends in Healthcare
HSC 400	Mgmt for Health Professionals
HSC 410	Informatics for Health Profs
HSC 420	Healthcare Research

BACHELOR OF SCIENCE IN COMPUTER SCIENCE

Academic Program Director: Alireza Farahani; afarahan@nu.edu

The Bachelor of Science in Computer Science degree program provides a strong technical background for students planning to begin careers upon graduation and for those interested in graduate study in computer science. Degree requirements include courses in object-oriented programming, data structures and algorithms, operating systems, computer communication networks, software engineering, and computer architecture, as well as mathematics, statistics, and the natural sciences. The program features a rigorous academic foundation that is complemented by realistic programming assignments. Emphasis is placed on developing both the technical and design skills necessary to begin and enhance an individual's career. Graduates of this program are well prepared for immediate employment in either the computer industry or many other businesses that increasingly rely on computer science.

The Bachelor of Science in Computer Science Program Educational Objectives are as follows.

Within a few years of graduation, graduates are expected to be:

- Engaged and active as responsible professionals pursuing diverse career paths or successfully continuing their education in graduate school
- Participating in continuing education opportunities enabling them to understand and apply new ideas and technologies in the field of computing
- Effective communicators and team members
- Active contributors to their community and their profession

Bachelor of Science in Computer Science/Master of Science in Computer Science (BSCS/MSCS) Transition Program

Students must complete graduate-level coursework taken as part of the BSCS degree with a grade of B or better. This coursework, which counts as electives, will not transfer as graduate-level credit to National University or any other institution as it is part of an undergraduate degree program. Grades earned in graduate level courses will be calculated as part of the student's undergraduate grade point average. Students must be within completing their last six courses in their undergraduate program and have a cumulative GPA of at least 3.00 to be eligible. Lastly, students must apply for and begin the MSCS program within six months after completing their final BSCS course. Students must complete their MSCS

program within four years with no break exceeding 12 months. Students in the BSCS transition program may take up to two MSCS classes as electives during the BSCS. Students may choose from the following courses: CSC 603, CSC 605, CSC 675, CSC606, and CSC607. The number of courses required to earn an MSCS degree for transition program students is reduced from 12 to as few as 10 courses.

Program Learning Outcomes

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

- Analyze a complex computing problem and to apply principles of computing and other relevant disciplines to identify solutions.
- Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline.
- Communicate effectively in a variety of professional contexts.
- Recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles.
- Function effectively as a member or leader of a team engaged in activities appropriate to the program's discipline.
- Apply computer science theory and software development fundamentals to produce computing-based solutions.

Degree Requirements

To receive a Bachelor of Science in Computer Science, students must complete at least 180 quarter units to include a minimum of 70.5 units of the University General Education requirements; 76.5 quarter units must be completed at the upper-division level, and 45, including the senior project courses (CSC 480A, CSC 480B & CSC 480C), must be taken in residence at National University. In the absence of transfer credit, students may need to take additional general electives to satisfy the total units for the degree. Students should refer to the section on undergraduate admission procedures for specific information on admission and evaluation. All students receiving an undergraduate degree in Nevada are required by State Law to complete a course in Nevada Constitution.

Prerequisites for the Major

(10 courses; 42 quarter units)

Students must select one (1) science related lecture and one (1) lab course from Area F of the General Education for a total of 6 quarter units. The course/lab combination must be intended for science and engineering majors and develop an understanding of the scientific method (PHY104 and PHY104A or PHY130A are recommended).

MTH 215*	College Algebra & Trigonometry *Prerequisite: Accuplacer test placement evaluation , or MTH 12A, and MTH 12B*
CSC 208*	Calculus for Comp. Science I *Prerequisite: MTH 215*
CSC 209	Calculus for Comp. Science II *Prerequisite: CSC 208*
CSC 220	Applied Probability & Stats. *Prerequisite: CSC 208, or MTH 220 or permission of the Academic Program Lead, EGR 220, or Permission of Academic Program Lead*
CSC 242 *	Intro to Programming Concepts *Prerequisite: MTH 215*
CSC 252 *	Programming in C++ *Prerequisite: CSC 242*
CSC 262 *	Programming in JAVA *Prerequisite: MTH 215*
CSC 272	Advanced Programming in Java *Prerequisite: CSC 262*

** May be used to meet a General Education requirement.*

Requirements for the Major

(18 courses; 78 quarter units)

CSC 300	Object Oriented Design *Prerequisite: CSC 252, or CSC 272*
CSC 350	Computer Ethics
EGR 320	Scientific Problem Solving *Prerequisite: CSC 208, or EGR 220*
CSC 310	Linear Algebra and Matrix Comp *Prerequisite: CSC 252, or CSC 272*
CSC 331	Discrete Structures and Logic *Prerequisite: CSC 252, or CSC 272*
CSC 335	Data Structures and Algorithms *Prerequisite: CSC 300, CSC 331*
CSC 338	Algorithm Design *Prerequisite: CSC 335*
CSC 340	Digital Logic Design *Corequisite: CSC 340L* *Prerequisite: CSC 331,*
CSC 340L	Digital Logic Design Lab (1.5 quarter units) *Corequisite: CSC 340, Prerequisite: CSC 331*
CSC 342	Computer Architecture *Prerequisite: CSC 340, and CSC 340L*
CSC 400	OS Theory and Design *Prerequisite: CSC 335*
CSC 422	Database Design *Prerequisite: CSC 300*
CSC 436	Comp. Communication Networks *Prerequisite: CSC 331*
CSC 430	Programming Languages *Prerequisite: CSC 300*
CIS 474	Information Systems Security *Prerequisite: CIS 350, CIS 423*
CSC 480A	Computer Science Project I *Prerequisite: Completion of requirements for the major EXCEPT CSC340/CSC340L, CSC342, ITM470*

CSC 480B	Computer Science Project II *Prerequisite: CSC 480A*
CSC 480C	Computer Science Project III *Prerequisite: CSC 480B*

Approved Electives
(2 courses; 9 quarter units)

Students must complete two 400 level technical electives, these electives can be taken from the computer science, computer information systems, or information technology management programs without duplicating any of the core courses.

CIS 430	Web/EB Design & Development
CIS 460	Human Factor /Ergonomic Design
CIS 475	Big Data and Cloud Computing *Prerequisite: CSC 422*

BACHELOR OF SCIENCE IN CYBERSECURITY
Academic Program Director: William Reid; wreid2@nu.edu

The Bachelor of Science in Cybersecurity (BSCYB) program is designed to meet the increasing demand for cybersecurity professionals. This program is designed to provide students with an understanding of basic information technology management concepts and fundamental security skills. Students will also learn the legal and ethical issues associated with cybersecurity. Graduates are prepared for positions in the areas of security analysts, computer network defenders, and computer incident responders. Once students have completed the core cybersecurity classes, they will choose a four class concentration in Computer Network Defense or Digital Forensics.

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

- Analyze a problem and design the cybersecurity measures appropriate to its solution.
- Apply concepts of best practices in cybersecurity management to enterprise processes.
- Describe the ethical challenges that confront a cybersecurity professional.
- Apply security control principles in the construction of cybersecurity solutions.
- Demonstrate written and oral communication skills expected of a cybersecurity professional.
- Demonstrate the ability to securely administer a Windows and Linux system using security automation tools and techniques.
- Demonstrate knowledge of the fundamental concepts of operating systems, networks, and cloud computing.

Degree Requirements

To receive a Bachelor of Science in Cybersecurity, students must complete at least 180 quarter units, 45 of which must be completed in residence at National University, 81 of which must be completed at the upper-division level, and a minimum 70.5 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. Students should refer to the section on undergraduate admission procedures for specific information on admission and evaluation. All students receiving an undergraduate degree in Nevada are required by State Law to complete a course in Nevada Constitution.

Foundation Technologies
(6 course; 27 quarter units)

CYB 202	Introduction to Networking
CYB 204	Operating System Fundamentals
CYB 206	Introduction to Cybersecurity
CYB 213	Data Fundamentals for Cybersec *Prerequisite: CYB 206*
CYB 215	Fund of Virt and Cloud Comp *Prerequisite: CYB 202, CYB 204*
CYB 216	Programming for Cybersecurity *Prerequisite: CYB 215*

First Core Sequence
(5 courses; 22.5 quarter units)

CYB 320	Tech Writing/Proj Mgnt for CYB
CYB 331	Secure Linux System Admin *Prerequisite: CYB 216*
CYB 332	Secure Windows Administration
CYB 333	Security Automation *Prerequisite: CYB 331, CYB 332*
CYB 340	Sys Sec Arch for Cybersec *Prerequisite: CYB 333*

Second core sequence
(6 courses; 27 quarter units)

CYB 420	Sec Audit and Assessments *Recommended: Prior completion of: CYB 340 At least 13.5 units of the first core sequence must be completed before this course.*
CYB 450	Cyber Threat Intelligence *Prerequisite: CYB 340*
CYB 451	Incident Handling/Response *Prerequisite: CYB 340*
CYB 452	Intro to Ethical Hacking *Prerequisite: CYB 340*
CYB 453	Network Defense
CYB 454	Cybersec Planning and Policy *Prerequisite: CYB 340*

Project
(3 courses; 13.5 quarter units)

CYB 499A	Cybersecurity Project I *Prerequisite: Completion of Computer network defense concentration (CYB 460, CYB 461, CYB 462, CYB 463) or completion of Digital Forensics Concentration (CYB 470, CYB 471, CYB 472, CYB 473)*
CYB 499B	Cybersecurity Project II *Prerequisite: CYB 499A*
CYB 499C	Cybersecurity Project III *Prerequisite: CYB 499B*

Concentration Computer Network Defense

The concentration in Computer Network Defense provides for greater focus on the security issues for computer networks.

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

- Demonstrate the ability to set up, implement and assess cybersecurity status of a computer system.
- Apply security controls affecting virtualized computing environment, a wireless network and an operating system.

Requirements for the Concentration
(4 courses; 18 quarter units)

CYB 460	Operating System Security *Prerequisite: CYB 420 and completion of all core CYB classes before starting the concentration, CYB 450, CYB 451, CYB 452, CYB 453, CYB 454*
CYB 461	Wireless and Mobile Security *Prerequisite: CYB 460*
CYB 462	Cloud and Virtualization Sec *Prerequisite: CYB 460*
CYB 463	Advanced Network Defense *Prerequisite: CYB 460*

Concentration Digital Forensics
The concentration in Digital Forensics provides for greater focus on investigation and analysis of computers and networks.

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

- Demonstrate the ability to conduct a digital forensics investigation on a server or workstation using commonly accepted standards and tools.
- Demonstrate the ability to preserve digital evidence using federal rules of digital evidence.
- Demonstrate the ability to conduct a digital forensics investigation on a mobile device using commonly accepted standards and tools.
- Examine digital evidence for indications of illegal malicious activity or malfeasance.

Requirements for Concentration
(4 courses; 18 quarter units)

CYB 470	Intro to Digital Forensics *Prerequisite: CYB 420 and completion of all core CYB classes before starting the concentration, CYB 450, CYB 451, CYB 452, CYB 453, CYB 454*
CYB 471	Operating Systems Forensics *Prerequisite: CYB 470*
CYB 472	Network Forensics *Prerequisite: CYB 470*
CYB 473	Mobile Device Forensics *Prerequisite: CYB 470*

Concentration Information Technology Management

This four (4) course concentration in Information Technology Management (ITM) provides for greater focus on the management of information and technology in regards to a secured networked system.

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

- Demonstrate the ability to manage and secure IT hardware, data, and databases.
- Integrate best practices for administering, managing, securing, and delivering cloud technologies.

Requirements for the Concentration
(4 courses; 18 quarter units)

CYB 480	IT Hardware *Prerequisite: CYB 420, CYB 450, CYB 451, CYB 452, CYB 453, CYB454*
CYB 481	Data/Database Security *Prerequisite: CYB 480*
CYB 482	Network Administration *Prerequisite: CYB 481*
CYB 483	Cloud Management *Prerequisite: CYB 482*

BACHELOR OF SCIENCE IN HOMELAND SECURITY AND EMERGENCY MANAGEMENT

Academic Program Director: Kenneth Christopher; kchristopher@nu.edu

The Bachelor of Science in Homeland Security and Emergency Management (BS-HSEM) program provides graduates with a foundation in the security issues; practices, politics and cultures of terrorism; best practices to cope with a pending emergency; and operations during and recovery from an emergency. The program also focuses on the management aspects of disasters and emergencies. More importantly, the program focuses on developing well rounded decision makers with a

background in leadership and ethics. Students will conduct research on various government and private sector entities and report on suggested improvements in preparing for an emergency. The program prepares graduates to work in a variety of homeland security and emergency preparedness capacities such as land borders, seaports and airports, threat assessment, disaster management, and crisis response planning and management. The goal of the program is to develop both the critical acumen and theoretical outcomes before, during, and after emergencies. Graduates will develop the ability to write emergency plans, implement and manage emergency plans, and assist decision makers on recovery issues.

The BS-HSEM program is designed for students who aspire to work in the security, business continuity and disaster management fields in the public sector (city, state or federal governments), non profit organizations and private industry. It is also appropriate for military personnel of all ranks, mid-level managers, and managers seeking promotion within the various levels of government and private industry.

