ADDENDUM C
TO THE NATIONAL UNIVERSITY GENERAL **CATALOG 87**

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

The following updates will take effect on July 1st, 2025.

Tuition Fees

Tuition rates are effective as July 1, 2025.

- Undergraduate Tuition
- Graduate and Doctoral Tuition
- Individual-Based Program Tuition Fees
- General Fees

Undergraduate Tuition

Program	Tuition Cost per Quarter Unit
Undergraduate	$370.00 (Includes RN to BSN courses)
Undergraduate NSG Courses	$407.00

Course Level	4.5 Quarter Units	3.0 Quarter Units	2.25 Quarter Units	1.5 Quarter Units
100, 200, 300, 400	$1,665.00	$1,110.00	$832.50	$555.00
500 Undergraduate	$1,665.00	$1,110.00	$832.50	$555.00

College of Business, Engineering and Technology (CoBET) Tuition	Tuition Cost per Credit
Bachelor of Science, Computer Science courses	$348.00 per credit
Bachelor of Science, Data Science courses	$348.00 per credit
Bachelor of Science, Human Resource Management courses	$348.00 per credit
Bachelor of Science, Project Management courses	$348.00 per credit
Bachelor of Science, Marketing courses	$348.00 per credit
Bachelor of Science, Logistics & Supply Chain Management courses	$348.00 per credit

School of Health Professions (SoHP) Tuition	Tuition Cost per Credit
Bachelor of Science in Nursing courses	$407.00 per credit

Undergraduate Nursing Program Fees

NSG 214	$843.00
NSG 240	$843.00
NSG 245	$843.00
NSG 304	$843.00
NSG 305	$843.00
NSG 330	$843.00
NSG 333	$843.00
NSG 334	$843.00
NSG 335	$843.00
NSG 340	$843.00
NSG 403	$843.00
NSG 422	$843.00
NSG 440	$843.00
NSG 460	$843.00
NSG 462	$843.00
NSG 214A	$843.00
NSG 240A	$843.00
NSG 245A	$843.00
NSG 330A	$843.00
NSG 333A	$843.00
NSG 334A	$843.00
NSG 335A	$843.00
NSG 340A	$843.00
NSG 460A	$843.00
NSG 462A	$843.00

School of Arts, Letters and Sciences (SoALS)

Fee	Courses	Fee
Lab Course Fee	BIO 100A, BIO 169A, BIO 201A, BIO 202A,BIO 203A, BIO 406A, BIO 407A, BIO 414A, BIO 416A, BIO 470A, CHE 101A, CHE 149A, CHE 150A, EES 103A, PHS 104A, PHS179A	$90.00 per on-site lab course

Tuition is due and payable prior to the first class session of each course. Some students may qualify for National University Payment Plans.

If a tuition payment check is returned due to insufficient funds, the University reserves the right to drop all current and future classes for that student.

Students will be notified of this action and assessed a return check charge. The University may require students who have written multiple insufficient-fund checks to make all future payments by cashier's check, cash or money order.

The University reserves the right to modify tuition and fees at any time. Students whose employers have entered into a contractual agreement with the University may be eligible for reduced tuition.

Day One Access to Resources and Text (DART) Optional eBook Program

National University offers students immediate access to embedded electronic textbooks (eBooks) within select online courses for optional purchase on the first day of the term.

Students can opt-in for unlimited free access to the eBook for the first five (5) days of the term. If students no longer intend to maintain eBook access, students must opt-out on or before the 5th day of the term to avoid being charged on their student account.

Undergraduate Technology Fees

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

Undergraduate Psychology Programs

PSYC 428 Technology Fee	$61.00
PSYC 469 Technology Fee	$61.00

RN to BSN Fees

NSG 442 Technology Fee	$100.99
NSG 443 Technology Fee	$100.99
NSG 444 Technology Fee	$161.94

Nursing Software Fee

NSG 422 Nursing Software Fee	$150.00

Bachelor of Science Cybersecurity

CYB 202 Technology Fee	$80.20
CYB 204 Technology Fee	$71.80
CYB 206 Technology Fee	$13.00
CYB 213 Technology Fee	$13.00
CYB 214 Technology Fee	$13.00
CYB 215 Technology Fee	$13.00
CYB 216 Technology Fee	$76.00
CYB 320 Technology Fee	$13.00
CYB 331 Technology Fee	$33.00
CYB 332 Technology Fee	$33.00
CYB 333 Technology Fee	$33.00
CYB 340 Technology Fee	$13.00
CYB 420 Technology Fee	$13.00
CYB 450 Technology Fee	$13.00
CYB 451 Technology Fee	$33.00
CYB 452 Technology Fee	$33.00
CYB 453 Technology Fee	$33.00
CYB 454 Technology Fee	$13.00

CYB 455 Technology Fee	$33.00
CYB 456 Technology Fee	$13.00
CYB 460 Technology Fee	$33.00
CYB 461 Technology Fee	$13.00
CYB 462 Technology Fee	$13.00
CYB 463 Technology Fee	$13.00
CYB 470 Technology Fee	$113.00
CYB 471 Technology Fee	$84.40
CYB 472 Technology Fee	$33.00
CYB 473 Technology Fee	$13.00
CYB 480 Technology Fee	$13.00
CYB 481 Technology Fee	$13.00
CYB 482 Technology Fee	$13.00
CYB 483 Technology Fee	$13.00
CYB 499A Technology Fee	$13.00
CYB 499B Technology Fee	$13.00
CYB 499C Technology Fee	$13.00

School of Arts, Letters and Sciences (SoALS) Technology Fee (Online Classes Only)

BIO 169A Technology Fee	$290.00
BIO 191A Technology Fee	$71.50
CHE 101A Technology Fee	$260.00
CHE 149A Technology Fee	$156.00
CHE 150A Technology Fee	$262.00
EES 103A Technology Fee	$227.00
PHS 104A Technology Fee	$201.00

PHS 179A Technology Fee	$206.00

School of Arts, Letters and Sciences (SoALS) Technology Fees

ART 329 Technology Fee	$54.95
ASL 120 Technology Fee	$60.00
BIO 100 Technology Fee	$40.00
BIO 100A Technology Fee	$35.00
BIO 169A Technology Fee	$59.00 (Onsite)
BIO 192A Technology Fee	$35.00
BIO 193A Technology Fee	$35.00
BIO 201A Technology Fee	$38.60
BIO 202A Technology Fee	$35.00
CHE 101 Technology Fee	$55.00
CHE 141 Technology Fee	$25.00
CHE 142 Technology Fee	$25.00
CHE 143 Technology Fee	$25.00
CHE 150 Technology Fee	$81.20
CHE 350 Technology Fee	$55.00
COM 100 Technology Fee	$46.00
EES 103A Technology Fee	$59.00 (Onsite)
HUB 441 Technology Fee	$80.00
MTH 12A Technology Fee	$42.00
MTH 12B Technology Fee	$42.00
MTH 204 Technology Fee	$67.50
MTH 209A Technology Fee	$41.25

MTH 210 Technology Fee	$75.00
MTH 215 Technology Fee	$80.00
MTH 216A Technology Fee	$80.00
MTH 216B Technology Fee	$80.00
MTH 301 Technology Fee	$42.00
MUS 327 Technology Fee	$59.50
PSYC 433 Technology Fee	$77.00
SCI 200A Technology Fee	$173.00
SOC 100 Technology Fee	$40.00
SPN 100 Technology Fee	$20.53
SPN 101 Technology Fee	$20.53
SPN 200 Technology Fee	$20.53
SPN 303 Technology Fee	$45.00

College of Business, Engineering, and Technology (CoBET) Technology Fee

BAN 300 Technology Fee	$190.00
CEE 324 Technology Fee	$54.00
CEE 324L Technology Fee	$40.00
BUS 485A Technology Fee	$82.50
CIS 350 Technology Fee	$59.99
CEN 486A Technology Fee	$70.00
CEN 486B Technology Fee	$70.00
CEN 486C Technology Fee	$70.00
CSC 310 Technology Fee	$54.00
CSC 331 Technology Fee	$54.00
CSC 335 Technology Fee	$54.00

CSC 400 Technology Fee	$54.00
CSC 422 Technology Fee	$71.00
CSC 445 Technology Fee	$71.00
MNS 205 Technology Fee	$94.50
MNS 407 Technology Fee	$63.00
PMB 400 Technology Fee	$65.82
PMB 410 Technology Fee	$65.82

College of Business, Engineering, and Technology (CoBET) eText

Accounting (ACC) courses utilize an eText, with the accompanying Interactive eStudy Guide.

ACC 201	$61.00
ACC 202	$61.00
ACC 410A	$90.00
ACC 431	$61.00
ACC 432A	$61.00
ACC 432B	$61.00
ACC 433	$61.00
ACC 434	$61.00
ACC 435A	$61.00
ACC 435B	$61.00
ACC 436	$61.00

School of Health Professions (SoHP) Technology Fee

BST 322 Technology Fee	$79.00

Sanford College of Education

SimSchool Technology

SimSchool is a web-based virtual classroom environment that provides students authentic interactive experiences with diverse learners and classroom dynamics.

Students enrolled in any of the SCOE courses listed below are required to obtain an annual subscription to simSchool.

If at any point in the program, the subscription expires, students are required to renew the annual subscription.

There is a $35.00 annual tech fee for simSchool. Students will be charged a fee annually throughout the duration of the program.

Department of Teacher Education	**ITL 400, ITL 404, ITL 406, ITL 408** *Under certain circumstances, candidates may need to be enrolled in simSchool during clinical practice. This is decided case by case.

Graduate and Doctoral Tuition

College of Law and Public Service		
Program	**Tuition Per Quarter Unit**	**Course Materials Fee per Course**
Graduate Certificate in Forensic and Crime Scene Investigations	$455.00	$105.00
Master of Forensic Sciences	$455.00	$105.00
Master of Science in Homeland Security and Emergency Management/BSHSEM Transition	$464.00	$35.00
Master of Criminal Justice Leadership	$477.00	$5.00
Master of Public Administration	$442.00	$105.00
Non-Degree Graduate and Doctoral	$455.00	$45.00

School of Arts. Letters and Sciences		
Program	**Tuition Per**	**Course Materials**

	Quarter Unit	Fee per Course
Master of Arts in English	$477.00	$5.00
Master of Arts in Human Behavioral Psychology	$455.00	$65.00
Master of Arts in Strategic Communications	$464.00	$25.00
Non-Degree Graduate	$455.00	$45.00

School of Business and Economics		
Program	**Tuition Per Quarter Unit**	**Course Materials Fee per Course**
Master of Accounting	$491.00	$115.00
Master of Arts in Human Resource Management	$529.00	$65.00
Master of Business Administration - Dual	$578.00	$0.00
Master of Science in Homeland Security and Emergency Management	$464.00	$35.00
Master of Science in Marketing	$522.00	$55.00
Master of Science in Leadership Studies	$455.00	$65.00
Graduate Certificate in Banking	$455.00	$5.00
Non-Degree Graduate and Doctoral	$455.00	$65.00

School of Technology and Engineering		
Program	**Tuition Per Quarter Unit**	**Course Materials Fee per Course**
Graduate Certificate in AI & Machine Learning	$455.00	$5.00
Master of Science in Computer Science	$433.00	$65.00

Master of Science in Cybersecurity	$429.00	$135.00
Master of Science in Data Science	$455.00	$45.00
Master of Science in Engineering Management	$515.00	$75.00
Non-Degree Graduate and Doctoral	$455.00	$65.00

School of Health Professions		
Program	**Tuition Per Quarter Unit**	**Course Materials Fee per Course**
Doctor of Nurse Anesthesia Practice	$798.00	$0.00
ANE 815 Handheld Ultrasound Machine (one-time fee)	$0.00	$4,400.00
Master of Healthcare Administration	$469.00	$75.00
Master of Public Health	$429.00	$45.00
Master of Science in Health Informatics	$455.00	$55.00
Master of Science in Nursing	$450.00	$695.00
Post-Graduate Family Nurse Practitioner Certificate	$450.00	$1,035.00
Post-Graduate Psychiatric Mental Health Nurse Practitioner Certificate	$450.00	$1,145.00
Non-Degree Graduate and Doctoral	$455.00	$60.00

JFK School of Psychology and Social Sciences		
Program	**Tuition Per Quarter Unit**	**Course Materials Fee per Course**
Doctor of Psychology (Core Courses)	$886.00	$0.00
Doctor of Psychology (Internship Courses)	$217.00	$0.00

Graduate Certificate in Consciousness, Psychology and Transformation	$721.00	$15.00
Master of Arts in Consciousness, Psychology, and Transformation	$721.00	$15.00
Master of Arts in Counseling Psychology (California)	$457.00	$115.00
Master of Arts in Sport and Performance Psychology Specialization in Applied Mental Performance	$455.00	$45.00
Master of Arts in Sport and Performance Psychology Specialization in Theoretical Mental Performance	$455.00	$45.00
Non-Degree Graduate	$455.00	$50.00
Non-Degree Doctoral	$721.00	$50.00

Sanford College of Education		
Program	**Tuition Per Quarter Unit**	**Course Materials Fee per Course**
Ed.D. in Organizational Innovation	$670.00	$0.00
Master of Arts in Education	$442.00	$25.00
Master of Arts in Social Emotional Learning	$455.00	$25.00
Master of Bilingual Education with a Preliminary Multiple Subject Teaching Credential with Bilingual Authorization (Spanish) (California)	$455.00	$55.00
Master of Bilingual Education with a Preliminary Multiple Subject Teaching Credential Internship Option with Bilingual Authorization (Spanish) (California)	$455.00	$55.00
Master of Bilingual Education with a Preliminary Single Subject Teaching Credential with Bilingual Authorization (Spanish) (California)	$455.00	$45.00
Master of Bilingual Education with a Preliminary Single Subject Teaching Credential Internship Option with Bilingual Authorization (Spanish) (California)	$455.00	$55.00
Master of Early Childhood Education	$455.00	$35.00

Master of Education in Inspired Teaching and Learning with a Preliminary Multiple Subject Teaching Credential	$442.00	$55.00
Master of Education in Inspired Teaching and Learning with a Preliminary Multiple Subject Teaching Credential Internship Option (California)	$442.00	$55.00
Master of Education in Inspired Teaching and Learning with a Preliminary Single Subject Teaching Credential	$442.00	$55.00
Master of Education in Inspired Teaching and Learning with a Preliminary Single Subject Teaching Credential Internship Option (California)	$442.00	$55.00
Master of Education in Special Education with Preliminary Education Specialist Credential Extensive Support Needs Teaching Credential (California)	$429.00	$35.00
Master of Education in Special Education with Preliminary Education Specialist Credential Extensive Support Needs Teaching Credential with Internship Option (California)	$429.00	$45.00
Master of Education in Special Education with Preliminary Education Specialist Credential Mild to Moderate Support Needs Teaching Credential (California)	$429.00	$35.00
Master of Education in Special Education with Preliminary Education Specialist Credential Mild to Moderate Support Needs Teaching Credential with Internship Option (California)	$429.00	$45.00
Master of Science in Applied Behavioral Analysis	$464.00	$95.00
Master of Science in Applied School Leadership with Preliminary Administrative Services Credential Option (in Partnership with County Offices of Education) (California)	$455.00	$25.00
Master of Science in Educational Administration with a Preliminary Administrative Services Credential Option (California)	$455.00	$55.00
Master of Science in Educational Counseling Community College Counseling	$464.00	$25.00
Master of Science in Educational Counseling with w/PPS Credential and CCC emphasis	$464.00	$45.00
Master of Science in Higher Education Administration	$455.00	$5.00
Master of Science in Learning Experience Design and Educational Technology	$455.00	$15.00

Master of Science in School Psychology with Pupil Personnel Services Credential (California)	$455.00	$125.00
Post-Credential Bilingual Authorization (Spanish) For Multiple Subject, Single Subject and/or Education Specialist Credential (California)	$455.00	$25.00
Inspired Teaching and Learning Preliminary Multiple Subject Teaching Credential with Bilingual Authorization (Spanish) (California)	$455.00	$55.00
Inspired Teaching and Learning Preliminary Multiple Subject Teaching Credential Internship Option with Bilingual Authorization (Spanish) (California)	$455.00	$55.00
Inspired Teaching and Learning Preliminary Single Subject Teaching Credential with Bilingual Authorization (Spanish) (California)	$455.00	$45.00
Inspired Teaching and Learning Preliminary Single Subject Teaching Credential Internship Option with Bilingual Authorization (Spanish) (California)	$455.00	$45.00
Inspired Teaching and Learning Preliminary Multiple Subject Credential (California)	$455.00	$55.00
Inspired Teaching and Learning Preliminary Multiple Subject Internship Credential (California)	$455.00	$55.00
Inspired Teaching and Learning Preliminary Single Subject Credential (California)	$455.00	$55.00
Inspired Teaching and Learning Preliminary Single Subject Internship Credential (California)	$455.00	$55.00
Preliminary Administrative Services Credential (California)	$455.00	$45.00
Clear Administrative Services Credential Induction Program	$455.00	$25.00
Pupil Personnel Services Credential School Psychology (California)	$455.00	$45.00

Pupil Personnel Services Credential in School Counseling	$455.00	$45.00
Pupil Personnel Services Credential School Counseling Credential with Waiver Option (California)	$455.00	$45.00
Preliminary Education Specialist Authorization: Extensive Support Needs Teaching Credential (California)	$455.00	$45.00
Preliminary Education Specialist Authorization: Extensive Support Needs Teaching Credential Internship Option (California)	$455.00	$45.00
Preliminary Education Specialist Authorization: Mild to Moderate Support Needs Teaching Credential (California)	$455.00	$45.00
Preliminary Education Specialist Authorization: Mild to Moderate Support Needs Teaching Credential Internship Option (California)	$455.00	$45.00
Non-Degree Graduate	$455.00	$45.00
Non-Degree Doctoral	$650.00	$45.00

Tuition is due and payable prior to the first class session of each course. Some students may qualify for National University Payment Plans.