The BS-HSEM program is composed of eleven core courses and five electives offered in accelerated one-month onsite and online formats. As an introduction, students are offered a broad overview of security management, current issues in homeland security, and the culture and politics of terrorists. The remaining five courses expose the student to direct management strategies for preparing for emergencies and responding to disasters including related ethical issues. Together these courses provide a theoretical and practical foundation for managing security issues and addressing emergencies.

Bachelor of Science in Homeland Security and Emergency Management/Master of Criminal Justice (BS-HSEM/MCJ) Transition Program

Students who are currently enrolled in the Bachelor of Science in Homeland Security and Emergency Management program and have at least a GPA of 3.0 and are within six courses of graduation, may register for the BS-HSEM/MCJ transition program by asking their admission advisor to submit a plan change into the transition program and by taking any two MCJ classes as electives during the BS-HSEM program. To be eligible, students must apply for and begin the MCJ program within six months of completing their BS-HSEM program. Students may choose up to two of the MCJ courses that do not require a prerequisite.

For students in the BS-HSEM/MCJ transition program, the University will waive two graduate-level criminal justice courses taken as part of the bachelor's degree, but these students must still meet the residency requirements for the MCJ.

Bachelor of Science Homeland Security and Emergency Management /Master of Public Administration (BS-HSEM/MPA) Transition Program

Students who are currently enrolled in the Bachelor of Science in Homeland Security and Emergency Management program and have at least a GPA of 3.0 and are within six courses of graduation, may register for the BS-HSEM/MPA transition program by asking their admission advisor to submit a plan change into the transition program and by taking two MPA classes as electives during the BS-HSEM program. To be eligible, students must apply for and begin the MPA program within six months of completing their BS-HSEM program. Students may choose up to two of the graduate-level public administration courses with the exception of PAD 631 and PAD 644.

For students in the BS-HSEM/MPA transition program, the University will waive two graduate-level public administration courses taken as part of the bachelor's degree, but these students must still meet the residency requirements for the MPA.

Bachelor of Science Homeland Security and Emergency Management /Master of Science Homeland Security and Emergency Management (BS-HSEM/MS-HSEM) Transition Program

Students who are currently enrolled in the Bachelor of Science in Homeland Security and Emergency Management program and have at least a GPA of 3.0 and are within six courses of graduation, may register for the BS-HSEM/MS-HSEM transition program by asking their admission advisor to submit a plan change into the transition program and by taking two MS-HSEM classes as electives during the BS-HSEM program. To be eligible, students must apply for and begin the MS-HSEM program within six months of completing their BS-HSEM program. Students may choose up to two of the graduate-level HSEM courses with the exception of HSE 690A and HSE690B.

For students in the BS-HSEM/MS-HSEM transition program, the University will waive two graduate-level HSEM courses taken as part of the bachelor's degree, but these students must still meet the residency requirements for the MS-HSEM.

Elective Option: Emergency Medical Technician Certificate

As part of meeting the elective unit requirement, students have the option to complete an Emergency Medical Technician Certificate (2 courses: 6 quarter units*). This certificate of completion provides entry-level basic knowledge, essential skills, and an understanding of emergency medical assistance in outpatient and emergency settings. Students will be prepared to respond in various types of emergencies that require urgent medical attention to assess emergency situations, provide care that can save a life, and transport patients to a hospital. The EMT Program suitably supplements the B.S. in Homeland Security and Emergency Management by training students in best practices to cope with pending emergency operations during response and recovery from an emergency. The EMT program also focuses on the management aspects of disasters and emergencies and the development of well-rounded decision makers with a background in leadership and ethics.

*__Please note__, additional units will be required to meet the total of 22.5 quarter units of upper division electives.

HSE 490, Supervised Senior Project:

The Supervised Senior Project is designed to be a comprehensive research project. Therefore, students should schedule HSE 490 toward the end of their degree program. Students must have fulfilled all General Education, Core and Elective Course requirements prior to beginning this course.

To complete the project satisfactorily, students apply extensive effort in research and writing over a period of two months. Due to the time and effort required for this project, it is recommended that students dedicate themselves to the completion of this project without academic distraction.

Students who do not complete the Supervised Senior Project within the two-month period are eligible, at the discretion of the instructor, to receive a grade of "IP" which allows 12 months from the start date of the class for the student to complete. Students who do not complete the project by the end of the specified time period will need to retake HSE 490. No grade of "I" (Incomplete) can be given for this course.

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

- Apply relevant criticism in sustained analysis and interpretations of security management thinking.
- Evaluate emergency disaster pre-plans, recovery plans, and after-action reports.
- Engage in informed critical discussion, both oral and written, pertaining to domestic security management and past breaches of security within the United States.
- Apply analytical skills in approaching ethical dilemmas and implications of technology and other areas faced in government and private industry.
- Describe the political and religious implications of the terrorist climate.
- Describe and analyze the role groups and teams have in organizations as they relate to addressing homeland security and emergency management issues.
- Describe the roles local, state and federal government agencies have in addressing homeland security and emergency management issues.
- Develop written, oral communication and critical thinking skills.

Degree Requirements
To earn a Bachelor of Science with a major in Homeland Security and Emergency Management, students must complete at least 180 quarter units as described below, 76.5 quarter units must be completed at the upper division level, 45 quarter units must be completed in residence at National University and a minimum of 70.5 units of the University General Education requirements must be completed. In the absence of transfer credit, students may need to take additional general electives to satisfy the total units for the degree. Students should refer to the section on undergraduate admission procedures for specific information on admission and evaluation. All students receiving an undergraduate degree in Nevada are required by State Law to complete a course in Nevada Constitution.

Requirements for the Major
(11 courses; 49.5 quarter units)

HSE 401	Domestic Security Management
PAD 400	Intro to Public Administration
LED 410	Leading Diverse Groups & Teams
CJA 467	Intl. & Domestic Terrorism
HSE 475	Interviewing and Interrogation
HSE 420	Information Security
HSE 430	Border-Transportation Security
HSE 440	Crisis Management
HSE 470	Legal Issues of Security
HSE 444	Disaster Management
HSE 490	Supervised Senior Project *Prerequisite: Students must have fulfilled all General Education, Core Courses, and Elective Courses requirements prior to beginning this course.*

Upper-Division Electives
(5 courses; 22.5 quarter units)

Students may choose any 5 upper division courses to satisfy the elective requirements. The following list of courses are recommended, but not required to satisfy this requirement:

BKM 400	Business Knowledge Mgmt Strat
CYB 453	Network Defense
EMTX 2381X	EMT I Basic (3 quarter units) *Prerequisite: BLS HCP (CPR) Cert*
EMTX 2382X	EMT II Basic (3 quarter units) *Prerequisite: EMTX 2181X with a minimum grade of B*
HED 311	Health Literacy
LAW 445	Administrative Law for Busines
LED 430	Conflict/Negotiation for Ldrs
MGT 351	Process Improvement Management
MKT 302A	Marketing Fundamentals

BACHELOR OF SCIENCE IN MANUFACTURING DESIGN ENGINEERING
Academic Program Director: Ronald Uhlig; ruhlig@nu.edu

The Bachelor of Science in Manufacturing Design Engineering provides students with the theoretical foundations, hands-on experience, and teaming skills required for effective conceptual, logistical, developmental, and interdisciplinary design of complex engineering devices, product life cycles, and engineering systems through integration of state-of-the-art computer-aided tools, concurrent engineering standards, and simulation modeling techniques. Graduates of this program will have competency in the fundamentals of evolving automated manufacturing technology and provide the industry with a source for qualified graduates to apply engineering principles in the design of automated and computer integrated manufacturing systems.

Upon completion of this degree, students will be prepared to hold positions such as manufacturing system design engineer, design supervisor for engineering projects, and product design engineer. The program blends together professional components from the traditional engineering curricula with the practical aspects of programming applications, engineering project management standards, and simulation modeling techniques. It also combines knowledge and practices needed for professionals working on engineering projects that require innovative and interdisciplinary background, skills, and experience.

Program Learning Outcomes

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

- Combine knowledge and practices needed to work on engineering projects that require innovative and interdisciplinary skills
- Utilize product reliability and design optimization concepts in engineering applications
- Apply state-of-the-art computer-aided engineering tools and engineering graphics techniques and methodologies
- Integrate engineering project management standards for efficient and competitive design of engineering products and processes
- Apply the concepts of engineering experiment design and analysis
- Analyze human factors, ergonomics, and safety issues as part of the requirements for design of engineering systems, products, and services
- Analyze a production problem and design and/or develop a manufacturing system
- Develop oral and written communication skills appropriate for engineering professionals
- Demonstrate global awareness and team skills needed in manufacturing design engineering

Degree Requirements
To receive a Bachelor Science in Manufacturing Design Engineering, students must complete at least 180 quarter units, 76.5 of which must be completed at the upper-division level and 45 of which must be taken in residence, including the research project classes, and a minimum of 70.5 units of the University General Education requirements. In the absence of transfer credit, students may need to take additional general electives to satisfy the total units for the degree. Students should refer to the section on undergraduate admission procedures for specific information on admission and evaluation. All students receiving an undergraduate degree in Nevada are required by State Law to complete a course in Nevada Constitution.

Preparation for the Major
(11 courses; 43.5 quarter units)

MTH 215*	College Algebra & Trigonometry *Prerequisite: Accuplacer test placement evaluation, or MTH 12A, and MTH 12B*
PHS 104 *	Introductory Physics *Prerequisite: 2 years of high school algebra, and MTH 204, or MTH 215, or MTH 216A, and MTH 216B*
PHS 104A *	Introductory Physics Lab (1.5 quarter units) *Prerequisite: PHS 104, or PHS 171 for science majors*

or

PHS 130A	Physics Lab for Engineering (1.5 quarter units)
CHE 101 *	Introductory Chemistry *Recommended Preparation: MTH 204, or MTH 215, or MTH 216A, and MTH 216B*
CHE 101A *	Introductory Chemistry Lab (1.5 quarter units) *Prerequisite: CHE 101, or CHE 141 for science majors*
or	
CHE 120A	Intro to Chemistry Lab for Eng (1.5 quarter units) *Prerequisite: CHE 101*
EGR 219	Intro to Graphics and Auto CAD *Prerequisite: MTH 215*
EGR 220	Engineering Mathematics *Prerequisite: MTH 215*
EGR 225	Statics & Strength of Material *Prerequisite: EGR 220*
EGR 230	Electrical Circuits & Systems *Prerequisite: MTH 215*
CSC 208 *	Calculus for Comp. Science I *Prerequisite: MTH 215*
CSC 220	Applied Probability & Stats. *Prerequisite: MTH 215*

* *May be used to satisfy a general education requirement.*

Requirements for the Major
(15 courses; 64.5 quarter units)

EGR 316	Legal Aspects of Engineering
EGR 320	Scientific Problem Solving *Prerequisite: CSC 208, or EGR 220*
EGR 320L	Scientific Problem Solving-LAB *Prerequisite: EGR 320 or*
DEN 308	Computer Aided Engineering I *Prerequisite: EGR 219*
EGR 310	Engineering Economics *Prerequisite: MTH 215*
DEN 411	Computer Aided Engineering II *Prerequisite: EGR 219*
DEN 417	Computer Aided Engineering IV *Prerequisite: EGR 219*
DEN 420	Computer Aided Engineering V *Prerequisite: EGR 219, DEN 411 with a min grade of C, DEN 417 with a min grade of C*
DEN 422	Materials and Manufacturing *Prerequisite: EGR 225*
DEN 423	Human Factors in Engineering *Prerequisite: MTH 215*
DEN 426	Reliability Engineering *Prerequisite: MTH 215*
DEN 429	Product Design Optimization *Prerequisite: MTH 215*
DEN 432	Concurrent Design Engineering *Prerequisite: MTH 210, orCSC 220 or*
DEN 435	Design & Analysis of Experiment
EGR 440	Project Management Fundamental

Engineering Senior Project
(2 courses; 9 quarter units)

DEN 496A	Senior Capstone Project I *Prerequisite: EGR 440 and satisfactory completion of courses as specified by Lead faculty*
DEN 496B	Senior Capstone Project II *Prerequisite: DEN 496A*

BACHELOR OF SCIENCE IN RADIATION THERAPY
Academic Program Director: Cheryl Young; cyoung2@nu.edu

The Bachelor of Science in Radiation Therapy builds on a broad-based foundation in liberal arts and sciences designed to strengthen critical thinking and communcation skills to work with a diverse population in multiple healthcare settings. Graduates of this major will be able to understand all aspects of radiation therapy including effective patient care and education, treatment planning and radiation physics as well as the biological effects of radiation in a rapidly advancing high touch, highly technical profession. This program is offered at the Los Angeles, Rancho Bernardo and Rancho Cordova campuses through distance education technology.

The Radiation Therapy major combines classroom with clinical experiences to prepare graduates for an entry level position in the profession as an integral member of the healthcare team using radiation to treat cancer and some benign diseases. Clinical internships are assigned by the Program and may require driving up to 100 miles from designated campus. This mileage is based on distance to the clinical setting from National University at each geographic site. Clinical internships require 40 hours per week in a clinical setting. Working while in the program is not encouraged. Graduates will use their competencies to assess the physical, emotional and educational needs of the patients they serve, determine the efficacy of a prescribed treatment and carry out the accurate delivery and documentation of treatment.

The Radiation Therapy major is a full-time, lock-step program in which each cohort of students' progress in unison, taking each of the courses in a sequenced manner. Courses in the program build on knowledge from courses previously completed with medical terminology as an integral component of all courses. Students will also take two courses in one month as scheduled. Students must pass each course with a C or better to progress in the program. Once the program is completed, students will be eligible to apply to sit for the American Registry of Radiologic Technologists (ARRT) national examination and apply for certification from the California Department of Public Health, Radiologic Health Branch. The Radiation Therapy Program has received accreditation by the California Department of Public

Health, Radiologic Health Branch and has received accreditation by Joint Review Committee on Education in Radiologic Technology (JRCERT), 20 N. Wacker Drive, Suite 2850, Chicago, IL 60606 (312) 704-5300. www.jrcert.org

The Radiation Therapy Program prepares the graduate to be able to fulfill the following outcomes as an entry-level professional.

Mission Statement
The mission of the Radiation Therapy major is to prepare students to assume the professional role of a radiation therapist. Graduates of the major will be skilled in critical thinking to provide the highest quality of patient care, education and treatment.

Goals

1. Students will be competent in the delivery of radiation therapy treatments and simulation.
2. Students will communicate effectively.
3. Students will utilize critical thinking and problem-solving skills.
4. Students will demonstrate professional and ethical behavior.

Student Learning Outcomes

1.1 Demonstrate safe practice in all aspects of radiation therapy and simulation.
1.2 Demonstrate clinical competence in all entry level aspects of radiation therapy.
2.1 Effectively communicate with patients and their families.
2.2 Effectively communicate with health providers.
3.1 Formulate priorities in daily clinical practice.
3.2 Demonstrate the ability to think critically by applying knowledge to new situations.
4.1 Demonstrate the concepts of teamwork.
4.2 Demonstrate attitudes and behaviors congruent with professional standards.

Admission Requirements

Students seeking to study radiation therapy at National University must:

A. Meet all requirements for admission to an undergraduate degree program at the University as outlined in the University Catalog.

B. Have obtained a 2.50 cumulative GPA from all regionally accredited institutions attended.

C. Students must complete a minimum of 40 hours of observation in a radiation therapy department. A completed time sheet must be signed by the therapist at the observation site. Time sheets are available in the radiation therapy office. Observation site placement is the student's responsibility and can be completed at any radiation therapy department.

D. Submit a minimum of 2 letters of reference forms from radiations therapists in the department where the student observed, and 1 letter of reference form from a teacher, and/or an employer. Reference forms are available from the radiation therapy office. All letters of reference must use the reference form. No other letters will be accepted. All letters of reference must be e-mailed to cyoung2@nu.edu.

E. Submit a separate application for admissions to the Department of Health Science, Radiation Therapy major.

F. Complete the written essay describing motivation to be a radiation therapist. Maximum one page, 12 point font, 1.5 spacing.

G. Submit a current resume with application.

H. Interview with the Radiation Therapy Admissions Committee.

I. Have been formally evaluated by the University Office of the Registrar.

J. Completed all General Education in all Areas A-G prior to the start of the program.

K. Completed all preparation for major courses with a "C" grade or better.

* Application is found in the student portal under e-forms.

*__Note__: According to California Department of Public Health requirements, a student must be at least 18 years of age to participate in Clinical Internship.

*__Note__: Meeting the minimum requirements, as listed above, does not guarantee admissions into the radiation therapy program.

Admission Process
Admission to the radiation therapy program is a three-step process: 1) Application to the University; 2) Application to the respective radiation therapy major; and 3) Participation in an interview with the Radiation Therapy Admission Committee. Prospective students should follow the University application requirements listed in the "General Admission Procedures" section of this

catalog. In addition, prospective radiation therapy students will complete a separate application for admission. These applications, with supporting documentation, are accepted on January 30th of each year. A minimum GPA of 2.50 is required for entry into the Radiation Therapy Program.

A prospective student should first meet with an Admissions Advisor. The advisors are located at each of the University campus offices. The prospective student will arrange to have transcripts from all other Colleges and Universities sent to National University. These courses will be evaluated by the Registrar's Office for equivalency. All prospective students will enroll in RTT 201 Introduction to Radiation Therapy. This course will review all aspects of the Radiation Therapy curriculum, major and profession to provide applicants with a knowledge base to form their decision to enter the program.

A Calculation Worksheet will be used to evaluate each prospective student's application packet by the Radiation Therapy Admissions Committee. The prospective student will be ranked in comparison to the other applicants during that application year. Application deadline is January 30th.

The scoring will be based on:

- Quality of grades in the prerequisite courses.
- Ranking of the recommendation letters.
- Knowledge of the profession.
- Written essay included with the application packet.
- Ranked interview.

Once all prospective students for a given year have been interviewed, the Radiation Therapy Admissions committee will rank applicants based on the interview and application materials. The highest ranked individuals will be invited to enter the program at San Diego, Costa Mesa or Sacramento educational sites. While student education site preference is followed, students may be accepted to another educational site based on the number of spaces available. If a student is unwilling to relocate to the education site for which they were accepted, the student will not be able to join the program. Based on ranking, a student may be invited to enter the program at their second or third preferred education site. There is no waiting list. Students who are not accepted may re-apply for admission one more time in the following year. They are encouraged to speak with the Program Director about strategies to strengthen their application.

Before participating in clinical internship, students must submit proof of the Radiation Therapy Health Clearance, current health insurance and current Cardio-Pulmonary Resuscitation (CPR) certificate from the American Heart Association (BLS-Basic Life Support for Health Care Providers). Students are responsible for determining if their health insurance coverage includes provisions for emergency room visits in the event of a needle stick or other injury in the clinical setting, as well as the costs of anti-HIV drugs if the physician determines the medications are warranted. Please note: if the student is out of the program for 5 months or more, she/he must re-do the drug screen and background check.

In addition, before engaging in clinical practice at health facilities, students will be required to obtain professional liability insurance in the amount of $1,000,000 per occurrence/$3,000,000 aggregate. Continued liability coverage as well as current health clearance, clear background check and drug screen, and immunity coverage is required throughout the program.

Each student is required to maintain membership to Trajesys, a cloud based clinical record keeping system. The membership is $150.00- which will provide access for the entire length of the program (24 months).

**Note: failure to maintain health clearance and a clear background check during the radiation therapy program may result in dismissal from the radiation therapy program and possible refusal of the ARRT to allow the student to take the Radiation Therapy licensure exam. Students are responsible for meeting all the above requirements.

Background Checks

Radiation therapy departments used by the Radiation Therapy major require criminal background and drug screening prior to internship. Students who do not pass the background check and/or drug test may be unable to attend the internship, therefore, may be unable to complete the program of study. Any fee or cost associated with background checks and/or drug testing is the responsibility of the student. Students may be subject to random drug testing. Any fee's associated with this will be the responsibility of the student.

Students will need to provide their own transportation to class and clinical internship. Proof of auto insurance and a valid driver's license is required. Travel to clinical internships may require driving up to 100 miles as measured from the National University educational site.

Students successfully completing the Radiation Therapy major will be eligible to apply for state and national examinations. Upon successful completion of the final course within the program, application for the national exam will be provided in the last course of the Program. Students are responsible for submitting applications and fees to the State of California and the American Registry

of Radiologic Technologists (ARRT).

Program Learning Outcomes

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

- Demonstrate safe practice in all aspects of radiation therapy.
- Effectively communicate with patients and their families.
- Demonstrate clinical competence in the areas of patient care, treatment, and simulation.
- Formulate priorities in daily clinical practice.
- Apply concepts of teamwork.
- Evaluate the clinical significance of treatment parameters as prescribed and suspend treatment as appropriate.
- Develop plans based on patient assessment to address physical, emotional, and educational needs.
- Demonstrate the ability to think critically and apply knowledge to new situations.
- Analyze clinical data to ensure safety and quality improvement of radiation therapy operations.
- Evaluate treatment plans to ensure accurate and effective treatment delivery.
- Demonstrate values and attitudes congruent with the profession's standards and ethics.
- Analyze current health care research for application to radiation therapy practice.
- Apply strategies that promote professional development and life long learning.

Degree Requirements

To receive a Bachelor of Science degree in Radiation Therapy, 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 70.5 units of the University General Education requirements. In the absence of transfer credit, additional general education electives may be necessary to satisfy total units for the degree. Refer to the section on undergraduate admission requirements for specific information regarding admission and matriculation. All students receiving an undergraduate degree in Nevada are required by State Law to complete a course in Nevada Constitution.

Preparation for the Major
(12 courses; 42.75 quarter units)

MTH 215 * College Algebra & Trigonometry
Prerequisite: Accuplacer test placement evaluation, or MTH 12A, and MTH 12B

BST 322 * Intro to Biomedical Statistics

BIO 161 * General Biology 1

BIO 201 * Human Anatomy and Physiol I
Corequisite: BIO 191A, or BIO 201A
Recommended: Prior completion of: BIO 100, BIO 100A, CHE 101, CHE 101A

BIO 201A* Human Anatomy and Physiol LabI (1.5 quarter units)
Corequisite: BIO 201
Recommended: Prior completion of: BIO 100, BIO 100A, CHE 101, CHE 101A or equivalent courses.

BIO 202 * Human Anatomy and Physiol II
Corequisite: BIO 202A
Prerequisite: BIO 201, and BIO 201A,

BIO 202A* Human Anatomy and Physiol LabII (1.5 quarter units)
Corequisite: BIO 202
Prerequisite: BIO 201, BIO 201A

BIO 203 * Introductory Microbiology
Corequisite: BIO 203A
Recommended Prior completion of: BIO 201, and BIO 201A, BIO 202, and BIO 202A, BIO 100, and BIO 100A, CHE 101, and CHE 101A or equivalent courses

BIO 203A* Introductory Microbiology Lab (1.5 quarter units)
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

PHS 181 * Physics for Non-Sci Majors I
Prerequisite: 2 years of high school algebra, and MTH 204, or MTH 215, or MTH 216A, or MTH 216B

or

PHS 171* General Physics 1
Prerequisite: MTH 215, or MTH 216A, and MTH 216B

PHS 182 * Physics for Non-Sci Majors II
Prerequisite: PHS 181

or

PHS 172* General Physics 2
Prerequisite: PHS 171

RTT 201 Introduction to Radiation Ther (2.25 quarter units)

** May be used to meet a General Education requirement.*

Requirements for the Major
(21 courses; 73.5 quarter units)
Students must pass all courses with a C or better to progress in the program. Students will need 76.5 quarter units of upper division level coursework. In absence of units students may need to take additional upper division electives to satisfy the total upper division units for the degree.

RTT 310 Sectional/Topographic Anatomy
Prerequisite: BIO 201 with a minimum grade of C, and BIO 202 with a minimum grade of C

RTT 300 Medical Imaging
Prerequisite: RTT 200 with a minimum grade of

C Acceptance into the Radiation Therapy Program, or RTT 201

RTT 305 Patient Care I
(3 quarter units)
Prerequisite: BIO 201 with a minimum grade of C, and BIO 202 with a minimum grade of C, and BIO 203 with a minimum grade of C, and RTT 300 with a minimum grade of C, Corequisite: RTT 320

RTT 320 Pro Ethics and Legal Issues
(1.5 quarter units)
Corequisite: RTT 305
Prerequisite: RTT 300

RTT 315 Clinical Concepts I
Prerequisite: RTT 305 with a minimum grade of C, and RTT 306 with a minimum grade of C

RTT 480 Internship I
Prerequisite: RTT 300 with a minimum grade of C, and RTT 305 with a minimum grade of C, and RTT 306 with a minimum grade of C, and RTT 310 with a minimum grade of C, and RTT 320 with a minimum grade of C

RTT 410 Clinical Radiation Physics I
Prerequisite: MTH 215 with a minimum grade of C, and PHS 171 with a minimum grade of C, and RTT 300 with a minimum grade of C

RTT 411 Clinical Radiation Physics II
Prerequisite: RTT 410 with a minimum grade of C

RTT 306 Patient Care II
Prerequisite: RTT 305 with a minimum grade of C

RTT 415 Clinical Oncology I
(2.25 quarter units)
Prerequisite: RTT 305 with a minimum grade of C, and RTT 306 with a minimum grade of C, and RTT 310 with a minimum grade of C, and RTT 480 with a minimum grade of C, Corequisite: RTT 316

RTT 316 Clinical Concepts II
(2.25 quarter units)
Corequisite: RTT 415 Prerequisite: RTT 315 with a minimum grade of C, and RTT 480,

RTT 416 Clinical Oncology II
(2.25 quarter units)
Prerequisite: RTT 415 with a minimum grade of C

RTT 317 Clinical Concepts III
(2.25 quarter units)
Corequisite: RTT 416 Prerequisite: RTT 316 with a minimum grade of C

RTT 481 Internship II
Prerequisite: RTT 480 with a minimum grade of C

RTT 420 Radiation Biology
(3 quarter units)
Prerequisite: RTT 410 with a minimum grade of C, and RTT 411 with a minimum grade of C, and RTT 415 with a minimum grade of C, and RTT 416 with a minimum grade of C, and RTT 481 with a minimum grade of C, Corequisite: RTT 460

RTT 460 Operational Issues
(1.5 quarter units*)*
Corequisite: RTT 420 Prerequisite: RTT 316 with a minimum grade of C, and RTT 416 with a minimum grade of C

RTT 455 Medical Dosimetry
Prerequisite: RTT 315 with a minimum grade of C, RTT 316 with a minimum grade of C, RTT 317 with a minimum grade of C, RTT 410 with a minimum grade of C, and RTT 411 with a minimum grade of C

RTT 440 Research in Radiation Therapy
(2.25 quarter units)
Corequisite: RTT 450 Prerequisite: BST 322 with a minimum grade of C, and RTT 315 with a minimum grade of C, and RTT 316 with a minimum grade of C, and RTT 317 with a minimum grade of C, and RTT 410 with a minimum grade of C, and RTT 411 with a minimum grade of C, and RTT 415 with a minimum grade of C, and RTT 416 with a minimum grade of C

RTT 450 Quality Management
(2.25 quarter units)
Corequisite: RTT 440 Prerequisite: RTT 410 with a minimum grade of C, and RTT 411 with a minimum grade of C

RTT 482 Internship III
(6 quarter units)
Prerequisite: RTT 481 with a minimum grade of C

RTT 490 Advanced Capstone
Prerequisite: Completion of major requirements.