If a tuition payment check is returned due to insufficient funds, the University reserves the right to drop all current and future classes for that student.

Students will be notified of this action and assessed a return check charge. The University may require students who have written multiple insufficient-fund checks to make all future payments by cashier's check, cash or money order.

The University reserves the right to modify tuition and fees at any time. Students whose employers have entered into a contractual agreement with the University may be eligible for reduced tuition.

Course Materials Fee

The CMF bundles all required textbooks, digital learning tools, and course resources into a single fee per course.

Individual-Based Program Tuition Fees

Please click here to see the program costs for the formerly NCU programs.

General Fees

Fees are non-refundable. All records and services are withheld from students who have any outstanding financial obligations to the University or have defaulted on a Title IV loan at the University.

Effective May 1, 2011 National University began reporting student account defaults to credit reporting agencies.

Fee	Cost
International Student Orientation Fee	$50.00
Transcript Fee	$10.00 (Per copy fee for each electronic transcript) $12.75 (Per copy fee for each paper transcript)
Returned Check Charge	$20.00
Credit by Examination Fee	$100.00 (Per examination, per course)
Challenge Examination Fee	$50.00 (Per examination charge, course waiver, no credit)

State-Specific Refund Policies

Oregon Refund Policy

After classes begin for a term, a student who withdraws from a course is eligible for a partial refund through the middle week of the term. Refunds shall be based on unused instructional time and shall be prorated on a weekly basis for schools using a semester, quarter, or nontraditional calendar. Refund rates shall not be differentiated on the criteria of a student's source of income or loan repayment obligations except as otherwise required by law without specific Commission approval. OAR 583-030-0035 (18) (c). For example, for a 4-week term, the resultant refund for the end of week 2 (half-way through the term) is 50% for Oregon students. For an 8-week term, the resultant refund for the end of week 4 (half-way through the term) is 50% for Oregon students. Specific charts reflecting the length of the individual student's term and the expected refund by week are included in disclosure attachment to the Oregon student's enrollment agreement.

University Scholarships and Grants

Each year, National University awards tuition scholarships and grants to educationally and economically disadvantaged students. All scholarships and grants are based upon the eligibility rules that focus on financial needs.

National University's awards are considered "last money" tuition scholarships. These awards are designed to supplement, but not replace, federal and state financial aid, employer tuition assistance, and student income. Awards are credited directly to the financial accounts of recipients. The number of scholarships disbursed depends upon the availability of allocated funds. As a nonprofit institution, National University tries to provide as many scholarship and grant opportunities as possible.

National University adheres to all federal, state, and local civil rights laws prohibiting discrimination in employment and education. The University does not discriminate in its admissions practices except as permitted by law, in its employment practices, or in its educational programs or activities on the basis of race, color, national origin, ancestry, citizenship status, religion (including religious dress and grooming and having requested accommodation of bona fide religious belief or practice), military status, veteran status, marital status, registered domestic partner status, age, disability, protected medical condition, genetic information, political activity, sex/gender. As a recipient of federal financial assistance for education activities, National University is required by Title IX of the Education Amendments of 1972 to ensure that all of its education programs and activities do not discriminate on the basis of sex/gender. Sex includes sex, sex stereotypes, gender identity, gender expression, sexual orientation, and pregnancy or parenting status or any other category protected by applicable state or federal law.

Admission advisors and financial aid advisors will assist you in applying for a University-funded award. However, it is your responsibility to read and comply with the policies and procedures contained in the University catalog prior to applying for a scholarship.
Please review the accompanying scholarship information. If you meet the eligibility criteria for an award and are in need of financial assistance, you are encouraged to apply.

For more information on scholarships please visit https://www.nu.edu/admissions/financial-aid-and-scholarships/scholarships/.

If you have any questions, please email scholarships@nu.edu.

Institutional Review Board (IRB) Policy

Scope

Applies to all research involving human subjects conducted at or under the auspices of National University.

Purpose

To ensure the protection of human subjects in research through compliance with federal regulations and ethical standards.

Institutional Commitment

National University is committed to protecting the rights and welfare of human subjects in research. All research involving human participants follows the ethical principles of the Belmont Report and applicable federal regulations, including 45 CFR 46 (Common Rule) and, when applicable, FDA, HIPAA, and Department of Defense regulations.

Federalwide Assurance (FWA)

National University maintains an active FWA with the Office for Human Research Protections (OHRP), ensuring compliance with federal regulations.
Authority of the IRB

The IRB has the authority to:

- Review, approve, require modifications, or disapprove research involving human subjects.
- Assess the risk level of studies and ensure appropriate protections are in place.
- Suspend or terminate research not conducted in accordance with IRB requirements.
- Monitor ongoing research for compliance.
- Require reporting of unanticipated problems and noncompliance.

Activities Subject to IRB Review

All research involving human subjects conducted by National University faculty, staff, or students requires IRB approval before initiation.

Researcher Responsibilities

Researchers must:

- Complete Collaborative Institutional Training Initiative (CITI) training before conducting human subjects research.
- Obtain IRB approval before data collection.
- Submit modifications for IRB review before implementing changes.
- Report adverse events or noncompliance to the IRB within 24 hours.
- Ensure compliance with local, state, and federal regulations.

IRB Administration Responsibilities

The IRB is responsible for:

- Ensuring compliance with federal regulations.
- Maintaining IRB membership and oversight procedures.
- Conducting reviews, monitoring research, and enforcing policies.
- Reporting serious noncompliance to institutional officials and federal agencies as required.

IRB Membership & Independence

IRB members are appointed by the Institutional Official and serve independently, free from undue influence. The IRB reports directly to the Institutional Official.

Appeals & Violations

Researchers may appeal IRB decisions by submitting a formal appeal to the Institutional Official. Suspected policy violations will be investigated, and corrective actions may include increased monitoring, suspension of research, or institutional sanctions.

For questions, contact irb@nu.edu.

Leave of Absence

Students are limited to one hundred and eighty (180) Leave of Absence (LOA) days per twelve (12) month period. LOA days need not all be taken at once. A student may have multiple LOAs within a 12-month period provided that the cumulative total does not exceed the allowable amount. University scheduled breaks will be counted toward the 180-LOA day limit if a student is on an approved LOA during a scheduled break.

For students in non-term programs who need a break of sixty (60) days or less from their last date of attendance, an LOA may not be necessary. A student will not be considered to have withdrawn if the student submits written confirmation (email is acceptable) that they will resume attendance, and that future date of attendance is no later than 60 calendar days after the student ceased attendance.

A student on an approved LOA will be considered enrolled at National University. In some cases, these students may be eligible for an in-school deferment for student aid loans. Federal Student Assistance (FSA) may be negatively impacted if students fail to timely apply for a LOA or if the application is denied.

To request a formal LOA, students will need to follow the steps outlined below. Students who receive FSA in the form of loans and grants, and who will have a break in attendance of 35 days or more, may be subject to recalculation and/or return of unearned FSA monies, unless they have an approved LOA on file. Students who do not return from an approved LOA on the student's scheduled return date will be withdrawn from the University.

Further information for FSA students may be obtained from their Academic and Finance Counselor.

Students requesting a LOA must:

1. Timely inform their Academic and Finance Counselor of their request and discuss financial aid implications, as appropriate.
2. Submit the e-form request for Leave of Absence located on the student portal and include the following information:
    1. Beginning and ending dates of the LOA requested
    2. Reason for the LOA request.
3. An LOA approval must meet the above criteria and the reason for the request must be approved by the Office of the Registrar.

All students are encouraged to submit requests at their earliest opportunity to allow the University adequate time to process the request. Requests submitted the day of the requested leave start date or later will not be considered.

All LOA requests start the day of the student's request for the LOA. LOA will not be backdated unless the student has documented extenuating circumstances that prevented them from making the request in advance of their leave.

Once approved, the LOA will be entered into the student's record and the student will be reported as an approved LOA student. It is the student's responsibility to determine how this status may affect any other funding sources they may be receiving.

Requesting a LOA does not grant a drop or withdrawal from the current class of attendance. The current class remains subject to the official drop and withdrawal policies as published in the catalog. If an emergency LOA is approved, in the middle of the course, and the student receives a Withdraw, upon return, the student will not be charged tuition to retake the course.

Financial Aid Implications for Students Requesting a Leave of Absence

Financial aid students must contact their Academic and Finance Counselor as early as possible upon determining they would like to request a LOA to discuss the impact on student aid. Students who do not return from an approved LOA will have all future loan disbursements canceled. The loan repayment grace periods established on all previously disbursed loans will have begun as of the first day of the student's approved LOA. Therefore, if the student does not return from an approved LOA, the student may have exhausted some or all the grace period and may be required to enter repayment immediately. Students will need to contact their lender(s) regarding grace period rules and requirements.

Students who wish to dispute the interpretation of a University financial policy, or who seek special consideration regarding a financial matter, can appeal their case to the Finance Committee.

Requests must be submitted in writing through the Student Accounts Office and must contain all pertinent information to support the appeal. All financial disputes must be submitted within one year of occurrence. Each case is decided upon its own merits. The decision of the committee is final and not subject to appeal, unless there is information pertinent to the outcome which was not available at the time of the initial request.

Return from Leave

Students returning from LOA remain in the degree program in which they were enrolled at the time the LOA was approved.

If a student does not return to the University by the end of an approved LOA, the student is administratively discontinued from their program and a Return to Title IV Calculation will be performed.

To avoid being discontinued, the student must complete an Academic-Related Activity within the first nine (9) days and vest in a class upon their LOA return date. The return class will be scheduled at the time of the LOA request and approval. It is the responsibility of the student to work with their Academic and Finance Counselor to begin a class on or before the date specified as the date of return from leave. The student's withdrawal date is retroactive to the student's last day of attendance (LDA).

Please see our Attendance Procedures for information on Academic-Related Activities.

Enrollment Agreement

Students must accept and sign an enrollment agreement before beginning classes at National University. The agreement includes topics pertaining to tuition and fees, billing, attendance, financial assistance, payment options, and other matters of enrollment. Students may contact an enrollment advisor for further information.

Tuition payment options are specified in the Catalog (see the Financial Aid Tab located in the Catalog). All payment arrangements for the first course(s) must be made before the start of the first course. Those students wanting to use student financial aid must complete all required eligibility paperwork and make the required payment arrangements before starting the first course(s). Students must meet official basis for admissions requirements to be eligible for financial aid.

Enrollment Cancellation Policy

National University reserves the right to cancel a student's enrollment under specific circumstances, including but not limited to non-attendance, non-compliance with University policies, or failure to meet academic or financial requirements.

Prior to a student starting their first class, students need to have met Basis for Admission requirements, been evaluated for transfer credits from prior institutions, signed their enrollment agreement, and submitted all documents required to officially secure and set up their method of payment.

If a student has not met academic and financial requirements prior to their designated start date, their designated start date may be postponed, at the University's sole discretion, until all requirements have been met. After 3 postponed designated start dates, a student's enrollment application may be cancelled.

Students with cancelled enrollments who are within 365 days of submitting their enrollment application may reach out to NU's Enrollment Department to reactivate their enrollment once they have met all requirements. Once a year has passed since their initial application, students with cancelled enrollments must reapply for admission.

Application for Degree Conferral

Degrees and certificates are not awarded automatically upon completion of academic requirements. To be considered as a candidate for a degree or certificate, students must submit a diploma/graduation application via their student portal. Submitting a diploma/graduation application triggers a final degree audit. The audit process confirms that the student has met all academic and programmatic requirements.

The conferral date will be listed as the end date of the last class in their degree program. This date will be used as the student's degree conferral and diploma date.

If a doctoral student successfully defends their dissertation prior to the end date of the last dissertation class, the University will use the date the student defended their dissertation as the degree conferral and diploma date.

The student's legal name in the official record will be printed on their diploma. Students may type out how they want their name to appear on the diploma in the diploma application; however, only minor deviations from the name will be allowed (e.g., omission or inclusion of middle name or suffix, abbreviated or nickname). If a student wants a different name than what is on record, they must complete a change of information request/ Biographical Change e-form prior to submitting the diploma application. Contact the Office of the Registrar for additional assistance.

Diplomas are mailed six to eight weeks following the degree conferral date. The University provides students with one complimentary copy of their diploma. Students will receive one physical diploma and will also receive one electronic diploma sent to their primary email address.

Information regarding commencement ceremonies can be found on the University website at https://www.nu.edu/grad-events.

Academic Information for Undergraduate Degrees

Acceptance Requirements

Program acceptance requirements vary by degree-level, School, and program of study. Minimum requirements for acceptance are outlined below. Please refer to School and program sections for additional, program-specific admissions, evaluation, and application requirements or procedures. Students must meet Basis for Admissions prior to the start of the first class.

Undergraduate Basis for Admissions

NU accepts students on a continual basis. Application for admission can be submitted online any time during the calendar year via www.nu.edu. The Office of the Registrar reviews each applicant file to ensure that the students meet the institutional and program-specific basis for admission requirements. Please refer to School and program sections of this catalog for program-specific admissions requirements and procedures.

All prospective students must provide the following documentation to meet basis for admission to the University:

- Official transcripts from a regionally or nationally accredited high school, high school level proficiency test, or have documented home school completion.

  -OR-

- Official Associate of Arts or Associate of Science degree from a regionally or nationally accredited institution posted transcript that can be degree-verified through the National Student Clearinghouse (NSC). Except where prohibited by accreditation.

Note: Students that intend to use VA funding must submit Official transcripts from all regionally or nationally accredited institutions attended.