MINORS

Minor in Accounting

Academic Program Director: Consolacion Fajardo; cfajardo@nu.edu

The Minor in Accounting is designed for students whose objective is to prepare for entry in the accounting field. Those aspiring to sit for the CPA or CMA exams should take the Bachelor of Science Major in Accounting program.

Requirement for the Minor
(6 courses; 27 quarter units)

To receive a Minor in Accounting students must complete the following six courses for which the upper division accounting required prerequisites have been successfully completed.

Minor Prerequisite
(2 course; 9 quarter units)
ACC 201 Financial Accounting Funds.
ACC 202 Managerial Accounting Funds.
Prerequisite: ACC 201

Requirements for the Minor
(6 courses; 27 quarter units)
ACC 410A Intermediate Accounting I

	Prerequisite: ACC 201
ACC 410B	Intermediate Accounting II *Prerequisite: ACC 410A*
ACC 410C	Intermediate Accounting III *Prerequisite: ACC 410B*
ACC 432A	Taxation-Individual *Prerequisite: ACC 431*
ACC 433	Managerial Accounting *Prerequisite: ACC 202*
ACC 434	Government and Nonprofit Acct *Prerequisite: ACC 201*

MASTER OF ACCOUNTING
Academic Program Director: Joyce Ellis; jellis@nu.edu

The Master of Accounting (MAcc) academically prepares students for a wide range of accounting-related careers. Some examples include public accounting, corporate accounting, internal auditing, accounting in not-for-profit organizations, and accounting for state and local government agencies such as the Internal Revenue Service, Franchise Tax Board, Defense Contract Audit Agency, FBI, CIA and other agencies.

The program offers two pathways towards completion; one for students with little or no previous accounting background who have an undergraduate degree in any discipline, and one for students with an undergraduate degree in accounting. Course content is based largely on the published content specifications of the uniform CPA Exam and the CMA exam. Students should enroll in an external, recognized exam review course to fully prepare for CPA and CMA exams.

Program Disclosure Information

The Master of Accounting program is currently operating using guidelines only from the California Board of Accountancy. For students who wish to become a CPA-, CMA or CIA-certified please see appropriate organizational website.

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:

- Integrate current information technologies to report and analyze financial information
- Evaluate accounting information based upon mastery of a common body of accounting knowledge
- Analyze ethical issues within the accounting profession
- Effectively conduct and present accounting research
- Collaborate effectively as a team to enhance critical thinking

Degree Requirements
To receive a Master of Accounting, students must complete at least 45 quarter units of graduate work. A total of 4.5 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. Students should refer to the section on graduate admission requirements for specific information regarding application and evaluation.

Students with an undergraduate degree in accounting are also required to take 10 courses, 7 are specified supplemented by 3 electives. Students with a BS in Accounting (BSACC) from National University, who have taken ACC 515 Accounting Ethics, and ACC 555 Data Analytics as part of their Undergraduate degree requirements **CANNOT** retake these courses to satisfy degree units for MAcc.

The Academic Program Director, or a designee, shall review the application and transcripts of every new student to determine the correct pathway and any necessary electives and prerequisites.

Total Degree Requirements
(10 courses; 45 quarter units)

Requirements for Students **WITHOUT** an Undergraduate Degree in Accounting

Core Requirements
(9 courses; 40.5 quarter units)

ACC 601M	Foundations of Financial Acc
ACC 657	Accounting Information Systems *Prerequisite: ACC 601M*
ACC 610M	Financial Accounting I *Prerequisite: ACC 601M*
ACC 611M	Financial Accounting II *Prerequisite: ACC 610M*
ACC 621M	Taxation of Bus & Oth Entities
ACC 630M	Cost Accounting *Prerequisite: ACC 601M*
ACC 651M	Auditing Procedures
ACC 515	Accounting Ethics
ACC 555	Data Analytics

Capstone Requirement
(1 course; 4.5 quarter units)

ACC 695M	Cases in Accounting & Auditing *Prerequisite: Completion of all core and elective*

courses

OR

Requirements for Students **WITH** an Undergraduate Degree in Accounting

Core Requirements
(6 courses; 27.0 quarter units)

ACC 652M	Forensic Accounting
ACC 631M	Advanced Managerial Accounting
ACC 653M	Internal Controls
ACC 654M	Legal Issues in Accounting
ACC 615M	Advanced Financial Accounting
ACC 640M	Acc for Gov't & NFP Entities

Electives for Students **WITH** an Undergraduate Degree in Accounting
(3 courses; 13.5 quarter units)

ACC 515 ***	Accounting Ethics
ACC 555 ***	Data Analytics
ACC 620M	Taxation of Individuals
LED 604	Leading Change and Adaptation
LED 605	Conflict and Power Dynamics

***Students who received a BS in Accounting degree from National University, and already completed **ACC515** and **ACC555** as a part of your undergraduate degree requirements, **CANNOT** retake these courses to satisfy graduate degree units for the MAcc.

Capstone Course
(1 course; 4.5 quarter units)

ACC 695M Cases in Accounting & Auditing
Prerequisite: Completion of all core and elective courses

MASTER BUSINESS ADMINISTRATION
Specialization in International Business

Business activities have an increasingly global reach. Successful business professionals must have a thorough knowledge of international business environments and be able to operate within individual foreign markets.

In this specialization, students have the option to travel to foreign locations where, under the guidance of National University professors, they attend lectures, visit universities, factories and cultural sites, thus achieving full immersion in a foreign environment such as China, Mexico, etc.

Specific issues covered in this specialization include cultural, economic and legal issues, as well as exporting, franchising, licensing, foreign direct investment and outsourcing. Students develop skills in areas such as international risk analysis, international human capital development, international communication, site selection, matching markets, and products/services, etc.

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

- Appraise the key economic, cultural, and legal factors that shape the international business environment.
- Assess the differences between the domestic and international business environments.

Degree Requirements
(4 courses; 18 quarter units)
Student should choose 4 courses from the following:

IBU 637	Comparative Int'l Management
IBU 641	Topics in Int'l Business
IBU 643	Global Strategy
MKT 631 *	Global Marketing *Prerequisite: MKT 602*
IBU 645	Intl Entrepreneurship Project
IBU 540	International Experience

** Please Note: MKT 602 prerequisites is NOT required for students in the Specialization in International Business*

MASTER OF HEALTHCARE ADMINISTRATION

Academic Program Director: Lockford Jones; ljones2@nu.edu

The Master of Healthcare Administration (MHA) is a graduate professional degree designed to enhance the practice of healthcare administration/management by preparing students for entry level and middle management roles in healthcare organizations. Healthcare management involves the organization, financing and delivery of services to prevent and treat illness and disease, including programs that serve the public and private sectors at all levels—local, state, and federal. Faculty members have expertise in diverse fields such as management, economics, law, medicine, public health, planning, sociology, and statistics. They are united by a common commitment to solving problems and developing innovations related to the access, cost, and quality of healthcare.

The MHA program emphasizes the conceptual and analytical skills required to understand and manage today's healthcare organization and prepare for tomorrow's challenges. Special attention is given to the social contributions of the profession and its unique people dependent focus. Also featured are experiential opportunities in project management, teamwork and leadership. Ideal candidates for the MHA program are those students looking for career advancement from middle to upper middle management; those looking for career transition into healthcare administration from other

professions; and those looking to advance from clinical/technical roles to management roles. Graduates will enhance their opportunities for professional growth and job placement through carefully planned internships and a capstone experience. The MHA program is an associate member institution of the Association of University Programs in Health Administration (AUPHA).

Internship Minnesota Students- National University's Master of Healthcare Administration Internship Coordinator will assist Minnesota students in locating an internship site within a 50-mile radius of their home address.

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

- Demonstrate critical thinking skills and apply decision-making technology to evaluate information and to discover evidence-based solutions that are reliable.
- Communicate effectively in all forms of expression to relate facts, simplify complexity, customize, and create persuasive arguments for the target audience to improve organizational function and/or to transform organizational vision for all stakeholders.
- Use and analyze corporate financial management concepts (e.g., rate of return, net present value, and cash flow analyses); analyze trends in population, disease, and utilization data; understand principles of insurance rating, actuarial risk, and shared risk to make decisions.
- Assess the business, demographic, ethnocultural, political, and regulatory implications of decisions and develop strategies that improve the long-term success and viability of the organization.
- Evaluate political, economic, social, technological, workforce, legal, ethical and regulatory factors that impact systems, organizations, communities and individuals at multiple levels along the health care continuum.
- Implement care and processes for better outcomes with the attendant evidence-based best practices in the full scope of healthcare operations and delivery.
- Demonstrate leadership excellence through abilities and behaviors, which include establishing a vision and motivating and supporting others to work towards that shared vision and related goals.
- Evaluate alternative organizing structures and use organization structure to design performance improvement strategies.
- Apply evidence-based approaches to engage communities and multilevel partners in working together to improve modifiable determinants of health and health outcomes to achieve optimal population health.
- Employ organizational integrity by examining organizational behavior for honesty and fair dealing with all constituencies, including employees and community stakeholders
- Exercise professional behaviors consistent with self-awareness, accountability, continuous learning, and ethical and social responsibility for the greater good.

Degree Requirements

To receive an MHA degree, students must complete at least 72 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 admission requirements for specific information regarding application and evaluation.

Core Requirements
(16 courses; 72 quarter units)

HCA 600	U.S. Healthcare System
HCA 610	Health Policy *Prerequisite: HCA 600*
COH 602	Biostatistics
HCA 620	Health Organization Management *Prerequisite: COH 602*
HCA 626 *	Healthcare Information Systems *Prerequisite: ANA 630*
HCA 622	Quality Appraisal & Evaluation *Prerequisite: HCA 600, and HCA 620*
COH 606	Epidemiology *Prerequisite: COH 602, or ANA 630*
HCA 660	Health Economics
HCA 628	HA Human Resources Management
HCA 630	Healthcare Law & Ethics
HCA 624	Healthcare Planning & Marketing *Prerequisite: COH 611*
HCA 663	Healthcare Accounting/Finance *Prerequisite: HCA 628*
COH 611	Public Health Research Methods
HCA 670	Healthcare Leadership *Prerequisite: HCA 624*
HCA 691	Healthcare Internship *Prerequisite: HCA 630, COH 602, HCA 620, HCA 628, HCA 660, HCA 670, and HCA 610, HCA 622, HCA 624, permission by instructor, HCA 626, HCA 600, COH 606, COH 611, HCA 663*
HCA 692	Healthcare Capstone *Prerequisite: HCA 691 or permission by instructor.*

** ANA prerequisite is NOT required for students in the MS in Healthcare Administration*

MASTER OF SCIENCE IN ENGINEERING MANAGEMENT

Academic Program Director: Ben Radhakrishnan; bradhakrishnan@nu.edu

Engineering management knowledge and skills are highly sought after in today's competitive global technological marketplace. The Master of Science in Engineering Management program is designed to bring the benefits of modern technology and high quality graduate-level instruction to engineers, scientists. and technologists interested in advancing their skills in engineering management with specializations in:

• Project Management - to become effective and efficient project/program managers.

• Systems Management - to manage activities related to the life cycle of systems.

These specializations offer practical business perspectives necessary for engineering management. Unlike traditional MBA programs, these specializations emphasize management skills that are specifically built on a students' technical background and experience. The custom-designed mix of management concepts and technical expertise will help prepare professionals to direct major public and private organizations in the increasingly complicated managerial environment of today's competitive global, technical environment. In this program, engineering management principles are broadly based and draw from many different disciplines such as applied sciences, engineering, natural sciences, mathematics, economics, business and social sciences.

Program Learning Outcomes

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

- Demonstrate data analysis and critical thinking skills and techniques to manage projects and processes (products and services).
- Examine a multidisciplinary approach involving the integration of engineering, management, quality, and risk analysis in projects and processes (products and services).
- Identify, prioritize and select relevant solutions in solving complex engineering problems and processes.
- Assess tools and techniques, resources, organizational systems, and decision making processes for the successful management of projects and processes (products and services).
- Apply global mindset and a knowledge of business environments in engineering management solutions.
- Demonstrate organizational and team skills needed to manage projects and processes.
- Communicate effectively using graduate-level oral and writing skills.
- Demonstrate professional and ethical responsibility in engineering management.

Degree Requirements

To receive a Master of Science in Engineering Management, students must complete at least 58.5 quarter units of required courses. A total of 9.0 quarter units of graduate credit may be granted for equivalent graduate work completed at another accredited institution, as it applies to this degree, and provided the units were not used in earning another advanced degree. Students should refer to the section in the graduate admission requirements for specific information regarding application and matriculation.

Program Prerequisites

(1 courses; 4.5 quarter units)

Candidates for the program must possess a Bachelor's degree in engineering, engineering technology, or physical sciences or a closely related area from an accredited university. Interested students from other disciplines may be admitted to the program but may be required to complete additional courses. Non-degree students will not be allowed to enter this program. For those who have a general non-science and non-engineering degree, admission would be based on relevant experience and the following program prerequisite:

CSC 220	Applied Probability & Stats. *Prerequisite: MTH 215*

This course may be waived if an equivalent has been completed at the undergraduate level with a grade of "C" or better.

Core Requirements

(9 courses; 40.5 quarter units)

ENM 600	Engineering Mgmt Concepts
ENM 601	Project Management Principles
ENM 602	Risk, Contracts, and Legal Iss
PME 602	Skills Management
ENM 604	Quality Management
TMG 610	Global Economic & Tech Trends
ENM 607A	Capstone Course I *Prerequisite: All core and specialization classes in program.*
ENM 607B	Capstone Course II *Prerequisite: ENM 607A*
ENM 607C	Capstone Course III *Prerequisite: ENM 607B*

All students must choose one Area of Specialization defined below

Specialization in Project Management

From small companies to giant global institutions, project managers are fueling much of the successful development of exciting technical enterprises. Talented and knowledgeable project managers command the best assignments, salaries, other compensation and bonuses. They are the future leaders and entrepreneurs. Good project managers are not born, but are nurtured from a combination of experience, time, talent, and training. Successful projects do not happen spontaneously; they require preparation, planning, and organization. This specialization is designed to provide systematic training to those would like to pursue an engineering project management career.

Program Learning Outcomes

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

- Apply a multidisciplinary approach involving the integration of engineering, management, quality, and cultural analysis to the conduct of project management engineering.
- Evaluate the financial impact of projects on corporations and businesses and develop appropriate action plans through project management engineer
- ing.
- Integrate state-of-the-art technological advances to the practice of project management engineering.
- Achieve agreed upon scope, budget and schedule requirements using resources, organizational systems, and decision-making processes.

Program Requirements

(4 courses; 18 quarter units)

ENM 603	Operation Management *Prerequisite: ENM 600*
PME 601	Advanced Project Management *Prerequisite: ENM 600, ENM 601, ENM 602, and ENM 603*
PME 603	Product Management *Prerequisite: ENM 600, ENM 601, ENM 602, and ENM 603*
PME 604	Project Financing Management *Prerequisite: ENM 600, ENM 601, ENM 602, ENM 603*

Specialization in Systems Engineering

This specialization focuses on complex technology systems that have a far reaching effect on society and its people. These systems are comprised of three types of entities: a) complex products such as aircraft, ships, land vehicles, and military hardware; b) networks of information and infrastructure such as air traffic control, highways, and public works and environmental processes; and, c) the organizations that design, build, and maintain these products, systems and related services, i.e., businesses (public and private, for-profit and non-profit), military command, and government agencies. The systems engineering program provides knowledge in the activities related to the life cycle of systems including definition, development, deployment, and decommission

Program Learning Outcomes

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

- Comprehend the fundamentals of systems and general systems theory.
- Design discrete and continuous systems utilizing appropriate systems theory, operational requirements, and component integration.
- Validate system performance with testing and evaluation methods.
- Maintain system operations at optimal conditions through the application of systems management fundamentals.

Program Requirements

(4 courses; 18 quarter units)

SYE 600	Introduction to Systems Design
SYE 601	Systems Analysis & Design Eval *Prerequisite: SYE 600*
SYE 602	Advanced System Design *Prerequisite: SYE 601*
SYE 603	System Dynamics *Prerequisite: SYE 602*

MASTER OF SCIENCE IN NURSING

Academic Program Director: Mary McHugh; mmchugh@nu.edu

The Master of Science in Nursing (MSN) degree program is for Registered Nurses who hold one of the following credentials: a nursing diploma, an associate nursing degree, or a Bachelor Degree in Nursing (BSN). In keeping with the standards for graduate education for advanced practice nursing delineated by the American Association of College of Nursing in the Essentials of Master's Education for Advanced Practice Nurses, the purpose of the MSN program is to prepare students to assume leadership roles in their particular specialization. Masters level nursing education is the appropriate level of education for nursing professionals who are seeking roles that require advanced practice skills in order to function as providers and organizers of the health care delivery process.

The Master of Science in Nursing 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.

MSN Admission Requirements

The following candidates are eligible for admission into the MSN program:

1. Candidates who hold a BSN degree from a nursing program that meets one of these criteria 1) State Board of Nursing approved, 2) Nationally accredited nursing program, 3) from a regionally accredited University/School, if applicable, and meet the University requirements for graduate study, listed in the General Catalog under Academic Information for Graduate Degrees.

2. Candidates who are currently enrolled in the final course of their BSN degree program at National University or recently graduated from National University with their BSN. (Candidates in the RN- BSN Completion Program are eligible to take MSN courses in the last month of their RN to BSN Completion Program) and meet the University requirements for graduate study, listed in the General Catalog under Academic Information for Graduate Degrees including Admission in the Term prior to Bachelor's Degree Completion.

*Candidates will be conditionally accepted into the MSN program, and may not begin specialization courses until the conditional acceptance is lifted, by providing proof of the following

- Current, active and unencumbered RN license in the State of employment and/or residence
- Copy of BSN transcript
- Copy of transcripts of all college coursework taken prior to admissions to National University.

If candidates are unable to show proof of RN license, admission to the MSN program will be rescinded.

3. Candidates who hold a nursing diploma, or an associate nursing degree from a nursing program that is 1) State Board of Nursing approved, 2) Nationally accredited nursing program, 3) from a regionally accredited University/School, if applicable and have completed a General Education curriculum or College Level Examination Program (CLEP) in these areas:

- Physical and Biological Sciences
- Mathematical Concepts and Quantitative Reasoning
- Social and Behavioral Sciences
- Arts, Humanities and Language
- Writing, Speech and Communication

*__Exception__: Candidates do not need to have a Bachelor's degree for admission to the graduate program as specified in Academic Information for Graduate Degrees and Credentials, Admission procedures.

Candidates wishing to be admitted under the exception must select one of the RN-MSN pathway options, and successfully complete the required courses prior to beginning Master of Science in Nursing (MSN) core requirements. RN-MSN Option 1 includes NSG 500 RN-MSN Portfolio Transition; OR Option 2 includes NSG 444/444A Community Population Nursing with Lab, and NSG 442/442A Nursing Leadership and Management with Lab, and NSG 447/447A Quality Improvement with Lab).

All MSN Candidates including RN to MSN

- Have a cumulative GPA of at least 3.0 on a 4.0 scale. Candidates with a GPA of 2.5-2.99 will be considered by the MSN Admission Committee on a case by case basis
- Complete the university graduate admission application
- Submit the MSN application packet

Candidates who graduated from a BSN program other than NU must

- Provide proof of current, active and unencumbered RN license in the State of employment and/or residence.
- Provide one official transcript from each college or university attended to the Registrar's office
- Provide two professional recommendation on approved forms, preferably from individuals who hold graduate or doctoral degrees

Prior to the start of their specialization courses, all candidates must

- Provide evidence of current, active professional liability and malpractice insurance coverage throughout the program

- Provide evidence of specified immunizations, a report of a recent physical examination, a clear drug screen and background check and current BLS certification.

Additional Program Information

A. Candidates are required to meet with their Admission Advisor to review the process for applying to and acceptance into the Nursing program. The specifics described are: program of study, schedules of courses, and requirements for progression in the program.

Note: Prospective students should review the MSN and Post-Graduate Certificate packet before submitting the application.

B. Students should be proficient in operating a personal computer, including: demonstrated competency in standard computer operating systems and electronic filing systems, basic keyboarding skills, organizing and sorting electronic documents; demonstrated knowledge of standard computer applications to include Microsoft Word and Excel; familiarity with using internet browsers and standard email systems such as MS Outlook.
C. MSN program is online with mandatory onsite component. All accepted applicants must attend one virtual online program orientation. In addition, students in the FNP and PMHNP specializations are required to attend three or four one-day Objective Structured Clinical Examination (OSCE) (which may be in person at an NU campus or virtual). FNP and PMHNP practicum courses are offered as immersion practicum experiences, conducted in faculty approved, in-person, preceptored clinical settings.
D. Students who request a change in specialization after they have been admitted to a prior specialization must resubmit an application packet including a new goal statement, and one recommendation form completed addressing the new specialization area. A new resume is not required. All prerequisites must be met prior to admissions into the new specialization. The new application will be re-submitted via the Graduate Nursing e-form Application in SOAR by the Admission Counselor.
E. Students who withdraw from the program or withdraw their application prior to beginning the program will not need to reapply if the point of initial application occurred within one year of re-application. Students requesting to be re-admitted after one year of initial application for admissions will need to resubmit a new application packet including all required items needed for the application packet and drug screening, background check, immunizations and physical examination. Re-application to the program does not guarantee acceptance or provide an advantage to being accepted.

NOTE: Additional fees apply as described:

- RN-MSN students taking NSG 500 carry additional fee of $3,280
- RN-MSN students taking NSG 442/A, NSG 444/A, NSG 447/A carry additional technology fee
- FNP and PMHNP Area of Specializations carry additional program fees. See General Information section of catalog for course fees.

Program Disclosure Information

The Master of Science in Nursing (MSN) degree program is for baccalaureate prepared nurses and is currently accredited by the Commission on Collegiate Nursing education (CCNE). In keeping with the standards for graduate education for advanced practice nursing delineated by the American Association of Colleges of Nursing in the Essentials of Master's Education for Advanced Practice Nurses, the purpose of the MSN program is to prepare students to assume leadership roles in their particular specialization. Master's-level Nursing education is the appropriate level of education for Nursing professionals who are seeking roles that require advanced practice skills in order to function as providers and organizers of the healthcare delivery process. Students must complete one of the specializations listed in the University catalog.

This program is not available in all 50 States, please see licensure website https://www.nu.edu/licensure disclosures/ or see an enrollment advisor for up-to date information.

Program Learning Outcomes

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

- Implement appropriate theories, models, frameworks, and concepts from nursing and non-nursing disciplines when designing interventions that influence healthcare outcomes for diverse populations in a variety of settings.
- Collaborate with interdisciplinary teams, to evaluate fiscally appropriate healthcare delivery systems that integrate research and clinical expertise to provide evidence-based, patient-centered care.
- Evaluate economic, policy, environmental, and social forces that impact nursing practice, health care delivery and quality of health care.
- Participate in the analysis, implementation and evaluation of strategies for improving nursing practice through the implementation of health information systems and technologies.
- Demonstrate a professional commitment to creating an environment of lifelong learning for patients, families, communities, and other healthcare practitioners.

Degree Requirements

To receive a Master of Science in Nursing degree, students must complete 87-89 quarter units of graduate credit. A maximum 13.5 quarter units of graduate credit may be transferred to meet program requirements. Refer to the General Catalog section on graduate admission requirements for specific information regarding admission and evaluation. Students must maintain a cumulative GPA of 3.0 and must maintain a B (84%) in all core and specialization courses.

RN-MSN Pathway Options
Candidates that do not hold a Bachelor's degree for admission to the graduate program will follow one of the RN-MSN pathway. Candidates accepted into the RN-MSN must provide completion of an associate degree in nursing or diploma Nursing Program and hold an unencumbered Registered Nurse license.

Option 1 - Only if a student holds an associate degree in nursing or diploma in nursing and has at least one year of registered nursing experience in leadership, community health and quality improvement is eligible to complete NSG 500.

Option 2 - Student holds an associate degree in nursing or diploma in nursing with no registered nursing experience in leadership, community health and quality improvement is eligible to complete NSG 442/A, NSG 444/A, NSG 447/A.

RN-MSN Pathway Course Requirements
(1 course; 6 quarter units OR 6 courses; 25.5 quarter units)

OPTION 1

NSG 500	RN-MSN Portfolio Transition (6 quarter units) *Prerequisite: Completion of an Associate Degree or Diploma Nursing Program and holding an unencumbered Registered Nurse license.*

OR

OPTION 2
ALL the following six (6) courses

NSG 444	Community Population NSG (6 quarter units) *Corequisite: NSG 444A*
NSG 444A	Comm Pop NSG Practicum (3 quarter units) *Corequisite: NSG 444*
NSG 442	NSG Leadership and Management *Corequisite: NSG 442A*
NSG 442A	NSG LDRSHP & MGMT Practicum (3 quarter units) *Corequisite: NSG 442*
NSG 447	Qual Improvement *Corequisite: NSG 447A*
NSG 447A	Qual Improvement Practicum *Corequisite: NSG 447*

Core Requirements
(6 courses; 27 quarter units)

NSG 600	Advanced Practice Nursing
NSG 620	Theory in Advanced Practice
NSG 623	Biomedical Statistics
NSG 606	Health Policy & Finance
NSG 607	EBP for Advanced NSG Practice
NSG 622	QI & Project Management

Students must pass all core courses before beginning specialization courses.