Unofficial and official transcripts submitted for basis of admissions to NU must include the following information at a minimum:

- Student's full name
- Name of school
- Course and/or term dates
- Earned and attempted credit totals
- Grade point average (GPA)
- Name of degree
- Degree conferral date (if applicable)
- All pages of the transcript
- Students who completed Home School instruction must also include:
    - 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
    - A letter from their state Department of Education or local school district confirming home school registration.

To be considered official, transcripts must be submitted to the Office of the Registrar in a sealed envelope from the institution via mail or electronically through a third-party transcript processor (e.g.,Parchment or National Student Clearinghouse).

Note: Degree audit reports and grade reports are not considered unofficial transcripts. All prospective students who wish to receive transfer credit from coursework completed outside the United States must provide official transcripts and official evaluations from an approved agency as needed for official evaluation. Once a student is considered officially admitted, they may receive financial aid.

Note: Students who provide an attestation of conferral for a degree conferral date that has not yet occurred are not permitted to attend courses until official documentation is received. Degree conferral dates must be within six months from the date of application to NU.

International Basis for Admissions

All prospective students with internationally awarded degrees must provide the following documentation to meet basis for admission to the University:

- English proficiency
- An official credential evaluation that meets the following requirements:
    - Evaluation completed by an approved credential evaluation agency
    - Submitted to NU in a sealed envelope from the agency or via secure email delivery to transcripts@nu.edu
    - Degree level
    - Program of study or major and U.S. equivalency statement
    - Degree conferral date
    - With information that matches that of the prospective student (e.g., birthdate, name, passport, etc.)

Note: Name change documentation is required if a prospective student's name differs from the name that is listed on official documentation from approved credential evaluation agency.

Transfer Credit

As of 3/1/2023 the Transfer Credit Policy has been updated. Student enrolling prior to March 1st, can contact the Registrar for the previous policy.

Transfer Credit Eligibility

National University accepts credits from regionally and nationally accredited institutions. It may also accept credits from institutions that are accredited by an agency which is a member of Council for Higher Education Accreditation (CHEA) or from collegiate institutions which are accredited by non-CHEA member agencies provided

they are recognized by the Department of Education. Transfer credits from institutions that are accredited by an agency which is a member of CHEA are only accepted provided that the academic quality of the institutions can be verified and the credits otherwise comply with National University guidelines. Transfer credits from agencies which are not CHEA members are subject to additional scrutiny to validate that their academic programs adhere to the standards of institutions accredited by CHEA members.

Students will undergo a transfer credit evaluation as part of the enrollment application process. All official transcripts and necessary documentation must be submitted and reviewed prior to the start of the first class. Requests by the student for consideration of additional transfer credit can be made at any time after the initial evaluation and prior to degree conferral provided the maximum number of transfer credits permissible has not already been accepted by the University.

The Office of the Registrar, School Dean, or designee must approve all requests for transfer credit. Transfer credits are evaluated for currency and relevancy to NU degree programs, and whether they meet academic standards. The Admissions and Evaluation team will document which credits are accepted in transfer and which University requirements are satisfied.

Any credits to be considered for transfer into a National University academic program must:

- Have been completed at a regionally or nationally accredited academic institution, an institution accredited by an agency which is a member of CHEA, or from a collegiate institution accredited by a non-CHEA member agency provided it is recognized by the Department of Education;
- Be equivalent to the degree program requirements, including specified electives;
- Appear on an official transcript from the institution where they were earned;
- Meet required minimum grade requirements for transfer credit eligibility outlined by degree or program-level (remedial college credits are not accepted as transfer credit);
- Have been completed within the specified number of years for transfer credit eligibility outlined by degree or program-level.

Note: If a student submits a transcript that has pending classwork or no grades assigned, it will not be evaluated for transfer credit until an official transcript is submitted with final grades. NU is not responsible for duplication of transferable credits/classes that the student may have taken at a prior institution.

Undergraduate Transfer Credit Policy

The School Dean or designee uses the following criteria to evaluate proposed transfer credits at the undergraduate level:

- Completed at regionally or nationally accredited post-secondary institution
- Do not exceed a maximum of 90 lower and upper division semester credit hours or 135 lower and upper division quarter credits unless programmatic accreditation requires otherwise.
- Earned with a grade of "C-" or better unless otherwise indicated by program or accreditation.

The following chart shows the maximum number of credits that are allowed to transfer in an NU undergraduate program by type of credit.

Type of Credits	Maximum number of credits allowed in an NU Undergraduate program
Lower Division (towards an Associate Degree)	58.5 quarter credits (39 semester credit hours)
Lower Division (towards a Bachelor's Degree)	103.5 quarter credits (69 semester credit hours)
Upper Division	40.5 quarter credits (27 semester credit hours)

Extension division from a regionally accredited institution	36 quarter credits (24 semester credit hours)
Vocational/Technical Courses	18 quarter credits (12 semester credit hours)
Physical Education Courses	9 quarter credits (6 semester credit hours)

Prior Learning Credit Transfer

National University recognizes knowledge is acquired in many different ways. In addition to the traditional classroom setting, mastery of college-level knowledge and skills may occur as a result of nontraditional learning experiences such as employment, military training and experience, noncollegiate training programs, advanced high school courses, and self-development. The University awards applicable credits earned for nontraditional prior learning, however, credit is not awarded simply for experience but for measurable college-level learning which includes knowledge, skills and competencies students have obtained as a result of their prior learning experiences. College credit may be granted on a case-by-case basis for prior learning only when it can be documented and falls within regular credit course offerings.

The maximum number of credits acceptable for non- collegiate learning is a cumulative total of up to 135 quarter credits (90 semester credits) for an associate degree or baccalaureate degree unless programmatic accreditation requires otherwise.

This maximum total is cumulative of all non-collegiate coursework. The credits may be from the following sources:

1. A maximum of 22.5 quarter credits (15 semester credits) may be earned for:

- Excelsior College Examinations.
- Council for Adult Experiential Learning (CAEL) Portfolio.
- Departmental examinations at National University (Credit by Examination).

2. A maximum of 67.5 quarter credits (45 semester credits) may be earned by:

- College Level Examination Program (CLEP) examinations at the lower-division.

3. A maximum of 45 quarter credits (30 semester credits) may be earned by:

- Advanced Placement Examinations (AP) at the lower-division level.
- International Baccalaureate Examinations (IB) at the lower-division level.
- Defense Activity for Non-Traditional Education Support (DANTES) & DANTES Subject Standardized Tests (DSST).
- Credit recommended in the ACE National Guide for Non-Collegiate credit.

4. A maximum of up to 135 quarter credits (90 semester credits) may be allowed for:

- Military experience and military schools that have been evaluated by ACE. An additional 9 quarter credits of correspondence credit is available to active or veteran Marine Corps students.
- Local, state, and federal law enforcement training recommended by ACE and such credit as is listed on a transcript from a regionally accredited college.

5. A maximum of 45 quarter credits (30 semester credits) of lower-division credit may be allowed for clinical courses for a registered nurse who is a graduate of a three-year hospital nursing school. Up to 22.5 quarter credits (15 semester credits) of additional lower-division credit may be granted for academically equivalent coursework.

More information on testing sites and preparation for CLEP or Excelsior College exams can be found at Testing Services. Students can also contact the Testing Center at 858.541.7951 or email testingservices@nu.edu.

Prior Learning Credit Categories

The University awards credit for:

1. **College Level Examination Program (CLEP)** - www.collegeboard.com/clep

In accordance with American Council on Education (ACE) guidelines, successful completion of CLEP subject examinations credits can be applied to meet general education, preparation for the major, or general lower division elective credit. To receive credit for CLEP examinations, an official CLEP transcript must be received by the Office of the Registrar.

Students who have taken a CLEP general examination prior to 2002 may use the credit toward general education requirements, as it applies, up to a maximum of 27 quarter credits or 18 semester credits. National University does not accept transfer credits for the mathematics general CLEP examination.

2. **Advanced Placement (AP) Exams -** www.collegeboard.com

In accordance with published ACE guidelines, AP Exams successfully passed are awarded as listed below. An official transcript must be received for credit to be awarded. The AP Code for National University is 0470.

3. **International Baccalaureate (IB)** - www.ibo.org

To students who successfully obtain the International Baccalaureate Diploma demonstrating the completion of Higher-Level Examinations. No credit is awarded for IB standard-level passes. An official transcript must be received to award credit.

4. **Defense Activity for Non-Traditional Education Support (DANTES)/DANTES Subject Standardized Tests (DSST) -** http://getcollegecredit.com

Credit for successful completion of DSST can be applied toward general education, preparation for the major, or general elective credit. Most tests grant 4.5 quarter credits (3 semester credits). DANTES Subject Standardized Tests (DSST) demonstrates college-level learning acquired outside of the college classroom. DSST are available to military personnel through the Base Education Services Officer. The DANTES code for National University is 7858.

5. **Excelsior College Examinations**

Credit for successful completion of an Excelsior College Examination can be applied toward general education, preparation for the major, or general lower-division elective credit. Most examinations grant 4.5 or 9 quarter credits (3 or 6 semester credits). The Excelsior College Examinations assess college-level competence acquired in non-campus settings in more than 40 arts and sciences, business, education, and nursing subjects.

6. **SOPHIA Learning LLC. Courses -** www.sophia.org

In accordance with published ACE guidelines, successful completion of SOPHIA courses can be applied. To receive credit for SOPHIA courses, an official SOPHIA transcript must be received by the Office of the Registrar. Students should submit a Concurrent Enrollment e-Form four weeks prior to the start of a course to ensure the transferability of any external coursework.

7. **StraighterLine Courses -** www.Straighterline.com

In accordance with published ACE guidelines, successful completion of StraighterLine courses can be applied. To receive credit for StraighterLine courses, an official StraighterLine transcript must be received by the Office of the Registrar. Student should submit a Concurrent Enrollment e-Form four weeks prior to the start of a course to ensure the transferability of any external coursework.

Prior Learning Credit Equivalency Chart

The charts below outline the minimum score requirements, credit amounts, and applicable uses of credit at NU, categorized by specific prior learning credit types. If not listed in a chart, please search the National University Course Equivalency Site.

College Level Examination Program (CLEP)

CLEP Examination	Minimum Score	(QTR) Units	(SEM) Credits	Transfer Credit Allowed For
American Government	50	4.5	3	POL 201
American Literature	50	4.5	3	Area D - Humanities
Analyzing & Interpreting Literature	50	4.5	3	LIT 100
Biology	50	9	6	BIO 100 & Area A-G
Calculus	50	4.5	3	MTH 220
Chemistry	50	9	6	CHE 141 & CHE 142
College Algebra	50	4.5	3	Area B - Math
College Composition	50	9	6	ENG 102 & ENG 240
College Composition Modular	50	4.5	3	ENG 102
College Mathematics	50	4.5	3	Area B – Math **Earned after 4/30/2023*
College Mathematics	50	9	6	Area B & Open Elective **Earned prior to 5/1/2023*
English Literature	50	4.5	3	LIT 100 **Earned prior to 2/1/2024*
English Literature	50	9	6	LIT 100 & Area D - Humanities **Earned after 1/31/2024*
Financial Accounting	50	4.5	3	ACC 201 **NOTE**: Students in the BSACC must have completed this exam within the last 2 years.
French Language – Level 1	50-58	9	6	2 Area D - Language
French Language – Level 2	59	13.5	9	2 Area D - Language & 1 Area A-G
German Language – Level 1	50-59	9	6	2 Area D - Language
German Language – Level 2	60	13.5	9	2 Area D - Language & 1 Area A-G
History of the United States I: Early Colonization to 1877	50	4.5	3	HIS 220A
History of the United States II: 1865 to Present	50	4.5	3	HIS 220B

Human Growth and Development	50	4.5	3	Area E - Social/Behavioral Sciences
Humanities	50	4.5	3	Area D - Humanities
Information Systems	50	4.5	3	Open Elective
Introduction to Educational Psychology	50	4.5	3	Open Elective
Introductory Business Law	50	4.5	3	LAW 204
Introductory Psychology	50	4.5	3	PSYC 100
Introductory Sociology	50	4.5	3	SOC 100
Natural Sciences	50	9	6	2 Area A-G
Precalculus	50	4.5	3	MTH 215
Principles of Macroeconomics	50	4.5	3	ECO 204
Principles of Management	50	4.5	3	Open Elective
Principles of Marketing	50	4.5	3	Open Elective
Principles of Microeconomics	50	4.5	3	ECO 203
Social Sciences and History	50	9	6	2 Area E - Social/Behavioral Sciences
Spanish Language – Level 1	50-62	9	6	SPN 100 & SPN 101
Spanish Language – Level 2	63	13.5	9	SPN 100, SPN 101, SPN 200
Spanish with Writing – Level 1	50-64	9	6	SPN 100 & SPN 101
Spanish with Writing – Level 2	65	18	12	SPN 100, SPN 101, & SPN 200
Western Civilization I: Ancient Near East to 1648	50	4.5	3	Area D - Humanities
Western Civilization II: 1648 to Present	50	4.5	3	Area D - Humanities

Advanced Placement (AP) Exams

Advanced Placement (AP) Exam	Minimum Score	(QTR) Units	(SEM) Credits	Transfer Credit Allowed For
2-D Art and Design	3	4.5	3	ART 200
3-D Art and Design	3	4.5	3	Open Elective
African American Studies	3	4.5	3	Area E - Social/Behavioral Sciences
Art History	3	9	6	Art 225 & Area D - Arts
Biology	3	6	4	BIO 100 & BIO 100A **Earned after 10/31/2021*
Biology	3	12	8	BIO 100, BIO 100A & Open Elective **Earned prior to 11/1/2021*
Calculus AB	3	6	4	MTH 220
Calculus BC	3	12	8	MTH 220 & MTH 221
Chemistry	3	6	4	CHE 101 & CHE 101A **Earned after to 10/31/2021*
Chemistry	4	12	8	CHE 101, CHE 101A, Area A-G
Chemistry	3	12	8	CHE 101, CHE 101A, Area A-G **Earned prior to 11/1/2021*
Chinese Language and Culture	3	12	8	Area D - Humanities (3) & 2-Area D - Languages (9)
Chinese Language and Culture	4	18	12	2-Area D - Humanities (9) & 2-Area D - Languages (9)
Chinese Language and Culture	5	24	16	2-Area D - Humanities (9), 2-Area D - Languages (9), Area A-G (6)
Comparative Government and Politics	3	4.5	3	Area E - Social/Behavior Sciences
Computer Science A	3	6	4	Area D - Language
Computer Science Principles	3	4.5	3	Open Elective
Drawing	3	4.5	3	Area D - Arts
English Language/ Composition	3	9	6	ENG 102 and ENG 240
English Literature/ Composition	3	9	6	ENG 102 and LIT 100

European History	3	9	6	2-Area E – Social/Behavior Sciences
Environmental Science	3	4.5	3	Area a-G
French Language and Culture	3	9	6	1-Area D - Humanities & 1-Area D - Languages
French Language and Culture	4	13.5	9	1-Area D - Humanities (4.5) & 2-Area D - Languages (9)
French Language and Culture	5	18	12	2-Area D - Humanities (9) & 2-Area D - Languages (9)
Human Geography	3	4.5	3	Area E - Social/Behavioral Sciences
Macroeconomics	3	4.5	3	ECO 204
Microeconomics	3	4.5	3	ECO 203
Music Theory	3	4.5	3	1-Area D - Arts
Music Theory	4	9	6	2-Area D - Arts
Physics 1: Algebra-Based	3	6	4	PHS 171 & Area F - Lab
Physics 2: Algebra-Based	3	6	4	PHS 172 & Area F - Lab
Physics C: Electricity and Magnetism	3	6	4	PHS 232 & Area F - Lab
Physics C: Mechanics	3	6	4	PHS 231 & Area F - Lab
Precalculus	3	6	4	MTH 215
Psychology	3	4.5	3	PSYC 100
Research	3	4.5	3	Open Elective
Research	4	9	6	Open Elective
Seminar	3	4.5	3	Open Elective
Seminar	4	9	6	2 - Open Electives
Spanish Language and Culture	3	9	6	SPN 100 & SPN 101
Spanish Language and Culture	4	13.5	9	SPN 100, SPN 101 & SPN 200
Spanish Language and Culture	5	18	12	SPN 100, SPN 101, SPN 200, & 1 Area D - Humanities
Spanish Literature and Culture	3	13.5	9	SPN 100, SPN 101, & SPN 200
Spanish Literature and Culture	4	18	12	SPN 100, SPN 101, SPN 200, & Area D - Humanities
Spanish Literature and Culture	5	22.5	15	SPN 100, SPN 101, SPN 200, Area D - Languages, & Area D - Humanities
Statistics	3	4.5	3	MTH 210

United States Government and Politics	3	4.5	3	POL 201
United States History	3	9	6	HIS 220A & HIS 220B
World History: Modern	3	9	6	HIS 233 & HIS 234

International Baccalaureate (IB)

International Baccalaureate Exam		Score Required	(QTR) Units	(SEM) Credits	Transfer Credit Allowed for (IB HL) Exams
Group 1: Studies in Language & Literature	Language A: Language and Literature (any language other than English)	4-7	9	6	Area D - Languages & Area D - Humanities
	Language A: Literature (any language other than English)	4-7	9	6	Area D - Humanities
Group 2: Language Acquisition	Language B: French	4-7	9	6	Area D - Languages & Area D - Humanities
	Language B: German	4-7	9	6	Area D - Languages & Area D - Humanities
	Language B: Spanish	4-7	9	6	SPN 200 & Area D - Humanities
Group 3: Individuals and Societies	Business Management	4-7	9	6	Open Elective
	Digital Society	4-7	9	6	Open Elective & Area D - Humanities
	Economics	4-7	9	6	Eco 203 & ECO 204
	Geography	4-7	9	6	Area A-G & Area E - Social/ Behavioral Sciences
	Global Politics	4-7	9	6	Area E - Social/ Behavioral Sciences
	History	4-7	9	6	Area E - Social/ Behavioral Sciences
	Language and Culture	4-7	9	6	Area D - Humanities & Area D - Languages
	Philosophy	4-7	9	6	Area D - Humanities
	Psychology	4-7	9	6	Area E - Social/ Behavioral Sciences

	Social and Cultural Anthropology	4-7	9	6	Area D - Humanities
Group 4: Sciences	Biology	4-7	9	6	BIO 161 & BIO 162
	Chemistry	4-7	9	6	CHE 141 & CHE 142
	Computer Science	4-7	9	6	Open Elective
	Design Technology	4-7	9	6	Open Elective
	Physics	4-7	9	6	PHS 171 & PHS 172
	Sports, Exercise and Health Science	4-7	9	6	Area F - Science Lec/ Lab & Open Elective
Group 5: Mathmatics	Math: Analysis & Approaches	4-7	9	6	Area B - Math
	Math: Applications & Interpretation	4-7	9	6	Area B - Math
Group 6: The Arts	Dance	4-7	9	6	Area D - Arts
	Film	4-7	9	6	Area D - Arts
	Music	4-7	9	6	Area D - Arts
	Theater Arts	4-7	9	6	Area D - Arts
	Visual Arts	4-7	9	6	Area D - Arts

Defense Activity for Non-Traditional Education Support (DANTES)

	DSST Examinations	Minimum Score	(QTR) Units	(SEM) Credits	Transfer Credit Allowed For
	A History of the Vietnam War	400	4.5	3	Area E - Social/ Behavioral Sciences
	Art of the Western World	400	4.5	3	Area D - Arts
	Astronomy	400	4.5	3	Area A-G
	Business Ethics and Society	400	4.5	3	Open Elective
	Business Mathematics	400	4.5	3	Open Elective
	Computing and Information Technology (formerly Introduction to Computing)	400	4.5	3	Open Elective
	Criminal Justice	400	4.5	3	CJA 230
	Environmental Science	400	4.5	3	Area A-G
	Ethics in America	400	4.5	3	Area D - Humanities
	Ethics in Technology	400	4.5	3	Open Elective
	Fundamentals of College Algebra	400	4.5	3	Area B - Math
LOWER DIVISION	Fundamentals of Counseling	400	4.5	3	Open Elective **Earned prior to 12/1/2021*
	Fundamentals of Cybersecurity	400	4.5	3	Open Elective **Earned after 11/ 30/2021*
	Health and Human Development	400	4.5	3	COH 100
	History of the Soviet Union	400	4.5	3	Open Elective **Earned after 1/ 31/2020*
	Human Resource Management	400	4.5	3	Open Elective
	Human/Cultural Geography	400	4.5	3	Area E - Social/ Behavioral Sciences
	Introduction to Business	400	4.5	3	Open Elective
	Introduction to Geography	400	4.5	3	Area E - Social/ Behavioral Sciences
	Introduction to Geology	400	4.5	3	Area A-G
	Introduction to Law Enforcement	400	4.5	3	CJA 229

	Introduction to World Religions	400	4.5	3	Area D - Humanities
	Lifespan Developmental Psychology	400	4.5	3	Area E - Social/ Behavioral Sciences ** Earned prior to 12/1/2021*
	Management Information Systems	400	4.5	3	Open Elective
	Math for Liberal Arts	400	4.5	3	Area B - Math
	Organizational Behavior	400	4.5	3	Open Elective
	Personal Finance	400	4.5	3	Open Elective
	Principles of Advance English Composition	400	4.5	3	ENG 240
	Principles of Finance	400	4.5	3	Open Elective
	Principles of Public Speaking	400	4.5	3	COM 103 **Earned: 4/1/ 2024-3/31/2029 or 11/1/2013-7/ 31/2018*
	Principles of Statistics	400	4.5	3	MTH 210
	Principles of Supervision	400	4.5	3	Open Elective
	Substance Abuse	400	4.5	3	Area G - Lifelong Learning & Self Development
	Technical Writing	400	4.5	3	Open Elective
	The Civil War and Reconstruction	400	4.5	3	Area E - Social/ Behavioral Sciences
	The Principles of Physical Science I	400	4.5	3	PHS 102
	Fundamentals of Counseling	400	4.5	3	Upper Div Open Elective **Earned after 11/ 30/2021*
UPPER DIVISION	Fundamentals of Cybersecurity	400	4.5	3	Upper Div Open Elective **Earned prior to 12/1/2021*
	History of the Soviet Union	400	4.5	3	Upper Div Open Elective **Earned prior to 2/1/2021*

Lifespan Developmental Psychology	400	4.5	3	Upper Div Area E - Social/ Behavioral Sciences **Earned after 11/ 30/2021*
Money and Banking	400	4.5	3	ECO 447
Principles of Public Speaking	400	4.5	3	Upper Div Area A - Communication **Earned between 8/1/2018 – 3/31/ 2024*

SOPHIA Learning LLC. Courses

SOPHIA Course Code and Title	Minimum Score	(QTR) Units	(SEM) Credits	Transfer Credit Allowed For
ARTHIST 1001 Art History I	70%	4.5	3	Area D - Arts
ARTHIST 1002 Art History II	70%	4.5	3	Area D - Arts
BUS 1001 Introduction to Business	70%	4.5	3	Open Elective
BUS 1010 Financial Accounting	70%	4.5	3	ACC 201
BUS 1200 Developing Effective Teams	70%	1.5	1	Open Elective
BUSLAW 1001 Business Law	70%	4.5	3	LAW 204
CA 0050 Foundations of College Algebra	70%	0	0	MTH 12A & MTH 12B
CA 1001 College Algebra	70%	4.5	3	Area B - Math
COLLEGE 1001 College Readiness	70%	4.5	3	Area G - Lifelong Learning & Self Development
COMM 1002 Public Speaking	70%	4.5	3	COM 103
COMM 1010 Workplace Communication	70%	4.5	3	Open Elective
CONRES 1000 The Essentials of Managing Conflict	70%	1.5	1	Open Elective
CONRES 1001 Conflict Resolution	70%	4.5	3	Open Elective
CS 1001 Introduction to Information Technology	70%	4.5	3	Open Elective
CS 1003 IT Career Exploration	70%	1.5	1	Open Elective
CS 1005 Introduction to Web Development	70%	4.5	3	Open Elective
CS 1011 Introduction to Relational Databases	70%	4.5	3	Open Elective
ECON 1001 Macroeconomics	70%	4.5	3	ECO 204
ECON 1002 Microeconomics	70%	4.5	3	ECO 203
ECON 1010 Personal Finance	70%	4.5	3	Open Elective
ENG 0050 Foundations of English Composition	N/A	N/A	N/A	Remedial
ENG 1001 English Composition I	70%	4.5	3	ENG 102
ENG 1002 English Composition II	70%	4.5	3	ENG 240
ENG 1010 Workplace Writing I	70%	4.5	3	ENG 102
ENG 1020 Workplace Writing II	70%	4.5	3	ENG 240
ENVS 1001 Environment Science	70%	4.5	3	Area A-G
FIN 1001 Principals of Finance	70%	4.5	3	Open Elective
HIST 1001 US History I	70%	4.5	3	HIS 220A
HIST 1002 US History II	70%	4.5	3	HIS 220B
HIST 1010 US. Topics in US History: Learning from the Past, Preparing for the Future	70%	4.5	3	Area E - Social/ Behavioral Sciences
HUMBIO 1001 Human Biology	70%	4.5	3	BIO 110

PHIL 1001 Ancient Greek Philosophers	70%	4.5	3	Area D - Humanities
PHIL 1002 Introduction to Ethics	70%	4.5	3	Area D - Humanities
PM 1001 Project Management	70%	4.5	3	Open Elective
PSY 1001 Introduction to Psychology	70%	4.5	3	PSYC 100
PSYC 1010 Introduction to Psychology: Smarter Decisions Through Psychology	70%	4.5	3	PSYC 100
REL 1001 Approaches to Studying Religions	70%	4.5	3	Area D - Humanities
SOC 1001 Introduction to Sociology	70%	4.5	3	SOC 100
SOCI 1010 Introduction to Sociology: Embracing Diversity and Collaboration	70%	4.5	3	SOC 100
STAT 0050 Foundations of Statistics	70%	4.5	3	MTH 210
STAT 1001 Introduction to Statistics	70%	4.5	3	MTH 210
SUCCESS 1001 Student Success	70%	1.5	1	Open Elective
VISCOMM 1001 Visual Communications	70%	4.5	3	Area D - Arts

StraighterLine Courses

StraighterLine Exam	Minimum Score	(QTR) Units	(SEM) Credits	Transfer Credit Allowed For
Accounting I	70%	4.5	3	ACC 201
Accounting II	70%	4.5	3	ACC 202
American Government	70%	4.5	3	POL 201
Anatomy and Physiology I	70%	4.5	3	Area F - Lecture
Anatomy and Physiology I Lab	70%	1.5	1	Area F - Lab
Anatomy and Physiology II	70%	4.5	3	Area F - Lecture
Anatomy and Physiology II Lab	70%	1.5	1	Area F - Lab
Art Appreciation	70%	4.5	3	Area D - Arts
Business Communication	70%	4.5	3	Open Elective
Business Ethics	70%	4.5	3	Open Elective
Business Law	70%	4.5	3	LAW 204
Business Statistics	70%	4.5	3	MTH 210
College Algebra	70%	4.5	3	Area B - Math
Cultural Anthropology	70%	4.5	3	SOC 260
English Composition I	70%	4.5	3	ENG 102
English Composition II	70%	4.5	3	ENG 240
Financial Accounting	70%	4.5	3	ACC 201
First Aid and CPR	70%	4.5	3	Open Elective
General Calculus I	70%	6	4	MTH 220
General Calculus II	70%	6	4	MTH 221
General Chemistry I	70%	4.5	3	CHE 101
General Chemistry I Lab	70%	1.5	1	CHE 101A
General Physics I	70%	4.5	3	PHS 171
General Physics I Lab	70%	1.5	1	Area F - Lab
Introduction to Biology	70%	4.5	3	BIO 100
Introduction to Biology Lab	70%	1.5	1	BIO 100A
Introduction to Business	70%	4.5	3	Open Elective
Introduction to Communications	70%	4.5	3	Area A - Communication
Introduction to Criminal Justice	70%	4.5	3	Area E - Social/Behavioral Sciences
Introduction to Environmental Science	70%	4.5	3	Area A-G
Introduction to Nutrition	70%	6	4	Area G - Lifelong Learning & Self Development

Introduction to Philosophy	70%	4.5	3	PHL 100
Introduction to Programming	70%	4.5	3	Area D - Languages
Introduction to Psychology	70%	4.5	3	PSYC 100
Introduction to Religion	70%	4.5	3	Area D - Humanities
Introduction to Sociology	70%	4.5	3	SOC 100
Introduction to Statistics	70%	4.5	3	MTH 210
Life-Span Development	70%	4.5	3	Area E - Social/Behavioral Sciences
Macroeconomics	70%	4.5	3	ECO 204
Medical Terminology	70%	4.5	3	COH 150
Microbiology	70%	4.5	3	Area F - Lecture
Microbiology Lab	70%	1.5	1	Area F - Lab
Microeconomics	70%	4.5	3	ECO 203
Organizational Behavior	70%	4.5	3	Open Elective
Personal Finance	70%	4.5	3	Open Elective
Personal Fitness and Wellness	70%	6	4	COH 100
Pharmacology	70%	4.5	3	Open Elective
Precalculus	70%	4.5	3	MTH 215
Principles of Management	70%	4.5	3	Open Elective
Student Success	70%	4.5	3	Area G - Lifelong Learning & Self Development
US History I	70%	4.5	3	HIS 220A
US History II	70%	4.5	3	HIS 220B
Western Civilization I	70%	4.5	3	Area D - Humanities
Western Civilization II	70%	4.5	3	Area D - Humanities

Paralegal Transfer Credit Policy

Students may receive credit for up to thirty percent (30%) of their legal specialty courses by transferring in coursework taken at another college or university, if approved by the Program Director or a qualified faculty member. Students transferring from American Bar Association (ABA) approved programs for which there is an existing articulation agreement may receive credit for up to fifty percent (50%) of their legal specialty coursework. Approval can be obtained by:

- An articulation agreement established through National University and the student's prior school or university, or
- Submission of a petition for transfer credit by the student to the Office of the Registrar, which will include:
    - Name of prior school or university,
    - Whether or not the prior program is ABA approved, and
    - For each course taken in the prior program for which credit is sought:
        - Name of course,

- Course description,
- Syllabus,
- Documentation of the number of hours, if any, the course was offered in synchronous or asynchronous format, if not included in the syllabus, and
- Certification of grade in the course (typically via a transcript from the prior institution).

Petitions will be reviewed by the Program Director or a qualified faculty member. Credit will only be granted if the course is equivalent in content, length, and nature to a National University course, the student has earned a grade of C or better, and the course was taken within the last ten (10) years. Additionally, students must still complete at least nine (9) semester credit hours or the equivalent of legal specialty courses through synchronous instruction and may be further limited in transfer credits to satisfy this requirement.

Military Transfer Credits

As recommended by the American Council on Education (ACE), United States military training, testing, and other appropriate academic experience may be considered for transfer into a National University degree program. Except for military training courses specifically designated by ACE as equivalent to graduate coursework, military transfer credit will be limited to undergraduate programs.

NU will accept the minimum semester credit hours, levels of study, and subject areas recommended by the American Council on Education (ACE) on all military training courses, selected Military Occupation Specialties (MOS) and Ratings.