Specialization in Family Nurse Practitioner
Academic Program Director: Lettica Johnson-Highsmith; ljohnsonhighsmith@nu.edu

The Family Nurse Practitioner (FNP) specialization will prepare advanced practice nurses to manage the care of individuals and families across the lifespan. The FNP program is designed for nurses who hold a nursing diploma, or an associate nursing degree, or a Baccalaureate Degree in nursing (BSN) who wish to advance their knowledge, education and skills to practice in an Advanced Practice role as a FNP. Graduates are eligible to sit for the FNP national certification examinations offered by the American Nurses Credentialing Center (ANCC) or the American Academy of Nurse Practitioners (AANP). The Program emphasis is to foster the FNP's abilities to critically think; make differential diagnoses; use evidence-based findings to improve healthcare outcomes; and be accountable for the provision of healthcare to diverse individuals and families in the areas of health promotion, disease prevention, management of acute and chronic health conditions and primary care. The FNP provides clinical management of primary care conditions in a variety of clinics and community-based settings.

Admission Requirements
Students applying for the FNP area of specialization must be accepted to the MSN program.

NOTE: Additional course fees apply. Course fees can be referenced in the general information section of this catalog.

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

- Synthesize theoretical and empirical knowledge derived from the physical and behavioral sciences and humanities as a basis for professional advanced clinical nursing practice.
- Devise evidence-based health promotion and disease prevention strategies at the patient, family, organizational, community, and population levels for the purpose of improving healthcare outcomes.
- Utilize current technologies to deliver, enhance, and document care across multiple settings to achieve optimal outcomes.
- Advocate for culturally sensitive health care systems and policies that meet ethical and legal standards as a means to improve outcomes and reduce disparity.

- Model collaboration with interdisciplinary and intradisciplinary teams in healthcare systems delivering care to complex, multi-need patients, families, and communities.
- Analyze the impact of national and global health policy on the cost, quality, and access to care in diverse patient populations.

Degree Requirements

Students must complete a total of 62 quarter units for the FNP specialization. Students must maintain a cumulative GPA of 3.0 and must maintain a B (84%) in all courses. Students must obtain at least 600 hours at an approved practicum site with a designated approved preceptor during the practicum courses.

Total Specialization Requirements
(12 courses; 62 quarter units)

Preparation for FNP Specialization
(3 courses; 15 quarter units)

NSG 681 *	Advanced Physical Assessment *(6 quarter units)*
NSG 641 *	Advanced Pharmacology I
NSG 682 *	Advanced Pathophysiology

*Students have the option of taking the preparation for FNP specialization concurrently with the 6 MSN core courses.

Specialization Requirements
(9 courses; 47 quarter units)
Students must pass all Preparation for FNP Specialization courses before beginning any specialization courses.

NSG 680	Diversity Issues in APN
FNP 642	Advanced Pharmacology II
FNP 683A	Primary Care of Adult and Aged *Corequisite: FNP 683C*
FNP 683C	Care of Adult & Aged Practicum (6 quarter units) *Corequisite: FNP 683A*
FNP 684A	Primary Care-Women & Children *Corequisite: FNP 684C*
FNP 684C	Women and Children Practicum (6 quarter units) *Corequisite: FNP 684A*
FNP 685A	FNP Residency *Corequisite: FNP 685C*
FNP 685C	FNP Residency Practicum (8 quarter units) *Corequisite: FNP 685A*
FNP 689	FNP Capstone

Specialization in Psychiatric-Mental Health Nurse Practitioner - Lifespan

Academic Program Director: Khadija Hamisi; khamisi@nu.edu

The Psychiatric-Mental Health Nurse practitioner-Lifespan (PMHNP) is registered nurse prepared at the master's degree level and specializes in primary mental health care for individuals, groups and populations across the lifespan. The PMHNP Program is designed for nurses who hold a nursing diploma, or an associate nursing degree, or a Baccalaureate Degree in Nursing (BSN), who wish to advance their knowledge, education and skills to practice in an advanced practice role as a PMHNP. This advanced practice nurse maintains a critical role in the health care team and ensures collaboration and the provision of safe, effective, coordinated care. As an independent member of the health care team, and in partnership with patients, the PMHNP provides a variety of evidence-based services and therapies. The PMHNP assesses, makes diagnoses and plans care for complex psychiatric and concomitant medical issues, including the prescription and management of psychopharmacologic agents. The PMHNP advocates for patients and their families within a recovery and trauma-informed paradigm. The PMHNP ensures that patients and their families are engaged and actively participate in their behavioral health (mental health and substance use) care as they respond to the illness experience. The PMHNP continuously enhances their care through quality improvement and safety efforts and influences policy at the local, regional and national levels. The PMHNP melds the art and science of professional nursing and skillfully manages the acute and enduring issues posed by people with behavioral health issues across the lifespan. Graduates of this PMHNP Program are eligible to sit for the American Nurses Credentialing Center (ANCC) Psychiatric-Mental Health Nurse Practitioner Lifespan competency-based examination.

Admission Requirements
Students applying for the PMHNP area of specialization must be accepted to the MSN program.

NOTE: Additional course fees apply. Course fees can be referenced in the general information section of this catalog.

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

- Synthesize theoretical and empirical knowledge derived from the physical and behavioral sciences and humanities as a basis for professional advanced clinical nursing practice.
- Devise evidence-based health promotion and disease prevention strategies at the patient, family, organizational, community, and population levels for

the purpose of improving health care outcomes.
- Utilize current technologies to deliver, enhance, and document care across multiple settings to achieve optimal outcomes
- Apply organizational and systems leadership to current healthcare issues for the promotion of quality, effective and safe patient care, including the emphasis on ethical and critical decision making, effective working relationships, and a systems-perspective approach.
- Model collaboration and coordination with interprofessional teams in health care systems delivering care to complex, multi-need patients, families and communities.
- Synthesize broad organizational, client-centered, and culturally appropriate concepts in the planning, delivery, management, and evaluation of evidence-based clinical prevention and population behavioral health care and services to individuals, families, and identified populations.

Degree Requirements

Students must complete a total of 60 quarter units for the PMHNP specialization. Students must maintain a cumulative GPA of 3.0 and must maintain a B (84%) in all courses. Students must obtain at least 540 hours at an approved practicum site with a designated approved preceptor during the practicum courses.

Total Specialization Requirements
(12 courses; 60 quarter units)

Preparation for PMHNP Specialization Courses
(3 courses; 15 quarter units)

NSG 641 *	Advanced Pharmacology I
NSG 681 *	Advanced Physical Assessment (6 quarter units)
NSG 682 *	Advanced Pathophysiology

*Students have the option of taking the preparation for MNP specialization concurrently with the 6 MSN core courses.

Specialization Requirements
(9 courses; 45 quarter units)
Students must pass all Preparation for PMHNP Specialization courses before beginning any specialization courses.

NSG 680	Diversity Issues in APN
MNP 643	Psychopharmacology in MH Care
MNP 694	MH Care: Adults/Aging Adults *Corequisite: MNP 694C*
MNP 694C	Adults/Aging Adults Practicum (8 quarter units) *Corequisite: MNP 694*
MNP 687	MH Care: Children/Adolescents *Corequisite: MNP 687C*
MNP 687C	Children/Adoles Practicum (6 quarter units) *Corequisite: MNP 687*
MNP 688A	Introduction to Psychotherapy *Corequisite: MNP 688C*
MNP 688C	Intro Psychotherapy Practicum (4 quarter units) *Corequisite: MNP 688A*
MNP 697	PMHNP Capstone

GRADUATE CERTIFICATES

Post-Graduate Family Nurse Practitioner Certificate
Academic Program Director: Lettica Johnson-Highsmith; ljohnsonhighsmith@nu.edu

The Post-Graduate FNP Certificate will prepare advanced practice nurses to manage the care of individuals and families across the lifespan. This program is designed for nurses who hold a Master of Science in Nursing (MSN) or Doctor of Nursing Practice (DNP) or Doctor of Philosophy (PhD), who wish to advance their knowledge, education, and skills to practice in an advanced practice role as a FNP. Graduates are eligible to sit for the FNP national certification examinations offered by the American Nurses Credentialing Center (ANCC) or the American Academy of Nurse Practitioners (AANP). The program emphasis is to foster the FNP's abilities to critically think; make differential diagnoses; use evidence-based findings to improve healthcare outcomes; and be accountable for the provision of healthcare to diverse individuals and families in the areas of health promotion, disease prevention, management of acute and chronic health conditions and primary care. The FNP provides clinical management of primary care conditions in a variety of clinics and community-based settings.

*This certificate program is a non-degree, graduate-level program. Upon completion of the program, participant receives a Post-Graduate Family Nurse Practitioner Certificate.

The Post-Graduate Certificate in Family Nurse Practitioner 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.

Admission Requirements
To be eligible for admission to the Post-Graduate FNP Certificate program at National University, candidates must:

- Meet the University requirements for graduate study, listed in the General Catalog under

admission requirements.

- Hold a Master's or doctoral degree in nursing from a program that meets one of these criteria 1) State Board of Nursing approved, 2) Nationally accredited, 3) from a regionally accredited University/School, if applicable.
- Provide proof of current, active, and unencumbered RN license in the State of residence.
- Have a GPA of at least 3.0 in graduate course work, on a 4.0 scale. Candidates with a GPA of 2.5-2.99 will be considered by the MSN Admissions Committee on a case by case basis.
- Have completed the University Application for Graduate Admissions.
- Have completed the Post-Graduate Certificate application packet.
- Provide one official transcript from each college or university attended to the Registrar Office.
- Have two professional recommendation on approved forms, preferably from individuals who hold graduate or doctoral degrees.

Prior to the start of the program, candidates are required to:

- Provide evidence of current, active professional liability and malpractice insurance coverage throughout the program.
- Provide evidence of specified immunizations, a report of a recent physical examination, a clear drug screen and background check, and current BLS certification.

Additional Program Information

- Candidates are required to meet with their Admission Counselor to review the process for applying to and acceptance into the Nursing Program. The specifics described are: program of study, schedules of courses, and requirements for progression in the Program. Note: Prospective students should review the MSN & Post-Graduate Certificate packet before submitting the application.
- Students should be proficient in operating a personal computer, including: demonstrated competency in standard computer operating systems and electronic filing systems, basic keyboarding skills, organizing and sorting electronic documents; demonstrated knowledge of standard computer applications to include Microsoft Word and Excel; familiarity with using internet browsers and standard email systems such as MS Outlook.
- Post-Graduate FNP Certificate program is online with mandatory onsite component. All accepted applicants must attend one virtual online program orientation. In addition, students in the FNP and PMHNP specializations are required to attend three or four one-day Objective Structured Clinical Examination (OSCE) (which may be in person at an NU Campus or virtual). FNP and PMHNP practicum courses are offered as immersion practicum experiences, conducted in faculty approved, in-person, preceptored clinical settings.
- Students who request a change in specialization after they have been admitted to a prior specialization must re-submit an application packet including a new goal statement, and one recommendation form completed addressing the new specialization area. A new resume is not required. All prerequisites must be met prior to admissions into the new specialization. The new application will be re-submitted via the Graduate Nursing E-form Application in SOAR by the Admission Counselor.
- Students who withdraw from the program or withdraw their application prior to beginning the program will not need to reapply if the point of initial application occurred within one year of re-application. Students requesting to be re-admitted after one year of initial application for admissions will need to resubmit a new application packet including all required items needed for the application packet and drug screening, background check, immunizations and physical examination. Reapplication to the program does not guarantee acceptance or provide an advantage to being accepted.

Program Disclosure Information

The Family Nurse Practitioner Certificate program is currently using guidelines that prepare eligible students to sit for the FNP national certification examinations offered by the American Nurses Credentialing Center (ANCC) or the American Academy of Nurse Practitioners (AANP). Please see appropriate organization for more information.

This program is designed for nurses who hold a Master of Science in Nursing (MSN) or Doctor of Nursing Practice (DNP) or Doctor of Philosophy (PhD), who wish to advance their knowledge, education, and skills to practice in an advanced practice role as a FNP.

This program is not available in all 50 States, please see licensure website 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:

- Synthesize theoretical and empirical knowledge derived from the physical and behavioral sciences

and humanities as a basis for professional advanced clinical nursing practice.
- Devise evidence-based health promotion and disease prevention strategies at the patient, family, organizational, community, and population levels for the purpose of improving healthcare outcomes.
- Utilize current technologies to deliver, enhance, and document care across multiple settings to achieve optimal outcomes.
- Advocate for culturally sensitive health care systems and policies that meet ethical and legal standards as a means to improve outcomes and reduce disparity.
- Model collaboration with interdisciplinary and intradisciplinary teams in healthcare systems delivering care to complex, multi-need patients, families, and communities.
- Analyze the impact of national and global health policy on the cost, quality, and access to care in diverse patient populations.

Degree Requirement
The Post-Graduate FNP Certificate Program of Study includes 53 quarter units. Refer to the General Catalog section on graduate admission requirements for specific information regarding admission and evaluation.

Students must obtain at least 600 hours at an approved practicum site with a designated approved preceptor during the practicum courses. Student must maintain a cumulative GPA of 3.0 and must maintain a B (84%) in all core and specialty courses.

NOTE: Additional course fees apply. Course fees can be referenced in the general information section of this catalog.

Preparation for the Certification
(3 courses; 15 quarter units)
Experienced, practicing Advanced Practice Registered Nurses (APRN) can waive NSG 641, NSG 681, and NSG 682 if taken previously. All others can waive NSG 641 and NSG 681 if taken less than five (5) years prior to application to the Certificate Program, and NSG 682 if taken less than seven (7) years prior to application to the Certificate Program. Doctoral level courses may be used to waive these courses.