The maximum amount of transfer credit granted for military education is 135 quarter units (90 semester credit hours). An additional nine (9) credits of correspondence coursework may be granted for active or veteran students who served in the Marine Corps.

Acceptable Transcripts and Credits

Military training and experience must be documented on an official military transcript system supported by ACE credit recommendations. These include JST (Joint Services Transcripts), CCAF (Community College of the Air Force), USCGI (United States Coast Guard Institute), or similar.

College transcripts sent directly to the Army National Guard Institute or other partnership agency and forwarded to NU with the original envelope showing that it was not received by the student may be accepted as official transcripts.

The recommended ACE credit must appear on an official transcript from the institution where they were earned. Work that is not documented on an official military transcript system may be considered on an individual basis when proper military documentation of military course completion is presented to NU for assessment.

Coursework Credits

Transfer credit for military or veteran applicants at the undergraduate level toward bachelor's degrees are accepted by NU on the following basis:

Undergraduate credits must be completed at a regionally or nationally accredited post-secondary institution and must be earned with a grade of "C-" or better

Military training or coursework must have been evaluated by an outside agency (i.e. ACE, institutions of higher learning) for academic content and semester credit hour equivalency

Courses accepted in transfer must relate to the program and degree being pursued and must be equivalent to the degree program requirements, including specified electives

Military Experience Credits

Credit for military experience may be awarded based on Army MOS, Navy Ratings, Marine Corps MOS, and/or Coast Guard Ratings. The School Dean or designee shall determine the equivalency and transfer credit for each MOS or rating matched to a bachelor's degree program or concentration.

Credit awarded based on a rating or MOS may not duplicate any credits given for military training.

Transcript Evaluation for Students Using VA Education Benefits

In addition to transcripts needed to meet basis for admissions requirements, for students electing to use VA Educational Benefits, such as GI Bill®, NU will inquire about all previous education and training, and request transcripts from students for all prior institutions. This includes transcripts for military training, traditional college coursework, and vocational training. A copy of an unofficial transcript is sufficient for the purpose of an initial evaluation. Transcripts for education and training from prior institutions will be evaluated and credit will be granted, as appropriate, per the University's Transfer Credit Policy.

Credit by Examination

Currently enrolled students can obtain credit for undergraduate courses through departmental examinations, called Credit by Examination, when their training or work experience seems to provide proficiency in the subject matter of an approved course. Only a limited number of courses are approved for Credit by Examination. Students cannot challenge courses that are in the same area as an advanced course taken at National University or another regionally accredited institution. Students cannot challenge a course they have previously attempted regardless of grade earned. Students can apply for Credit by Examination by completing the e-forms link on the Student Portal. Students must submit their e-form after they are formally evaluated by the Office of the Registrar to determine eligibility for the exam. Approval for the exam must be granted before the exam can be taken. Students must pay the required $100 Credit by Examination fee to the Student Accounts.

All Credit by Examinations must support the objectives of the student's degree program and cannot exceed 13.5 quarter units in an associate degree program. Credit from Credit by Examination counts toward graduation, but no grade points are assigned or included in calculating Grade Point Averages. The credit cannot be used to meet residency requirements.

You can find more information on testing sites and preparation for your exam at: Testing Services. You can also contact the testing center at 858.541.7951 or email testingservices@nu.edu.

Challenge by Examination

Waivers for certain University courses can only be established by departmental examination. Typically, the courses that require a departmental examination to establish an exemption (waiver) are courses in computer science, mathematics, technical subjects, or those required for licensure or a credential.

Procedures to challenge a course by examination are identical to the Credit by Examination procedures explained above, but the fee for a Challenge by Examination is $50 rather than $100. No credit is awarded for a waived course.

Undergraduate Course Waivers

Students may request to waive a course based on previous training or experience. If the student can demonstrate mastery of a subject, the department chair must submit a recommendation to allow the student to waive the particular course. If the course in question has an available Credit by Examination (or other approved test) then the student must pass the examination and may not request for a waiver.

A course waived exempts a student from that course. Units are not awarded for a waived course, so the student may need to take a different course such as an elective in order to meet the overall unit requirements for the degree. Approval of a course waiver does not reduce the total number of credits required for the awarding of the degree, but allows the student to take another approved course for the same number of credits. Waiver requests must be submitted at least four (4) weeks prior to the class' scheduled start date.

Language Proficiency Testing

National University offers competency proficiency testing through an agreement with the University of Pennsylvania Penn Language Center for students who need foreign language proficiency verification. National University will allow students, who have met the Intermediate level of foreign language proficiency through this test, to waive the Area D language requirement in General Education. This service is made available to the students at a reasonable cost.

Note: Students will need to meet the overall unit requirement for General Education.

The foreign language competency test consists of four components which measure a student's ability to communicate, read and write in a foreign language. The duration of the test varies depending on the language,

and could take approximately 1.5–2 hours. The test contains an oral interview between test candidate and the tester, a reading comprehension assignment, and a writing sample.

University of Pennsylvania Penn Language Center will keep a permanent record of the results of the competency testing. Credit by Examination is not available. Website: www.pls.sas.upenn.edu/testing.

Approval For the Training of Veterans

National University is approved for the training of veterans under Title 38 of the U.S. Code, Chapters 30, 31, 32, 34, and 35. The University is also authorized for active duty tuition assistance.

Questions regarding pre-evaluations and degree plans of military students may be submitted to student's academic advisor or the Military Evaluations Team (militaryevaluations@nu.edu or 858.642.8047).

Course Applicability For Veteran Students Using VA Benefits

(Applies to all GI Bill Educational Programs)

U.S. Department of Veterans Affairs pays GI Bill benefits for students in pursuit of one educational degree at a time. Only courses that satisfy the minimum requirements outlined by the curriculum guide or graduation evaluation form can be certified for VA purposes. A curriculum guide or graduation evaluation form should be kept in the student's file. When a student takes a course that does not fulfill a program requirement, it cannot be certified for VA purposes. Excessive free electives, for example, cannot be certified.

National University students are responsible for notifying the Veterans Affairs Department of any change of status, class schedule changes, or unsatisfactory progress.

Academic Information for Graduate Degrees

Acceptance Requirements

Program acceptance requirements vary by degree-level, School, and program of study. Minimum requirements for acceptance are outlined below. Please refer to School and program sections for additional, program-specific admissions, evaluation, and application requirements or procedures. Students must meet Basis for Admissions prior to the start of the first class.

Graduate Basis for Admissions

NU accepts students on a continual basis. Application for admission can be submitted online any time during the calendar year via www.nu.edu. The Office of the Registrar reviews each applicant file to ensure that the prospective students meet the institutional and program-specific basis for admission requirements. Please refer to School and program sections of this catalog for program-specific admissions requirements and procedures.

All prospective students must provide the following documentation to meet basis for admission to the University:

- An unofficial degree posted transcript that can be degree-verified through the National Student Clearinghouse (NSC). Except where prohibited by accreditation.

  -IF-

- An unofficial transcript is unable to be verified through NSC, an official degree posted transcript is required.

  -OR-

- A signed attestation of conferral and an unofficial transcript that can be degree-verified through the National Student Clearinghouse (NSC)

Note: Some programs at National University require degrees conferred from regionally accredited institutions. Please refer to program pages for program specific basis for admissions requirements.

Note: Students that intend to use VA funding must submit Official transcripts from all regionally or nationally accredited institutions attended.

Unofficial and official transcripts submitted for basis of admissions to NU must include the following information at a minimum:

- Student's full name
- Name of school
- Course and/or term dates
- Earned and attempted credit totals
- Grade point average (GPA)
- Name of degree
- Degree conferral date (if applicable)
- All pages of the transcript

To be considered official, transcripts must be submitted to the Office of the Registrar in a sealed envelope from the institution via mail or electronically through a third-party transcript processor (e.g., Parchment or National Student Clearinghouse)

Note: Degree audit reports and grade reports are not considered unofficial transcripts. All prospective students who wish to receive transfer credit from coursework completed outside the United States must provide official transcripts and official evaluations from an approved agency as needed for official evaluation. Once a student is considered officially admitted, they may receive financial aid.

Note: Students who provide an attestation of conferral for a degree conferral date that has not yet occurred are not permitted to attend courses until official documentation is received. Degree conferral dates must be within six months from the date of application to NU.

International Basis for Admissions

All prospective students with internationally awarded degrees must provide the following documentation to meet basis for admission to the University:

- English proficiency
- An official credential evaluation that meets the following requirements:
    - Evaluation completed by an approved credential evaluation agency
    - Submitted to NU in a sealed envelope from the agency or via secure email delivery to transcripts@nu.edu
    - Degree level
    - Program of study or major and U.S. equivalency statement
    - Degree conferral date
    - With information that matches that of the prospective student (e.g., birthdate, name, passport, etc.)

Note: Name change documentation is required if a prospective student's name differs from the name that is listed on official documentation from approved credential evaluation agency.

Transfer Credit

As of 3/1/2023 the Transfer Credit Policy has been updated. Student enrolling prior to March 1st, can contact the Registrar for the previous policy.

Transfer Credit Eligibility

National University accepts credits from regionally and nationally accredited institutions. It may also accept credits from institutions that are accredited by an agency which is a member of Council for Higher Education Accreditation (CHEA) or from collegiate institutions which are accredited by non-CHEA member agencies provided they are recognized by the Department of Education.

Transfer credits from institutions that are accredited by an agency which is a member of CHEA are only accepted provided that the academic quality of the institutions can be verified and the credits otherwise comply with National University guidelines. Transfer credits from agencies which are not CHEA members are subject to additional scrutiny to validate that their academic programs adhere to the standards of institutions accredited by CHEA members.

Students will undergo a transfer credit evaluation as part of the enrollment application process. All official transcripts and necessary documentation must be submitted and reviewed prior to the start of the first class. Requests by the student for consideration of additional transfer credit can be made at any time after the initial evaluation and prior to degree conferral provided the maximum number of transfer credits permissible has not already been accepted by the University.

The Office of the Registrar, School Dean, or designee must approve all requests for transfer credit. Transfer credits are evaluated for currency and relevancy to NU degree programs, and whether they meet academic standards. The Admissions and Evaluation team will document which credits are accepted in transfer and which University requirements are satisfied.

Any credits to be considered for transfer into a National University academic program must:

- Have been completed at a regionally or nationally accredited academic institution, an institution accredited by an agency which is a member of CHEA, or from a collegiate institution accredited by a non-CHEA member agency provided it is recognized by the Department of Education;
- Be equivalent to the degree program requirements, including specified electives;
- Appear on an official transcript from the institution where they were earned;
- Meet required minimum grade requirements for transfer credit eligibility outlined by degree or program-level (remedial college credits are not accepted as transfer credit);
- Have been completed within the specified number of years for transfer credit eligibility outlined by degree or program-level.

Note: If a student submits a transcript that has pending classwork or no grades assigned, it will not be evaluated for transfer credit until an official transcript is submitted with final grades. NU is not responsible for duplication of transferable credits/classes that the student may have taken at a prior institution.

Post-Baccalaureate Certificate Programs

The School Dean or designee uses the following criteria to evaluate proposed transfer credits at the graduate-level:

- Completed within five (5) years prior to acceptance at NU, while enrolled at a regionally or nationally accredited institution
- Credits must be earned with a grade of "B" or better or an equivalent satisfactory grade
- A maximum of three (3) semester credit hours may be transferred from a graduate-level program to NU's Post-Baccalaureate certificate programs
- Must be equivalent to NU classwork as demonstrated by the transfer class description

Note: The Applied Behavior Analysis (ABA) Post-Baccalaureate Certificate may accept a maximum of 12 semester credit hours in transfer credit toward the certificate program for graduate classwork completed toward graduate degree at an accredited college or university with a grade of "B" or better. Transfer credit is only awarded for class work that is evaluated to be substantially equivalent in content to the required class work in the Applied Behavior Analysis (ABA) Post-Baccalaureate Certificate.

Note: Credits earned at NU have the same time limits stated above for application to current programs and degree plans, based on the date the corresponding class grade was posted.

Master's Programs

The School Dean or designee uses the following criteria to evaluate proposed transfer credits at the graduate level; exceptions may be made at the Dean's discretion:

- Completed within seven (7) years prior to acceptance at NU unless programmatic accreditation requires otherwise.
- Credits must be earned with a grade of "B" or better or an equivalent satisfactory grade unless otherwise indicated by program or accreditation.
- A maximum of twelve (12) semester credit hours may be transferred from a graduate-level program. Many graduate programs have lower transfer limits. Please consult program description for program specific transfer limits.
- No more than nine (9) semester credit hours can be applied to specialization classes. Many graduate programs have lower transfer limits. Please consult program description for program specific transfer limits.

- Must be equivalent to content in the required NU class as demonstrated by the transfer class description and/or syllabus

Note: Credits earned at NU have the same time limits stated above for application to current programs and degree plans, based on the date the corresponding class grade was posted.

Post-Master's Certificate Programs

The School Dean or designee uses the following criteria to evaluate proposed transfer credits at the doctoral-level:

- Completed within seven (7) years prior to acceptance at NU unless programmatic accreditation requires otherwise.
- Credits must be earned with a grade of "B" or better or an equivalent satisfactory grade unless otherwise indicated by program or accreditation.
- A maximum of three (3) semester credit hours may be transferred from a doctoral-level program. Please consult program description for program specific transfer limits.
- Must be equivalent to content in the required NU class as demonstrated by the transfer class description and/or syllabus

Note: Credits earned at NU have the same time limits stated above for application to current programs and degree plans, based on the date the corresponding class grade was posted.

Juris Doctor Program

For information about the Juris Doctor program's transfer credit limits please see the Juris Doctor Handbook

Education Specialist Programs

The School Dean or designee uses the following criteria to evaluate transfer credits at the Education Specialist level:

- Completed within seven (7) years prior to acceptance at NU unless programmatic accreditation requires otherwise.
- Credits must be earned with a grade of "B" or better or an equivalent satisfactory grade unless otherwise indicated by program or accreditation.
- A maximum of twelve (12) semester credit hours may be transferred from an advanced graduate or doctoral-level program. Please consult program description for program specific transfer limits.
- No more than nine (9) semester credit hours can be applied to specialization classes. Please consult program description for program specific transfer limits.
- Must be equivalent to content in the required NU class as demonstrated by the transfer class description and/or syllabus

Note: Credits earned at NU have the same time limits stated above for application to current programs and degree plans, based on the date the corresponding class grade was posted.

Note: Students who complete NU's EdS program may be eligible to apply up to 30 semester credit hours from the EdS program to NU Sanford College of Education Doctoral programs. School Dean (or their designee) approval is required to determine number of applicable credit credits from EdS to the selected doctoral program.

Doctoral Programs

The School Dean or designee uses the following criteria to evaluate transfer credits at the doctoral level; exceptions may be made at the Dean's discretion:

- Completed within seven (7) years prior to acceptance at NU unless programmatic accreditation requires otherwise.
- Credits must be earned with a grade of "B" or better or an equivalent satisfactory grade unless otherwise indicated by program or accreditation.
- A maximum of twelve (12) semester credit hours may be transferred from a doctoral-level program. Please consult program description for program specific transfer limits.
- No more than nine (9) semester credit hours can be applied to specialization classes. Please consult program description for program specific transfer limits.

- Must be equivalent to content in the required NU class as demonstrated by the transfer class description and/or syllabus

Note: Credits earned at NU have the same time limits stated above for application to current programs and degree plans, based on the date the corresponding class grade was posted.

Note: Students enrolled in the Dissertation Completion Pathway (DCP) will be eligible to transfer in all doctoral classwork as long as it aligns to the chosen program of study, culminated in doctoral candidacy, and the student was not dismissed for academic reasons. The DCP leadership will conduct a transcript review to ensure program alignment and students have achieved doctoral candidacy at a previous institution for a degree program and specialization offered at NU to determine transfer of credit applicability.