NSG 641	Advanced Pharmacology I
NSG 681	Advanced Physical Assessment (6 quarter units)
NSG 682	Advanced Pathophysiology

Requirements for the Certification
(7 courses; 38 quarter units)

FNP 642	Advanced Pharmacology II
FNP 683A	Primary Care of Adult and Aged *Corequisite: FNP 683C*
FNP 683C	Care of Adult & Aged Practicum (6 quarter units) *Corequisite: FNP 683A*
FNP 684A	Primary Care-Women & Children *Corequisite: FNP 684C*
FNP 684C	Women and Children Practicum (6 quarter units) *Corequisite: FNP 684A*
FNP 685A	FNP Residency *Corequisite: FNP 685C*
FNP 685C	FNP Residency Practicum (8 quarter units) *Corequisite: FNP 685A*

Post-Graduate Psychiatric Mental Health Nurse Practitioner Certificate
Academic Program Director: Khadija Hamisi; khamisi@nu.edu

The Post-Graduate PMHNP Certificate program will prepare advanced practice nurses to provide primary mental health care for individuals, groups and populations across the lifespan. This Certificate Program is designed for nurses who hold a Master of Science in Nursing (MSN) or Doctor of Nursing Practice (DNP) or Doctor of Philosophy in Nursing (PhD) who wish to advance their knowledge, education, and skills to practice in an advanced practice role as a PMHNP. This advanced practice nurse maintains a critical role in the health care team and ensures collaboration and the provision of safe, effective, coordinated care. As an independent member of the health care team, and in partnership with patients, the PMHNP provides a variety of evidence-based services and therapies. The PMHNP assesses, makes diagnoses and plans care for complex psychiatric and concomitant medical issues, including the prescription and management of psychopharmacologic agents. The PMHNP advocates for patients and their families within a recovery and trauma-informed paradigm. The PMHNP ensures that patients and their families are engaged and actively participate in their behavioral health (mental health and substance use) care as they respond to the illness experience. The PMHNP continuously enhances their care through quality improvement and safety efforts and influences policy at the local, regional and national levels. The PMHNP melds the art and science of professional nursing and skillfully manages the acute and enduring issues posed by people with behavioral health issues across the lifespan. Graduates of this Post-Graduate PMHNP Certificate Program are eligible to sit for the American Nurses Credentialing Center (ANCC) Psychiatric-Mental Health Nurse Practitioner (Lifespan; formerly known as Family Psychiatric-Mental Health Nurse Practitioner) competency-based examination.

*This certificate program is a non-degree, graduate-level program. Upon completion of the program, participants receive a PMHNP Certificate of Completion.

The Post-Graduate Certificate in Psychiatric Mental Health Nurse Practitioner 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.

Admission Requirements

To be eligible for admission to the Post-Graduate PMHNP Certificate program at National University, candidates must:

- Meet the University requirements for graduate study, listed in the General Catalog under admission requirements.
- Hold a Master's or doctoral degree in nursing from a program that meets one of these criteria 1) State Board of Nursing approved, 2) Nationally accredited, 3) from a regionally accredited University/School, if applicable.
- Provide proof of current, active, and unencumbered RN license in the State of residence.
- Have a GPA of at least 3.0 in graduate course work, on a 4.0 scale. Candidates with a GPA of 2.5-2.99 will be considered by the MSN Admissions Committee on a case by case basis.
- Have completed the University Application for Graduate Admissions.
- Have completed the Post-Graduate Certificate application packet.
- Provide one official transcript from each college or university attended to the Registrar Office.
- Have two professional recommendation on approved forms, preferably from individuals who hold graduate or doctoral degrees.

Prior to the start of the program, candidates are required to:

- Provide evidence of current, active professional liability and malpractice insurance coverage throughout the program.
- Provide evidence of specified immunizations, a report of a recent physical examination, a clear drug screen and background check, and current BLS certification.

Additional Program Information

- Candidates are required to meet with their Admission Advisor to review the process for applying to and acceptance into the Nursing Program. The specifics described are: program of study, schedules of courses, and requirements for progression in the Program. Note: Prospective students should review the MSN & Post Graduate Certificate packet before submitting the application.
- Students should be proficient in operating a personal computer, including: demonstrated competency in standard computer operating systems and electronic filing systems, basic keyboarding skills, organizing and sorting electronic documents; demonstrated knowledge of standard computer applications to include Microsoft Word and Excel; familiarity with using internet browsers and standard email systems such as MS Outlook.
- Post-grad PMHNP Certificate program is online with mandatory onsite component. All accepted applicants must attend one virtual online program orientation. In addition, students in the FNP and PMHNP specializations are required to attend three or four one-day Objective Structured Clinical Examination (OSCE) (which may be in person at an NU campus or virtual). FNP and PMHNP practicum courses are offered as immersion practicum experiences, conducted in faculty approved, in-person, preceptored clinical settings.
- Students who request a change in specialization after they have been admitted to a prior specialization must re-submit an application packet including a new goal statement, and one recommendation form completed addressing the new specialization area. A new resume is not required. All prerequisites must be met prior to admissions into the new specialization. The new application will be re-submitted via the Graduate Nursing E-form Application in SOAR by the Admission Counselor.
- Students who withdraw from the program or withdraw their application prior to beginning the program will not need to reapply if the point of initial application occurred within one year of re-application. Students requesting to be re-admitted after one year of initial application for admissions will need to resubmit a new application packet including all required items needed for the application packet and drug screening, background check, immunizations and physical examination. Reapplication to the program does not guarantee acceptance or provide an advantage to being accepted.

Program Disclosure Information

The Psychiatric Mental Health Nurse Practitioner Certificate program is currently using guidelines that prepare eligible students to sit for the American Nurses Credentialing Center (ANCC) Psychiatric-Mental Health Nurse Practitioner competency-based examination. Please see appropriate organization for more information. This program is designed for nurses who hold a Master of

Science in Nursing (MSN) or Doctor of Nursing Practice (DNP) or Doctor of Philosophy (PhD), and who wish to advance their knowledge, education and skills to practice in an advanced practice role as a PMHNP.

This program is not available in all 50 States, please see licensure website 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:

- Synthesize theoretical and empirical knowledge derived from the physical and behavioral sciences and humanities as a basis for professional advanced clinical nursing practice.
- Devise evidence-based health promotion and disease prevention strategies at the patient, family, organizational, community, and population levels for the purpose of improving health care outcomes.
- Utilize current technologies to deliver, enhance, and document care across multiple settings to achieve optimal outcomes.
- Apply organizational and systems leadership to current healthcare issues for the promotion of quality, effective and safe patient care, including the emphasis on ethical and critical decision making, effective working relationships, and a systems-perspective approach.
- Model collaboration and coordination with interprofessional teams in health care systems delivering care to complex, multi-need patients, families and communities.
- Synthesize broad organizational, client-centered, and culturally appropriate concepts in the planning, delivery, management, and evaluation of evidence-based clinical prevention and population behavioral health care and services to individuals, families, and identified populations.

Degree Requirements
The Post-Graduate PMHNP Certificate Program of Study includes 51 quarter units. Refer to the General Catalog section on graduate admission requirements for specific information regarding admission and evaluation.

Students must obtain at least 540 hours at an approved practicum site with a designated approved preceptor during the practicum courses. Student must maintain a cumulative GPA of 3.0 and must maintain a B (84%) in all core and specialty courses.

NOTE: Additional course fees apply. Course fees can be referenced in the general information section of this catalog.

Preparation for Certifications
(3 courses; 15 quarter units)

Experienced, practicing Advanced Practice Registered Nurses (APRN) can waive NSG 641, NSG 681, and NSG 682 if taken previously. All others can waive NSG 641 and NSG 681 if taken less than five (5) years prior to application to the Certificate Program, and NSG 682 if taken less than seven (7) years prior to application to the Certificate Program. Doctoral level courses may be used to waive these courses.

NSG 641	Advanced Pharmacology I
NSG 681	Advanced Physical Assessment (6 quarter units)
NSG 682	Advanced Pathophysiology

Requirements for the Certification
(7 courses; 36 quarter units)

MNP 643	Psychopharmacology in MH Care
MNP 694	MH Care: Adults/Aging Adults *Corequisite: MNP 694C*
MNP 694C	Adults/Aging Adults Practicum (8 quarter units) *Corequisite: MNP 694*
MNP 687	MH Care: Children/Adolescents *Corequisite: MNP 687C*
MNP 687C	Children/Adoles Practicum (6 quarter units) *Corequisite: MNP 687*
MNP 688A	Introduction to Psychotherapy *Corequisite: MNP 688C*
MNP 688C	Intro Psychotherapy Practicum (4 quarter units) *Corequisite: MNP 688A*

SANFORD COLLEGE OF EDUCATION

PROGRAM TERMINATIONS

- Concentration in STEM (Science, Technology, Engineering, Mathematics)
- Graduate Certificate in Reading and Literacy Certificate (Added Authorization) California Only
- Early Childhood Special Education Add on Authorization

COURSE DESCRIPTIONS

BUS – Business

BUS 485A Capstone Strat Bus Policy I
Prerequisite: MNS 205 or, MTH 215 or, MTH 220 and, MTH 210, ECO 203, ECO 204, ACC 201, ACC 202, LAW 204, BIM 400, MGT 309, MGT 400, FIN 310, MNS 407, MKT 302A, IBU 430, MGT 451

Students apply the principal concepts and skills learned in each of their BBA program core courses to real-world business situations. Students' ability to integrate this knowledge and to apply and articulate critical analysis to cases and other assignments are among the key objectives of this course. This is the first part of a two-part sequence. The focus of part A is on scanning and evaluating a current business situation for strategic planning.

BUS 485B Capstone Strat Bus Policy II
Prerequisite: BUS 485A with a minimum grade of C.
Second part of the BBA capstone sequence. It builds on BUS 485A by focusing on 5-year strategies, as well as implementation, evaluation, and control of the strategic plan. Students also take the BBA program comprehensive exam in this class.

CIS – Information Systems

CIS 474 – Information Systems Security
Prerequisite: CIS 350 and CIS 423
This course covers the aspects of information security on computer systems and networks. Information is becoming a valuable asset and security is vital in maintaining its confidentiality, integrity and availability. This course explores aspects of securing a network such as identifying threats, vulnerabilities and assets that aid in planning, risk analysis and implementation of security policies. Other topics include security management practices, security models and architectures, and business continuity, disaster recovery and incident response planning. In addition, legal, ethical, and professional issues are analyzed. This course, together with CIS 475, may help students prepare for the Certified Information Systems Security Professional (CISSP) exam.

CIS 475 – IS Security Technology
Prerequisite: CIS 474
This course covers the technical aspects of information security for computer systems and networks. Various topics of information security will provide students with an understanding of the tools and technologies used to design secure information systems and networks. With the understanding of what security is, this course discusses access control mechanisms, methods of attack and secure protocols. It includes how to secure telecommunications networks and the Internet. Cryptography is discussed in regards to privacy and secrecy. There is an emphasis on physical security followed by application and system development security. In addition, there will be a discussion of vulnerability assessments and penetration testing and an examination of digital forensics. This course, together with CIS 474, may help students prepare for the Certified Information Systems Security Professional (CISSP) exam.

CSC – Computer Science

CSC 220 Applied Probability & Stats.
Prerequisite: CSC 208 or MTH 220 Or permission of the Program Lead, EGR 220 or Permission of Program Lead
Introduction to the theory and applications of probability and statistics. Topics include data and numerical summary measures, fundamental concepts of probability, conditional probability, random variables, common distributions, quality and reliability and statistical inference (estimation, hypothesis testing, and regression). The emphasis is on developing problem solving skills and application to business, social sciences and engineering.

CSC 242 Intro to Programming Concepts
Prerequisite: MTH 215
This course introduces the modern programming design techniques using C++. A study of fundamental control structures in C++ as well as syntax and semantic of the constructs in the language. The coverage includes data types, looping and decision statements, functions, and arrays. The course examines problem analysis, decomposition and modern programming paradigms and methodologies with introduction to object oriented programming.

CSC 252 Programming in C++
Prerequisite: CSC 242
The course introduces the fundamentals of Object-Oriented Programming in C++ including class definition and object instantiation, inheritance and polymorphism. Detailed coverage of pointers, operator overloading, I/O and file streams, templates, and exception handling. Exposure to Data Structures and basic algorithms for sorting and searching.

CSC 262 Programming in JAVA
Prerequisite: MTH 215
The course introduces the Java programming language and its features. Topics include introduction to object-oriented programming, basic control structures, Java graphics and GUI objects, exposure to event driven programming, arrays and strings in Java. Coverage includes inheritance, and polymorphism and exception handling.

CSC 272 Advanced Programming in Java
Prerequisite: CSC 262

A treatment of advanced programming techniques in Java using abstraction, encapsulation and inheritance. A deep dive with generic collection classes, coverage of regular expressions, file I/O operations, serialization, multi-threading, and Graphical User Interface design.

CSC 300 Object Oriented Design
Prerequisite: CSC 252 or CSC 272
Covers the key concepts and methodologies required for object-oriented design, evaluation and development with focus on practical techniques such as use-case, and scenario based analysis. Coverage of Unified Modeling Language (UML) and domain analysis design. Exposure to software development process models and software management and security.

CSC 335 Data Structures and Algorithms
Prerequisite: CSC 300, CSC 331
An overview of common data structures such as lists, stacks, queues, trees, and graphs. A discussion of various implementations, efficiency and applications of data structures. Course examines efficient storage structures such as Hash tables and Binary Search Tree. Coverage of searching, sorting and graph algorithms along with their implementation and efficiency analysis.