Note: Students who complete a Master's degree program at NU may be eligible to satisfy a maximum of 9 doctoral semester credit hours in their doctoral program using graduate level credits from their conferred Master's degree. Students must receive written verification from the School Dean (or their designee) at the time of application to their doctoral program that classes from the conferred Master's degree meet requirements for the doctoral program.

Example: MBA-5102 could be used to satisfy BTM-7101.

Graduate Credit From Foreign Institutions

The University may accept transfer credit if an official class-by-class evaluation from an approved credential evaluation agency is supplied. NU will accept credential evaluations through any evaluation agency accredited by the National Association of Credential Evaluation Services (NACES). In addition, credential evaluations by the American Association of Collegiate Registrars and Admissions Officers (AACRAO) are also accepted.

Program Terminations

Group Based

Foreign Credential Bridge Program

Master of Arts in History

Master of Science in Applied School Leadership with Preliminary Administrative Services Credential Option (in Partnership with participating County Offices of Education)

Individual Based

Doctor of Education in Educational Leadership - Higher Education Specialization

Doctor of Education in Educational Leadership - PK-12 Specialization

Doctor of Philosophy in Educational Leadership - Higher Education Specialization

Doctor of Philosophy in Educational Leadership - PK-12 Specialization

Post-Baccalaureate Certificate in Business - Entrepreneurship Specialization

Post-Baccalaureate Certificate in Business - General Business Specialization

Post-Baccalaureate Certificate in Business - Inclusive Leadership Specialization

Post-Baccalaureate Certificate in Business - Management of Virtual Organizations Specialization

Post-Baccalaureate Certificate in Business - Project Management Specialization

Post-Baccalaureate Certificate in Marriage and Family Therapy Systemic Sex Therapy Specialization

Post-Baccalaureate Certificate in Marriage and Family Therapy Systemic Treatment of Addictions Specialization

Post-Baccalaureate Certificate in Marriage and Family Therapy Trauma Studies Specialization

Post-Master's Certificate in Business - Advanced Accounting Specialization

Post-Master's Certificate in Business - Financial Management Specialization

Post-Master's Certificate in Business - Project Management Specialization

Course Terminations

Group Based

CHE 350A - Organic Chemistry I Lab

CHE 351A - Organic Chemistry II Lab

EDA 631 - Shared Vision of Learning

EDA 632 - Teaching and Learning Culture

EDA 633 - Mgmt for Teaching/Learni

EDA 634 - Diverse Families/Communities

EDA 635 - Personal Ethics for Leadership

EDA 636 - Political and Social Influence

ENG 620B - Literary Period or Movement II

ENG 680B - Seminar in a Theme II

ENG 690B - Major Author Seminar II

MTH 216A - College Algebra I

MTH 216B - College Algebra II

MUL 420 - Multimedia Arts Portfolio Proj

MUL 471 - Adv Digital Interactivity Proj

PHL 339 - Study of a Major Philosopher

PLA 219 - Foundations of Property Law

PME 602 - Skills Management

PSYC 480 - Senior Project

Individual Based

MFS-6000 Foundations of Trauma Studies

MFS-6001 Assessment and Treatment Planning of Trauma

MFS-6002 Global Implications of Trauma

MFS-6003 The Neurobiology of Trauma and Art-Based Interventions

MFS-6004 Somatic Approaches/Vicarious Trauma and Self-care

MFS-6005 Working with Trauma in Family Systems, Systemic Trauma: Self, Culture, and Society

MFT-6951 MFT Practicum I

MFT-6951B MFT Practicum I

MFT-6951CA MFT Practicum I

MFT-6952 MFT Practicum II

MFT-6952B MFT Practicum II

MFT-6952CA MFT Practicum II

MFT-6953 MFT Practicum III

MFT-6953B MFT Practicum III B

MFT-6955 MFT Practicum II

MFT-6988 MFT Internship I

MFT-6989 MFT Internship II

MFT-6991 MFT Internship I

MFT-6991CA MFT Internship I

MFT-6992 MFT Internship II

MFT-6992CA MFT Internship II

MFT-6993 MFT Internship III

MFT-6994 MFT Internship IV

MFT-6995 MFT Internship and Capstone Presentation

MFT-6995CA MFT Internship and Capstone Presentation

MFT-6996 MFT Internship V

MSW-6006 Leadership in Social Work Practice

PSY-6802 Educational Psychology for Diverse Populations

Degree Information

General Education Requirements

Group Based

Associate of Arts and Associate of Science General Education Requirements

Academic Program Director: John Miller; jmiller@nu.edu

The following General Education requirements apply to all Associate of Arts and Associate of Science degrees.

The Associate of Arts in General Education (formerly the Associate of Arts), and the Associate of Science in General Education have specific General Education requirements. Please see these programs for more information.

The General Education program for the Associate of Arts and Associate of Science degrees promotes the intellectual growth of all students in National University's Associate level undergraduate degree programs. The general education curriculum assumes that undergraduates will not concentrate on a major field of study until they have completed a general education program that provides instruction in writing and mathematical skills as well as introducing the student to subject matter in the Humanities, Information Literacy and Science and Social Science disciplines. Students will also address the cultural diversity of contemporary society.

Students in the general education program are advised to focus on writing and speech communication first. Students are then counseled to explore mathematical and other formal systems to develop abstract reasoning abilities and are encouraged to take a course in informational literacy. Finally, all students are required to have exposure to the natural sciences, the humanities, fine arts, language, and the social and behavioral sciences. Many of these courses include an examination of the human condition in a multicultural society.

The general education curriculum emphasizes communications, mathematics and sciences, humanities, arts, language, and social/behavioral sciences. Thus, the curriculum provides coherence to Associate level undergraduate education.

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

- Demonstrate skills for self-development that contribute to lifelong learning.
- Demonstrate literacy in written and oral communication.
- Apply information literacy skills in developing research projects and presentations.
- Demonstrate a capacity for responsible citizenship in a diverse society.
- Demonstrate awareness of past and present human and cultural diversity.
- Identify ethical issues raised in different disciplines.
- Demonstrate scientific and quantitative literacy skills in appraising information and solving problems.
- Demonstrate the ability to use the elements of critical thinking to analyze issues, solve problems, and make decisions.
- Demonstrate the ability to work successfully in a team.

Degree Requirements:

The General Education curriculum furnishes students with the basic knowledge necessary to pursue any Associate level degree program. Students who fulfill the curriculum gain an interdisciplinary liberal arts framework geared toward problem solving. This emphasis promotes self-directed research in many academic areas that have traditionally been kept separate.

Diversity Requirement

The diversity component serves the general education program goal of increasing respect for, and awareness of, diverse peoples and cultures. A plus [+] after any course on the list of approved general education courses signifies a diversity-enriched course. Students must complete at least one diversity-enriched course in the general education program.

General Education Program Requirements

The general education program consists of a minimum of 37.5 quarter units. Of the 37.5 quarter units students must complete at least 4.5 units in diversity enriched coursework.

AREA A: ENGLISH COMMUNICATION (Minimum 9.0 quarter units)

Category 1 Writing (4.5 quarter units)		
ENG 102	Effective College English	4.50
Category 2 Speech and Communication (4.5 quarter units)		
COM 103	Public Speaking	4.50
COM 120	Intro to Interpersonal Comm	4.50

AREA B: MATHEMATICAL CONCEPTS AND QUANTITATIVE REASONING (Minimum 4.5 quarter units)

MTH 204	Mathematics Non-STEM Majors ***Prerequisite:*** *MTH 12A and MTH 12B or equivalent, or Accuplacer test placement into College Level Math*	4.50
MTH 209A	Fundamentals of Mathematics I ***Prerequisite:*** *MTH 12A and MTH 12B*	4.50
MTH 210	Probability and Statistics ***Prerequisite:*** *MTH 12A and MTH 12B, or Accuplacer test placement evaluation*	4.50
MTH 215	College Algebra & Trigonometry ***Prerequisite:*** *MTH 12A and MTH 12B, or Accuplacer test placement evaluation*	4.50
MTH 220	Calculus I ***Prerequisite:*** *MTH 215, or Accuplacer test placement*	4.50
MTH 221	Calculus II ***Prerequisite:*** *MTH 220*	4.50
MTH 301	Fundamentals of Mathematics II ***Prerequisite:*** *MTH 209A*	4.50
CSC 208	Calculus for Comp. Science I ***Prerequisite:*** *MTH 215*	4.50
MNS 205	Intro to Quantitative Methods	4.50
BST 322	Intro to Biomedical Statistics	4.50

AREA C: INFORMATION LITERACY (Minimum 4.5 quarter units)

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

AREA D: ARTS AND HUMANITIES, AND LANGUAGE (Minimum 4.5 quarter units)

ART 110	Visual Arts	4.50
ART 225	Introduction to Art History ***Prerequisite:*** *ENG 102*	4.50
ASL 120	American Sign Language I	4.50
ASL 130	American Sign Language II	4.50

	Prerequisite: *ASL 120*	
HIS 233	World Civilizations I ***Prerequisite:*** *ENG 102*	4.50
HIS 234	World Civilizations II ***Prerequisite:*** *ENG 102*	4.50
LIT 100	Introduction to Literature ***Prerequisite:*** *ENG 102*	4.50
LIT 345	Mythology ***Prerequisite:*** *ENG 240 and LIT 100*	4.50
MUL 201	Intro to Graphic Design ***Prerequisite:*** *ENG 102*	4.50
MUS 100	Music History & Appreciation	4.50
MUS 300	Film Music ***Recommended Preparation:*** *MUS 100;* ***Prerequisite:*** *ENG 102*	4.50
MUS 327	World Music[+] ***Prerequisite:*** *ENG 102*	4.50
ACEX 2101X	Philosophy of Coaching	4.50
PHL 100	Introduction to Philosophy ***Prerequisite:*** *ENG 102*	4.50
PHL 238	Logical & Critical Thinking ***Prerequisite:*** *ENG 102*	4.50
PHL 336	Science, Technology & Humanity ***Prerequisite:*** *ENG 102*	4.50
PHL 337	Ethics ***Prerequisite:*** *ENG 102*	4.50
SPN 100	Beginning Spanish I	4.50
SPN 101	Beginning Spanish II ***Prerequisite:*** *SPN 100*	4.50
SPN 200	Intermediate Spanish I ***Prerequisite:*** *SPN 101*	4.50
THR 200	Theater Arts	4.50

[+]Diversity Enriched Offerings

AREA E: SOCIAL AND BEHAVIORAL SCIENCES (Minimum 4.5 quarter units)

ACEX 2100X	History of Sport	4.50
COM 100	Intro to Mass Communication	4.50
COM 220	Media Literacy	4.50
COM 380	Democracy in the Info. Age[+] ***Prerequisite:*** *ENG 102*	4.50
ECO 203	Principles of Microeconomics	4.50
ECO 204	Principles of Macroeconomics	4.50
ETH 100	Intr to Social Justice Studies	4.50
HIS 220A	United States History I[+] ***Prerequisite:*** *ENG 102*	4.50
HIS 220B	United States History II[+] ***Prerequisite:*** *ENG 102*	4.50
POL 100	Introduction to Politics ***Prerequisite:*** *ENG 102*	4.50
POL 201	American Politics ***Prerequisite:*** *ENG 102*	4.50
PSYC 100	Introduction to Psychology	4.50

SOC 100	Principles of Sociology[+]	4.50
SOC 260	Cultural Anthropology ***Prerequisite:*** *ENG 102*	4.50
SOC 350	Cultural Diversity[+] ***Prerequisite:*** *ENG 102*	4.50

[+]Diversity Enriched Offering

AREA F: PHYSICAL AND BIOLOGICAL SCIENCES (Minimum 6 quarter units [Note: one science lab is required])

Strongly recommended: complete the BIO 201 - 203A series in numerical sequence BIO 201 + 201A, 202 + 202A, 203 + 203A.

BIO 100	Survey of Bioscience	4.50
BIO 100A	Survey of Bioscience Lab ***Prerequisite:*** *BIO 100 for non-science majors (GE), or BIO 163 for science majors*	1.50
BIO 161	General Biology 1	4.50
BIO 162	General Biology 2 ***Prerequisite:*** *BIO 161*	4.50
BIO 163	General Biology 3 ***Prerequisite:*** *BIO 161; BIO 162*	4.50
BIO 169A	General Biology Lab ***Prerequisite:*** *BIO 161; BIO 162; BIO 163*	1.50
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*	4.50
BIO 191A	Online Hum Anat and Phys I Lab ***Corequisite:*** *BIO 201;* ***Recommended: Prior completion of:*** *BIO 100; BIO 100A; CHE 101; CHE 101A*	1.50
OR BIO 201A	Human Anatomy and Physiol Lab ***Corequisite:*** *BIO 201;* ***Recommended: Prior completion of:*** *BIO 100; BIO 100A; CHE 101; CHE 101A or equivalent courses.*	1.50
BIO 202	Human Anatomy and Physiol II ***Corequisite:*** *BIO 202A, or BIO 192A;* ***Prerequisite:*** *BIO 201 and BIO 201A*	4.50
BIO 192A	Online Anat and Phys II Lab ***Corequisite:*** *BIO 202;* ***Prerequisite:*** *BIO 191A with a minimum grade of C-. Passing grade required; BIO 201 with a minimum grade of C-. Passing grade required*	1.50
OR BIO 202A	Human Antmy andPhysiol LabII ***Corequisite:*** *BIO 202;* ***Prerequisite:*** *BIO 201; BIO 201A*	1.50
BIO 203	Introductory Microbiology ***Corequisite:*** *BIO 193A; BIO 203A Students should take both lecture and lab courses concurrently and with the same instructor to ensure a consistent learning experience. Students who are retaking one of the two courses or present special circumstances should petition for exception to this requisite.;*	4.50

	Recommended: Prior completion of: *BIO 100 and BIO 100A; CHE 101 and CHE 101A or equivalent courses; BIO 201 and BIO 201A; BIO 202 and BIO 202A*	
BIO 193A	Online Microbiology Lab ***Corequisite:*** *BIO 203;* ***Recommended: Prior completion of:*** *BIO 191A; BIO 201; CHE 101; CHE 101A*	1.50
OR		
BIO 203A	Introductory Microbiology Lab ***Corequisite:*** *BIO 203;* ***Recommended: Prior completion of:*** *BIO 100; BIO 100A; CHE 101; CHE 101A; BIO 201 and BIO 201A; BIO 202 and BIO 202A*	1.50
BIO 205A	Pre-health laboratory skills ***Prerequisite:*** *BIO 191A with a minimum grade of C-. A passing grade is required in this prerequisite lab course.; BIO 192A with a minimum grade of C-. A passing grade is required in this prerequisite lab course.; BIO 193A with a minimum grade of C-. A passing grade is required in this prerequisite lab course.*	1.50
CHE 101	Introductory Chemistry ***Recommended Preparation:*** *MTH 204*	4.50
CHE 101A	Introductory Chemistry Lab ***Prerequisite:*** *CHE 101, or CHE 141 for Science Majors.*	1.50
CHE 141	General Chemistry 1 ***Prerequisite:*** *MTH 204; MTH 215*	4.50
CHE 142	General Chemistry 2 ***Prerequisite:*** *CHE 141*	4.50
CHE 143	General Chemistry 3 ***Corequisite:*** *CHE 149A;* ***Prerequisite:*** *CHE 142*	4.50
CHE 149A	General Chemistry Laboratory ***Corequisite:*** *CHE 143*	1.50
CHE 150	Introductory Organic Chemistry ***Prerequisite:*** *CHE 101 and CHE 101A, or CHE 141 and CHE 142 and CHE 143 and CHE 149A; Prerequisites for this course are NOT required for BSCLS students.*	4.50
CHE 150A	Introductory Organic Chem Lab ***Prerequisite:*** *CHE 150 with a minimum grade of C-. A student must have passed the lecture to take the lab.*	1.50
EES 103	Fundamentals of Geology	4.50
EES 103A	Fundamentals of Geology Lab ***Prerequisite:*** *EES 103*	1.50
PHS 104	Introductory Physics ***Prerequisite:*** *MTH 204, or MTH 215*	4.50
PHS 104A	Introductory Physics Lab ***Prerequisite:*** *PHS 104, or PHS 171 for Science Majors.*	1.50
PHS 171	General Physics 1 ***Prerequisite:*** *MTH 215*	4.50
PHS 172	General Physics 2 ***Prerequisite:*** *PHS 171*	4.50
PHS 173	General Physics 3 ***Corequisite:*** *PHS 179A;* ***Prerequisite:*** *PHS 171; PHS 172*	4.50
PHS 179A	General Physics Lab ***Prerequisite:*** *PHS 171 and PHS 172 and* ***Corequisite:*** *PHS 173*	1.50
PHS 231	Calculus-based Physics 1 ***Prerequisite:*** *PHS 104 and MTH 220, or CSC 208 and MTH 221, or CSC 209*	4.50

PHS 232	Calculus-based Physics 2 ***Prerequisite:*** *PHS 104 and PHS 231; MTH 220, or CSC 208; MTH 221, or CSC 209*	4.50
SCI 200	Earth and Space Sciences	4.50
SCI 200A	Earth and Space Sciences Lab ***Prerequisite:*** *SCI 200 with a minimum grade of C-. A student must have passed the lecture course in order to take the lab course.*	1.50

AREA G: LIFELONG LEARNING AND SELF DEVELOPMENT (Minimum 4.5 quarter units)

ANA 210	Applied Ethics for AI	4.50
ANA 240	Introduction to AI	4.50
ART 250	Self-Reflection via Visual Art ***Recommended Preparation:*** *ART 225; ART 110*	4.50
COH 100	Personal Health	4.50
COH 317	Public Health Nutrition ***Prerequisite:*** *ENG 102;* ***Recommended Preparation:*** *COH 100*	4.50
COH 318	Drug Use and Abuse ***Prerequisite:*** *ENG 102;* ***Recommended Preparation:*** *COH 100*	4.50
COH 319	Human Sexuality ***Prerequisite:*** *ENG 102;* ***Recommended Preparation:*** *COH 100*	4.50
CRS 300	Conflict Resolution Studies ***Recommended Preparation:*** *ENG 102 with a minimum grade of C. Satisfactory English skills are needed to understand the subject matter and to communicate in this class. The prerequisite is recommended*	4.50
ENG 201	Fiction Writing I ***Prerequisite:*** *ENG 102*	4.50
ENG 150	Intro to Creative Writing	4.50
ENG 202	Poetry Writing I ***Prerequisite:*** *ENG 102*	4.50
ENG 203	Screenwriting I ***Prerequisite:*** *ENG 102*	4.50
ENG 375	Nature Writing ***Prerequisite:*** *ENG 102; ENG 240, or ENG 334A*	4.50
FFL 100	Foundation to Academic Success	4.50
GLS 150	Global Issues and Trends	4.50
MUS 200	Music Composition ***Recommended Preparation:*** *MUS 100, or MUS 326, or MUS 327*	4.50
MUL 203	Intro to Visual Storytelling ***Prerequisite:*** *ENG 102*	4.50
PHS 102	Survey of Physical Science	4.50

General Education for Bachelor Degrees

Academic Program Director: John Miller; jmiller@nu.edu

The general education program promotes the intellectual growth of all students in National University's undergraduate degree programs. The general education curriculum assumes that undergraduates will not concentrate on a major field of study until they have completed a thorough general education program that is writing-intensive and addresses the cultural diversity of contemporary society.

Students in the general education program are advised to focus on writing and speech communication first. Students are then counseled to explore mathematical and other formal systems to develop abstract reasoning abilities and are required to take a course in informational literacy and report writing. Finally, all students are

required to have a significant exposure to the natural sciences, the humanities and fine arts, and the social and behavioral sciences and modern language. Many of these courses include an examination of the human condition in a multicultural society.

The general education curriculum emphasizes communications, mathematics and sciences, humanities and social/behavioral sciences. Thus, the curriculum provides coherence to undergraduate education, affording the student the opportunity to:

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

- Demonstrate skills for self-development that contribute to lifelong learning.
- Demonstrate literacy in written and oral communication.
- Apply information literacy skills in developing research projects and presentations.
- Demonstrate a capacity for responsible citizenship in a diverse society.
- Demonstrate awareness of past and present human and cultural diversity.
- Identify ethical issues raised in different disciplines.
- Demonstrate scientific and quantitative literacy skills in appraising information and solving problems.
- Demonstrate the ability to use the elements of critical thinking to analyze issues, solve problems, and make decisions.
- Demonstrate the ability to work successfully in a team.
- Demonstrate creative thinking in expression or problem solving.

Degree Requirements:

The general education curriculum furnishes students with the basic knowledge necessary to pursue any degree program. Students who fulfill the curriculum gain a strong interdisciplinary liberal arts framework geared toward problem solving. This emphasis promotes self-directed research in many academic areas that have traditionally been kept separate.

Diversity Requirement

The diversity component serves the general education program goal of increasing respect for, and awareness of, diverse peoples and cultures. A plus [+] after any course on the list of approved general education courses signifies a diversity-enriched course. Students must complete at least one diversity-enriched course in the general education program.

CSU General Education Certifications and IGETC

National University will accept the following General Education certifications: California State University (CSU) General Education Breadth Certification and the Inter-Segmental General Education Transfer Curriculum (IGETC). All requirements for CSU General Education and IGETC must be completed and certified prior to transfer to National University. The University will not accept partial certifications. Students transferring with full certifications are typically required to take one to three upper-division general education courses at National in order to fulfill the unit requirements. Students must provide an official transcript with the certification included or a separate certification form from the community college attended.

General Education Program Requirements

The general education program consists of a minimum of 69 quarter units. Of the 69 quarter units, students must complete at least 4.5 units at the upper-division level and 4.5 units in diversity enriched coursework. All undergraduate students working toward any associate or bachelor's degree must meet the University's diversity requirement. A maximum of 13.5 upper-division units may be utilized to meet G.E. requirements. Students enrolled in a Bachelor of Arts and residing in Oregon must complete 18 quarter units/12 semester credits of Foreign Language to satisfy state requirements.

AREA A: ENGLISH COMMUNICATION (Minimum 13.5 quarter units)

CATEGORY 1: Writing(9.0 quarter units required)		
ENG 102	Effective College English	4.50
ENG 240	Advanced Composition ***Prerequisite:*** *ENG 102*	4.50
OR ENG 334A	Technical Writing ***Prerequisite:*** *ENG 102; (Only Business, Engineering and Nursing majors may fulfill the requirement by taking ENG 334A)*	4.50
CATEGORY 2 - Oral Communication (4.5 quarter units required)		
COM 103	Public Speaking	4.50
COM 120	Intro to Interpersonal Comm	4.50

AREA B: MATHEMATICAL CONCEPTS AND QUANTITATIVE REASONING (Minimum 4.5 quarter units)

MTH 204	Mathematics Non-STEM Majors ***Prerequisite:*** *MTH 12A and MTH 12B or equivalent, or Accuplacer test placement into College Level Math*	4.50
MTH 209A	Fundamentals of Mathematics I ***Prerequisite:*** *MTH 12A and MTH 12B*	4.50
MTH 210	Probability and Statistics ***Prerequisite:*** *MTH 12A and MTH 12B, or Accuplacer test placement evaluation*	4.50
MTH 215	College Algebra & Trigonometry ***Prerequisite:*** *MTH 12A and MTH 12B, or Accuplacer test placement evaluation*	4.50
MTH 220	Calculus I ***Prerequisite:*** *MTH 215, or Accuplacer test placement*	4.50
MTH 221	Calculus II ***Prerequisite:*** *MTH 220*	4.50
MTH 301	Fundamentals of Mathematics II ***Prerequisite:*** *MTH 209A*	4.50
CSC 208	Calculus for Comp. Science I ***Prerequisite:*** *MTH 215*	4.50
MNS 205	Intro to Quantitative Methods	4.50
BST 322	Intro to Biomedical Statistics	4.50

AREA C: INFORMATION LITERACY (Minimum 4.5 quarter units)

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

AREA D: ARTS, HUMANITIES, AND LANGUAGES (Minimum 18 quarter units in at least 2 areas)

ARTS		
ART 225	Introduction to Art History ***Prerequisite:*** *ENG 102*	4.50
ART 110	Visual Arts	4.50
MUL 201	Intro to Graphic Design ***Prerequisite:*** *ENG 102*	4.50
MUS 100	Music History & Appreciation	4.50
MUS 300	Film Music	4.50

	Recommended Preparation: *MUS 100;* ***Prerequisite:*** *ENG 102*	
MUS 327	World Music[+] ***Prerequisite:*** *ENG 102*	4.50
THR 200	Theater Arts	4.50
HUMANITIES		
ACEX 2101X	Philosophy of Coaching	4.50
HIS 233	World Civilizations I ***Prerequisite:*** *ENG 102*	4.50
HIS 234	World Civilizations II ***Prerequisite:*** *ENG 102*	4.50
LIT 100	Introduction to Literature ***Prerequisite:*** *ENG 102*	4.50
LIT 345	Mythology ***Prerequisite:*** *ENG 240 and LIT 100*	4.50
PHL 100	Introduction to Philosophy ***Prerequisite:*** *ENG 102*	4.50
PHL 238	Logical & Critical Thinking ***Prerequisite:*** *ENG 102*	4.50
PHL 336	Science, Technology & Humanity ***Prerequisite:*** *ENG 102*	4.50
PHL 337	Ethics ***Prerequisite:*** *ENG 102*	4.50
LANGUAGES		
ASL 120	American Sign Language I	4.50
ASL 130	American Sign Language II ***Prerequisite:*** *ASL 120*	4.50
SPN 100	Beginning Spanish I	4.50
SPN 101	Beginning Spanish II ***Prerequisite:*** *SPN 100*	4.50
SPN 200	Intermediate Spanish I ***Prerequisite:*** *SPN 101*	4.50
Students may also satisfy Area D Foreign Language requirements with 9 quarter units of computer languages:		
CSC 242	Intro to Programming Concepts ***Prerequisite:*** *MTH 215*	4.50
CSC 252	Programming in C++ ***Prerequisite:*** *CSC 242*	4.50
CSC 262	Programming in JAVA ***Prerequisite:*** *MTH 215*	4.50

[+]Diversity Enriched Offerings

AREA E: SOCIAL AND BEHAVIORAL SCIENCES (Minimum 13.5 quarter units)

ACEX 2100X	History of Sport	4.50
COM 100	Intro to Mass Communication	4.50
COM 220	Media Literacy	4.50
COM 380	Democracy in the Info. Age[+] ***Prerequisite:*** *ENG 102*	4.50
ECO 203	Principles of Microeconomics	4.50
ECO 204	Principles of Macroeconomics	4.50
ETH 100	Intr to Social Justice Studies	4.50
HIS 220A	United States History I[+]	4.50

	Prerequisite: *ENG 102*	
HIS 220B	United States History II[+] ***Prerequisite:*** *ENG 102*	4.50
POL 100	Introduction to Politics ***Prerequisite:*** *ENG 102*	4.50
POL 201	American Politics ***Prerequisite:*** *ENG 102*	4.50
PSYC 100	Introduction to Psychology	4.50
SOC 100	Principles of Sociology[+]	4.50
SOC 260	Cultural Anthropology ***Prerequisite:*** *ENG 102*	4.50
SOC 350	Cultural Diversity[+] ***Prerequisite:*** *ENG 102*	4.50

[+]Diversity Enriched Offering.

AREA F: PHYSICAL AND BIOLOGICAL SCIENCES (Minimum 6 quarter units [Note: one science lab is required])

Strongly recommended: complete the BIO 201 - 203A series in numerical sequence BIO 201 + 201A, 202 + 202A, 203 + 203A.

BIO 100	Survey of Bioscience	4.50
BIO 100A	Survey of Bioscience Lab ***Prerequisite:*** *BIO 100 for non-science majors (GE), or BIO 163 for science majors*	1.50
BIO 161	General Biology 1	4.50
BIO 162	General Biology 2 ***Prerequisite:*** *BIO 161*	4.50
BIO 163	General Biology 3 ***Prerequisite:*** *BIO 161; BIO 162*	4.50
BIO 169A	General Biology Lab ***Prerequisite:*** *BIO 161; BIO 162; BIO 163*	1.50
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*	4.50
BIO 191A	Online Hum Anat and Phys I Lab ***Corequisite:*** *BIO 201;* ***Recommended: Prior completion of:*** *BIO 100; BIO 100A; CHE 101; CHE 101A*	1.50
OR		
BIO 201A	Human Anatomy and Physiol Lab ***Corequisite:*** *BIO 201;* ***Recommended: Prior completion of:*** *BIO 100; BIO 100A; CHE 101; CHE 101A or equivalent courses.*	1.50
BIO 202	Human Anatomy and Physiol II ***Corequisite:*** *BIO 202A, or BIO 192A;* ***Prerequisite:*** *BIO 201 and BIO 201A*	4.50
BIO 192A	Online Anat and Phys II Lab ***Corequisite:*** *BIO 202;* ***Prerequisite:*** *BIO 191A with a minimum grade of C-. Passing grade required; BIO 201 with a minimum grade of C-. Passing grade required*	1.50

OR		
BIO 202A	Human Antmy andPhysiol LabII ***Corequisite:*** *BIO 202;* ***Prerequisite:*** *BIO 201; BIO 201A*	1.50
BIO 203	Introductory Microbiology ***Corequisite:*** *BIO 193A; BIO 203A Students should take both lecture and lab courses concurrently and with the same instructor to ensure a consistent learning experience. Students who are retaking one of the two courses or present special circumstances should petition for exception to this requisite.;* ***Recommended: Prior completion of:*** *BIO 100 and BIO 100A; CHE 101 and CHE 101A or equivalent courses; BIO 201 and BIO 201A; BIO 202 and BIO 202A*	4.50
BIO 193A	Online Microbiology Lab ***Corequisite:*** *BIO 203;* ***Recommended: Prior completion of:*** *BIO 191A; BIO 201; CHE 101; CHE 101A*	1.50
OR		
BIO 203A	Introductory Microbiology Lab ***Corequisite:*** *BIO 203;* ***Recommended: Prior completion of:*** *BIO 100; BIO 100A; CHE 101; CHE 101A; BIO 201 and BIO 201A; BIO 202 and BIO 202A*	1.50
BIO 205A	Pre-health laboratory skills ***Prerequisite:*** *BIO 191A with a minimum grade of C-. A passing grade is required in this prerequisite lab course.; BIO 192A with a minimum grade of C-. A passing grade is required in this prerequisite lab course.; BIO 193A with a minimum grade of C-. A passing grade is required in this prerequisite lab course.*	1.50
CHE 101	Introductory Chemistry ***Recommended Preparation:*** *MTH 204*	4.50
CHE 101A	Introductory Chemistry Lab ***Prerequisite:*** *CHE 101, or CHE 141 for Science Majors.*	1.50
CHE 141	General Chemistry 1 ***Prerequisite:*** *MTH 204; MTH 215*	4.50
CHE 142	General Chemistry 2 ***Prerequisite:*** *CHE 141*	4.50
CHE 143	General Chemistry 3 ***Corequisite:*** *CHE 149A;* ***Prerequisite:*** *CHE 142*	4.50
CHE 149A	General Chemistry Laboratory ***Corequisite:*** *CHE 143*	1.50
CHE 150	Introductory Organic Chemistry ***Prerequisite:*** *CHE 101 and CHE 101A, or CHE 141 and CHE 142 and CHE 143 and CHE 149A; Prerequisites for this course are NOT required for BSCLS students.*	4.50
CHE 150A	Introductory Organic Chem Lab ***Prerequisite:*** *CHE 150 with a minimum grade of C-. A student must have passed the lecture to take the lab.*	1.50
EES 103	Fundamentals of Geology	4.50
EES 103A	Fundamentals of Geology Lab ***Prerequisite:*** *EES 103*	1.50
PHS 104	Introductory Physics ***Prerequisite:*** *MTH 204, or MTH 215*	4.50
PHS 104A	Introductory Physics Lab ***Prerequisite:*** *PHS 104, or PHS 171 for Science Majors.*	1.50
PHS 171	General Physics 1	4.50