CSC 338 Algorithm Design
Prerequisite: CSC 335
This course presents an introduction to algorithm design strategies and their application in solving some commonly encountered problems in computing. Topics include asymptotic behavior of algorithms, algorithm designs such as brute force and exhaustive search, divide-and-conquer, dynamic programming, greedy techniques, backtracking as well as branch and bound approach. A discussion of Intractability and NP–complete problems. The course includes an introduction to the theory of parallel and distributed computing.

CSC 342 Computer Architecture
Prerequisite: CSC 340 and CSC 340L
An examination of advanced hardware design, analysis and low-level programming with emphasis on the structure of the machine. In addition, the machine cycles and instructions, pipelining, addressing modes, memory hierarchy, cache levels and virtual memory and architecture concepts are covered. A discussion of I/O architectures and data transmission modes, disk technologies, tapes and RAID concepts. Comparison of alternative architectures like RISC and parallel processing are presented.

CSC 350 Computer Ethics
Analysis of the values, ethics and ideologies in computing and their applications to current issues in computer industry within the contemporary sociocultural setting. Focuses on ethical decision-making in computing matters. Students develop an ethical outlook on a wide variety of workplace issues in computing through case study, debate and readings.

CSC 422 Database Design
Prerequisite: CSC 300
A survey of principles, structure, analysis, and techniques of database design and implementation. Topics include physical and logical design, normalization, database models, security, integrity and queries.

CSC 430 Programming Languages
Prerequisite: CSC 300
A comparative study of programming languages. Syntax, semantics and pragmatics are considered. Language features that support Object-Oriented programming are emphasized. Recent trends in programming language design and theories are studied.

CSC 445 Web and Mobile App Development
Prerequisite: CSC 300 Permission of the program director
Current web and wireless development technologies protocols. Coverage includes the current and emerging web and mobile application development technologies and tools. Examines the impact of web and wireless applications on individuals and organizations. Students will study the current tools, languages and techniques employed in development of web and mobile software solutions. A discussion of user interface design.

CSC 480A Computer Science Project I
Prerequisite: Completion of requirements for the major EXCEPT CSC340/CSC340L, CSC342, ITM470

Part I of three-part capstone project course focusing on Software Engineering concepts. Coverage of software development processes with a focus on agile development model. An exposure to software project management concepts including project scheduling. Students work collaboratively to gather requirements and generate UML use case diagrams for a realistic software project to be designed and constructed in parts II and III of the series. Emphasis is on agile Scrum software development process model. Grading is by H, S or U only.

CSC 480B Computer Science Project II
Prerequisite: CSC 480A
Part II of three-part series on Software Engineering concepts and practices. Students follow a formal software development process model to build a system with specified requirements. A study of software testing methodologies. The focus is on object-oriented design, implementation and testing of tasks and subsystems in sprints. Students engage in Scrum software development process model and sprint planning. Grading is by H, S or U only.

CSC 480C Computer Science Project III
Prerequisite: CSC 480B
Part III of three-part capstone project course with focus on Software Engineering concepts and practices. Exposure to Software security engineering and software configuration management. Students continue to engage in Scrum agile software development process model and sprint planning. Conduct object-oriented design, implementation, testing and project write up to deliver and demonstrate the finished software product. Grading is by H, S or U only.

CYB – Cybersecurity

CYB 480 IT Hardware
Prerequisite: CYB 420 and completion of all core CYB classes before starting the concentration, CYB 450, CYB 451, CYB 452, CYB 453 and CYB454
This course provides an understanding of the internal and external components of an information technology (IT) system. The course contains an overview of internal components and broadens out to an entire IT system. Students will be introduced to the proper installation, security, and administration of components of an IT system. In addition, network, mobile, IoT, and printer terminology, concepts, troubleshooting, and security fundamentals are also covered.

CYB 481 Data/Database Security
Prerequisite: CYB 480
An in-depth exploration of various tools and controls designed to preserve and protect data and databases against compromises of their confidentiality, integrity, and availability. Included is an introduction to how databases are created, populated, administered, and secured.

CYB 482 Network Administration
Prerequisite: CYB 481
This course expands on the skills and knowledge needed to administer, maintain, and secure an organizations LAN/WAN infrastructure. Topics include identifying threats, vulnerabilities, and assets that facilitate in planning, risk analysis, and implementation of security policies. In addition, legal, ethical, and professional challenges are examined.

CYB 483 Cloud Management
Prerequisite: CYB 482
Introduction to cloud management from both a business and technical perspective. The focus will be on the management of cloud networks, including data storage, processing, and management. Topics include cloud services, architecture, deployment strategies, administration, security, and legal, ethical, and professional challenges.

DEN – Design Engineering

DEN 420 Computer Aided Engineering V
Prerequisite: EGR 219, DEN 411 with a minimum grade of C, DEN 417 with a minimum grade of C.
Advanced topics on three-dimensional parametric modeling tools, features and functions of SolidWorks with emphasis on mechanical design solutions, standards, simulation and techniques.

FNP – Family Nurse Practitioner

FNP 683A Primary Care of Adult and Aged
Corequisite: FNP 683C
Development of clinical decision-making skills. Focus is the delivery of comprehensive health care, including health promotion, health maintenance, and the diagnosis and treatment of common acute and chronic illnesses. Assigned readings, lectures, class discussion, and case studies are used as well as supervised practicum in multicultural practice settings. FNP 683A and FNP 683C must be taken concurrently and both completed satisfactorily to progress.

FNP 683C Care of Adult & Aged Practicum
Corequisite: FNP 683A
Application of theoretical knowledge in supervised clinical settings in the practice of caring for the adult and aged. The role of the family nurse practitioner in health promotion and disease prevention is emphasized. Required 180 preceptored/field experience clinical hours. FNP 683A and FNP 683C must be taken concurrently. Grading is S/U only.

FNP 684A Primary Care-Women & Children
Corequisite: FNP 684C
Focus on methods of health promotion/disease prevention, and assessment and management of common health problems in infants, toddlers, school age children, adolescents, and women from menarche through to the climacteric. FNP 684A and FNP 684C must be taken concurrently and both completed satisfactorily to progress.

FNP 684C Women and Children Practicum
Corequisite: FNP 684A
Application of theoretical knowledge in supervised clinical settings in the practice of caring for women and children. The role of the Family Nurse Practitioner in health promotion and disease prevention is emphasized. Required 180 preceptored/field experience clinical hours. FNP 684A and FNP 684C must be taken concurrently. Grading is S/U only.

FNP 685A FNP Residency
Corequisite: FNP 685C
Prepare students to perform the advanced practice roles of manager, clinician, educator, researcher and consultant in

the provision of primary care services across the lifespan to under-served populations. FNP 685A and FNP 685C must be taken concurrently and both completed satisfactorily to progress.

FNP 685C FNP Residency Practicum
Corequisite: FNP 685A
Concentrated residency experience in which the student will critically and accurately assess, plan intervene and evaluate nursing experiences related to the care of individuals, aggregates, and nursing systems. Required 240 preceptored/field experience clinical hours. FNP 685A and FNP 685C must be taken concurrently. Grading is S/U only.

HCA – Healthcare Administration

HCA 691 Healthcare Internship
Prerequisite: HCA 600, COH 602, HCA 610, HCA 620, HCA 622, COH 606, HCA 624, HCA 626, HCA 628, HCA 630, HCA 660, HCA 663, COH 611, HCA 670 and permission by instructor
Minimum of 120 hours of structured work experience in a healthcare organization under the direct supervision of one or more experienced healthcare managers. Grading is S or U only.

HCA 692 Healthcare Capstone
Prerequisite: HCA 691 or permission by instructor.
Two-month capstone project focused on a relevant problem in healthcare administration theory or practice. Planning and completion of either a data-based research project or a scholarly and creative activity related to healthcare administration.

MGT – Management

MGT 351 Process Improvement Management
Fundamental concepts of managing production of goods and operation of services. Focus on managing customer needs through continuous process improvement, cost management, and quality management. Lean concepts are used to reduce waste throughout every process. Additional topics include production strategy, product and process design, inventory management and supply chain management. Students who have taken MGT 451 cannot take MGT 351.

MGT 451 Production & Ops Management
Prerequisite: MNS 407
A survey of the fundamental concepts of production and operations management. Use of quantitative methods for forecasting, resource allocation, capacity planning, inventory management, and quality assurance. Focus is on improving production efficiency while simultaneously enhancing effectiveness through better managerial decision. Concludes with management skills to align the organization with external suppliers and customers using Supply Chain Management. Students who have taken MGT 351 cannot take MGT 451.

MGT 480 Capstone: Strategic Bus Mgt
Prerequisite: Students must complete all "Preparation for the Major" courses and all other courses listed as "Requirements for the Major."
Application of strategic management principles to develop, organize, finance, and operate a business enterprise. Integrates and applies knowledge and skills gained in other business and management courses to create a competitive strategy.

MNP – Mental Health Nurse Practitioner

MNP 687 MH Care: Children/Adolescents
Corequisite: MNP 687C
Evidence-based biopsychosocial assessment, diagnosis and treatment of children and adolescents with mental illness and/or developmental disorders are explored. Facilitate the knowledge of professional, policy and practice issues influencing the nurse practitioner's role as mental health provider of children and adolescents with mental illness and/or developmental disorders.

MNP 687C Children/Adoles Practicum
Corequisite: MNP 687
Facilitate Practicum experience of the PMHNP student with children/adolescents in mental health care settings. Accurately assess, plan, intervene, and evaluate the care of children/adolescents with developmental, behavioral or psychiatric disorder. Perform the advance practice role of manager, clinician, educator, researcher, and consultant in the provision of mental health services. Required 180 preceptored/field experience clinical hours. Grading is S/U only.

MNP 688A Introduction to Psychotherapy
Corequisite: MNP 688C
Provides a comprehensive review of psychotherapy principles and treatment approaches commonly used in primary mental health care services. Explores ways of developing effective therapeutic relationships with an emphasis on therapeutic communication. Individual, group and family psychotherapy across the lifespan are analyzed. MNP688A and MNP688C are taken concurrently.

MNP 688C Intro Psychotherapy Practicum
Corequisite: MNP 688A
Learner applies theories and principles of psychotherapy learned in MNP688A. Assesses motivation and readiness for treatment. Applies various theories of behavior patterns, belief systems, therapeutic relationship strategies based on evidence to reduce emotional stress, facilitate cognitive and behavior change, and foster growth. Required 120 preceptored/field experience clinical hours. MNP688A and MNP688C are taken

concurrently. Grading is S/U only.

MNP 694 MH Care: Adults/Aging Adults
Corequisite: MNP 694C
Evidence-based assessment, diagnosis and treatment/management approaches to various psychiatric symptoms and disorders are explored. Analyze concepts of neurophysiology and neuropathophysiology of adult/aging adults with psychiatric disorders. Examine the professional, policy and practice issues influencing the nurse practitioner's role as a mental health provider for adult/aging adults with psychiatric disorders.

MNP 694C Adults/Aging Adults Practicum
Corequisite: MNP 694
Facilitate practicum experience of the PMHNP student with adults/aging adults in mental health care settings. Accurately assess, plan, intervene, and evaluate the care of adults/aging adults with mental illness. Perform the advance practice role of manager, clinician, educator, researcher, and consultant in the provision of mental health services. Required 240 preceptored/field experience clinical hours Grading is S/U only.

MNS – Management Science

MNS 407 Management Science
Prerequisite: MNS 205 and MTH 210
An introduction to the fundamentals of business analytics. Focuses on the management science approach for problem solving, the application of linear programming, the use of decision analysis techniques, as well as project management tools. It is practical and students gain advanced skills in Excel. This course is a prerequisite for MGT 451.

TMG – Technology Management

TMG 610 Global Economic & Tech Trends
The focus of this course is to explore how globalization driven by technology trends resulting in economic shifts affects businesses and people all around the world. The course synthesizes information on production, the supply chain, consumption, culture, and changing technological innovation that support the global economy. Technological processes that impact global businesses and organizations are analyzed for various industry sectors. Students will examine the interactions of transnational corporations and States (countries) that are engaged in this dynamic economic and technological environment. Course Assignments and project will focus on demonstrating the above aspects.

COURSE TERMINATIONS

AAL 650 - Purposeful Assessment
AAL 652 - Creating Clear Lrng Trgt
AAL 654 - Quality Assess for Stu Lrng
AAL 656 - Assessment for Learning
ARL 640C - Action Res for the Read Spec
ARL 647A - Lang Arts Assess and Instruc I
ARL 647B - Fld St: Lag Art Assess & In II
BUS 480 - Capstone: Integrated Bus Policy
HCA 650 - Medical Practice Management
HIS 339 - The Middle East, 600
HIS 341 - History Through Theater
HIS 346 - Chinese History and Culture I
HIS 355 - Chinese History and Culture II
HIS 370 - History of the American S/W
ITM 200 - Computer Hardware & Software
ITM 205 - Office Productivity Software
ITM 230 - Computer Network Overview
ITM 320 - Information Technology Manage
ITM 325 - IT Project Management
ITM 340 - IT Clients Using MS Windows
ITM 345 - IT Servers Using Linux
ITM 435 - Wireless LAN Security
ITM 438 - Role of Programming in IT
ITM 440 - Database Concepts & Data Model
ITM 450 - DB Processing & Administration
ITM 490A - Info Technology Project I
ITM 490B - Info Technology Project II
ITM 490C - Info Technology Project III
ITM 697 - MS-ITM Capstone Project III