	Prerequisite: *MTH 215*	
PHS 172	General Physics 2 ***Prerequisite:*** *PHS 171*	4.50
PHS 173	General Physics 3 ***Corequisite:*** *PHS 179A;* ***Prerequisite:*** *PHS 171; PHS 172*	4.50
PHS 179A	General Physics Lab ***Prerequisite:*** *PHS 171 and PHS 172 and* ***Corequisite:*** *PHS 173*	1.50
PHS 231	Calculus-based Physics 1 ***Prerequisite:*** *PHS 104 and MTH 220, or CSC 208 and MTH 221, or CSC 209*	4.50
PHS 232	Calculus-based Physics 2 ***Prerequisite:*** *PHS 104 and PHS 231; MTH 220, or CSC 208; MTH 221, or CSC 209*	4.50
SCI 200	Earth and Space Sciences	4.50
SCI 200A	Earth and Space Sciences Lab ***Prerequisite:*** *SCI 200 with a minimum grade of C-. A student must have passed the lecture course in order to take the lab course.*	1.50

AREA G: LIFELONG LEARNING AND SELF DEVELOPMENT (Minimum 4.5 quarter units)

ANA 210	Applied Ethics for AI	4.50
ANA 240	Introduction to AI	4.50
ART 250	Self-Reflection via Visual Art ***Recommended Preparation:*** *ART 225; ART 110*	4.50
COH 100	Personal Health	4.50
COH 317	Public Health Nutrition ***Prerequisite:*** *ENG 102;* ***Recommended Preparation:*** *COH 100*	4.50
COH 318	Drug Use and Abuse ***Prerequisite:*** *ENG 102;* ***Recommended Preparation:*** *COH 100*	4.50
COH 319	Human Sexuality ***Prerequisite:*** *ENG 102;* ***Recommended Preparation:*** *COH 100*	4.50
CRS 300	Conflict Resolution Studies ***Recommended Preparation:*** *ENG 102 with a minimum grade of C. Satisfactory English skills are needed to understand the subject matter and to communicate in this class. The prerequisite is recommended*	4.50
ENG 150	Intro to Creative Writing	4.50
ENG 201	Fiction Writing I ***Prerequisite:*** *ENG 102*	4.50
ENG 202	Poetry Writing I ***Prerequisite:*** *ENG 102*	4.50
ENG 203	Screenwriting I ***Prerequisite:*** *ENG 102*	4.50
ENG 375	Nature Writing ***Prerequisite:*** *ENG 102; ENG 240, or ENG 334A*	4.50
FFL 100	Foundation to Academic Success	4.50
GLS 150	Global Issues and Trends	4.50
MUL 203	Intro to Visual Storytelling ***Prerequisite:*** *ENG 102*	4.50
MUS 200	Music Composition ***Recommended Preparation:*** *MUS 100, or MUS 326, or MUS 327*	4.50

AREA A-G: GENERAL EDUCATION (Minimum 4.5 quarter units)

If a student has not met the upper-division unit requirement in the completion of the above general education areas, an upper-division course from the following list must be taken. (Upper-division courses applicable to General Education are numbered 300-399). If a student has already met the upper-division unit requirement in the completion of the above general education areas, any course below or any course in Areas A through G may satisfy this Area. Remedial courses taken to achieve minimum levels of collegiate-level competency in the areas of writing and mathematical concepts and systems do not satisfy any portion of the general education requirement.

ART 315	Film as Art ***Prerequisite:*** *ENG 102*	4.50
ART 329	World Art[+] ***Prerequisite:*** *ENG 102*	4.50
BAN 300	Intro to Business Analytics ***Prerequisite:*** *MNS 205 and MTH 210*	4.50
COM 360	Representation in the Media[+] ***Prerequisite:*** *ENG 102*	4.50
COM 380	Democracy in the Info. Age ***Prerequisite:*** *ENG 102*	4.50
CSC 350	Computer Ethics	4.50
EES 322	Oceanography	4.50
LIT 311	British Literature I ***Prerequisite:*** *ENG 240 and LIT 100*	4.50
LIT 312	British Literature II ***Prerequisite:*** *ENG 240 and LIT 100*	4.50
LIT 321	American Literature I ***Prerequisite:*** *ENG 240 and LIT 100*	4.50
LIT 322	American Literature II ***Prerequisite:*** *ENG 240 and LIT 100*	4.50
MUS 326	American Music[+] ***Prerequisite:*** *ENG 102*	4.50
PHL 320	World Religions[+] ***Prerequisite:*** *ENG 102*	4.50
PHL 375	Environmental Ethics ***Prerequisite:*** *ENG 102*	4.50
PHS 102	Survey of Physical Science	4.50
PSY 300	Social Psychology of Sport ***Prerequisite:*** *ENG 102; PSYC 100*	4.50
PSYC 301	Child Development ***Prerequisite:*** *ENG 102*	4.50
SCI 300	Geography[+]	4.50
SOC 325	Popular Culture ***Prerequisite:*** *ENG 102*	4.50
HIS 336	American Film and Society[+] ***Prerequisite:*** *ENG 102*	4.50
SOC 344	Love, Sex, and the Family ***Prerequisite:*** *ENG 102*	4.50
SOC 350	Cultural Diversity ***Prerequisite:*** *ENG 102*	4.50

[+]Diversity Enriched Offering.

Undergraduate Degrees

Group Based

Associate of Science in Business

Academic Program Director: Kentaya Beeler; kbeeler@nu.edu

The Associate of Science in Business program is designed to prepare students for entry-level management positions. The degree completion provides a transition path to a Bachelor of Business Administration (B.B.A.) degree. The curriculum includes courses in general business, accounting, economics, finance, legal studies, management and marketing. With a goal to maximizing student success, the program is designed with three prerequisites: information literacy, introductory business mathematics, and probability and statistics. Other courses may be taken in any sequence.

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

- Describe the types of business organizations and their basic functions.
- Describe the legal structure of different types of business organizations such as sole proprietorship, partnership and corporation.
- Explain the functions of basic management relating to planning and implementing an organization's strategic behavior.
- Explain the basic accounting, finance, and management functions of business organizations.
- Explain the role of marketing in business.
- Describe the legal and ethical issues surrounding the business community.

Degree Requirements:

To receive an Associate of Science in Business degree, students must complete at least 90 quarter units consisting of all courses as articulated below along with the required minimum 37.5 units of the Associate of Science General Education. In the absence of transfer credit, students may need to take additional general electives to satisfy total units for the degree. Refer to the section on undergraduate admission procedures for specific information regarding application and evaluation.

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

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

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

MNS 205	Intro to Quantitative Methods*	4.50
OR		
MTH 220	Calculus I ***Prerequisite:*** *MTH 215, or Accuplacer test placement*	4.50
MTH 210	Probability and Statistics ***Prerequisite:*** *MTH 12A and MTH 12B, or Accuplacer test placement evaluation*	4.50

* May be used to meet General Education requirements

Requirements for the Major (8 courses; 36 quarter units)

Foundation Courses		
ECO 203	Principles of Microeconomics	4.50
ECO 204	Principles of Macroeconomics	4.50
ACC 201	Financial Accounting Funds.	4.50
ACC 202	Managerial Accounting Funds. ***Prerequisite:*** *ACC 201*	4.50
Core Courses		
LAW 204	Legal Aspects of Business I	4.50
MKT 302A	Marketing Fundamentals	4.50
FIN 310	Business Finance ***Prerequisite:*** *ACC 201*	4.50
MGT 309	Prin. of Mgmt & Organizations	4.50

Associate of Science in Human Biology

Academic Program Director: Ana Maria Barral; abarral@nu.edu

The Associate of Science in Human Biology (AS-HB) degree is designed to give students a solid foundation for continuing intellectual growth and further professional studies leading to a career in Nursing or other Health Science-related fields.

Students planning to apply to the Nursing program at NU should take onsite Anatomy & Physiology (BIO201A and BIO202A) and microbiology (BIO203A) labs, as the online versions of these lab courses are not accepted into NU BSN programs.

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

- Discuss the social, physiological, and psychological aspects of human behavior at a basic level.
- Discuss the complexities of human biology on the continuum from the level of organism to the level of organized social being.
- Use computer technologies to augment productivity, apply statistical procedures, and gain access to multiple informational resource services.
- Communicate effectively with others using oral, visual, and written methods.

Degree Requirements:

To receive the Associate in Human Biology degree, students must complete at least 90 quarter units, 18 of which must be taken in residence at National University. Of the 90 units required, 40.5 must fall into the areas of general education listed below. Students must complete 4.5 quarter units in diversity-enriched coursework. A plus (+) indicates a diversity-enriched offering. All undergraduate students working toward the AS HB must meet the university diversity requirement. The other 49.5 units can be comprised of elective courses and/or specific major program preparatory courses.

Students are urged to meet the English requirements as early as possible in their college studies to avoid serious difficulties in other coursework. Refer to the section on undergraduate admission procedures for specific information regarding application and placement evaluation.

Prerequisites for the Major (6 courses; 24 quarter units)

ENG 102	Effective College English	4.50
COM 103	Public Speaking	4.50
ILR 260	Academic Information Literacy ***Prerequisite:*** *ENG 102*	4.50

CHE 101	Introductory Chemistry ***Recommended Preparation:*** *MTH 204*	4.50
CHE 101A	Introductory Chemistry Lab ***Prerequisite:*** *CHE 101, or CHE 141 for Science Majors.*	1.50
MTH 204	Mathematics Non-STEM Majors ***Prerequisite:*** *MTH 12A and MTH 12B or equivalent, or Accuplacer test placement into College Level Math*	4.50
OR		
MTH 215	College Algebra & Trigonometry ***Prerequisite:*** *MTH 12A and MTH 12B, or Accuplacer test placement evaluation*	4.50

Requirements for the Major (9 courses; 31.5 quarter units)

It is strongly recommended that students complete the BIO 201 - 203A series in numerical sequence: BIO 201 + 201A, 202 + 202A, 203 + 203A.

PSYC 100	Introduction to Psychology	4.50
SOC 100	Principles of Sociology	4.50
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*	4.50
BIO 191A	Online Hum Anat and Phys I Lab* ***Corequisite:*** *BIO 201;* ***Recommended: Prior completion of:*** *BIO 100; BIO 100A; CHE 101; CHE 101A*	1.50
OR		
BIO 201A	Human Anatomy and Physiol Lab ***Corequisite:*** *BIO 201;* ***Recommended: Prior completion of:*** *BIO 100; BIO 100A; CHE 101; CHE 101A or equivalent courses.*	1.50
BIO 202	Human Anatomy and Physiol II ***Corequisite:*** *BIO 202A, or BIO 192A;* ***Prerequisite:*** *BIO 201 and BIO 201A*	4.50
BIO 192A	Online Anat and Phys II Lab* ***Corequisite:*** *BIO 202;* ***Prerequisite:*** *BIO 191A with a minimum grade of C-. Passing grade required; BIO 201 with a minimum grade of C-. Passing grade required*	1.50
OR		
BIO 202A	Human Antmy andPhysiol LabII ***Corequisite:*** *BIO 202;* ***Prerequisite:*** *BIO 201; BIO 201A*	1.50
BIO 203	Introductory Microbiology ***Corequisite:*** *BIO 193A; BIO 203A Students should take both lecture and lab courses concurrently and with the same instructor to ensure a consistent learning experience. Students who are retaking one of the two courses or present special circumstances should petition for exception to this requisite.;* ***Recommended: Prior completion of:*** *BIO 100 and BIO 100A; CHE 101 and CHE 101A or equivalent courses; BIO 201 and BIO 201A; BIO 202 and BIO 202A*	4.50

BIO 193A	Online Microbiology Lab* ***Corequisite:*** *BIO 203;* ***Recommended: Prior completion of:*** *BIO 191A; BIO 201; CHE 101; CHE 101A*	1.50
OR		
BIO 203A	Introductory Microbiology Lab ***Corequisite:*** *BIO 203;* ***Recommended: Prior completion of:*** *BIO 100; BIO 100A; CHE 101; CHE 101A; BIO 201 and BIO 201A; BIO 202 and BIO 202A*	1.50
BST 322	Intro to Biomedical Statistics	4.50

*These online lab courses are not accepted into NU BSN programs.

Concentration in Spanish

Academic Program Director: Rachel VanWieren; rvanwieren@nu.edu

Through this concentration, students can improve their Spanish language skills and their marketability in various professions. The coursework focuses on increasing students' spoken and written fluency and their cultural competency for working with Spanish-speaking populations.

Students can enter directly into the concentration at the 300 Level if they have extensive experience with the Spanish language, either through their personal life or previous studies. Those at the beginner or intermediate level can take prerequisite courses SPN 100, SPN 101, and/or SPN 200 at NU. Placement can be established through prior coursework, testing options as described in the NU catalog, or an oral interview with SoALS faculty.

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

- Use Spanish language skills effectively (listening, speaking, reading, writing) for daily life, travel, and workplace related tasks at a level equivalent to ACTFL Advanced Low.
- Produce projects in Spanish related to student's chosen future profession.
- Demonstrate a greater understanding of the diversity of contemporary and past ways of life in the Spanish speaking world, including workplace culture.
- Analyze cultural artifacts and manifestations from Latin American, Spanish, and US Latino communities.

Degree Requirements:

The Concentration in Spanish requires four courses at and above the 300-level for a total of 18 quarter units. Required courses include SPN 303 and SPN 304. Students then choose two electives, one of which must be in Spanish.

Placement into prerequisite courses or directly into the concentration can be established through prior coursework at the high school or college level, testing options as described in the NU catalog, or an oral interview with SoALS faculty in the case of extensive personal experience speaking Spanish.

Total Requirements for the Concentration (4 courses;18 credit hours)
Requirements for the Concentration (2 courses; 9 credit hours) **Units:** 9.00

SPN 303	Virtual Study Abroad ***Prerequisite:*** *SPN 200 Prerequisite can be waived through prior coursework, testing options as described in the NU catalog, or an oral interview with SoALS faculty.*	4.50
SPN 304	Spanish for Professional Comm	4.50

	Prerequisite: *SPN 200 Prerequisite can be waived through prior coursework, testing options as described in the NU catalog, or an oral interview with SoALS faculty.*	

Elective Courses in Spanish (1 course; 4.5 credit hours)

Students will need to select at least one course in Spanish from the list below as part of the Spanish Concentration.

SPN 350	Film and Culture ***Prerequisite:*** *SPN 303; SPN 304*	4.50
SPN 340A	Spanish for the Work Place	4.50

Elective Courses in English (1 course; 4.5 credit hours)

Students will need to select one elective course in English from the list below as part of the Spanish Concentration.

SPN 341	Cross-Cultural Communication	4.50
HIS 345	Latin American Studies ***Prerequisite:*** *ENG 102*	4.50
LIT 420	U.S. Latino Literature ***Prerequisite:*** *ENG 240 and LIT 100*	4.50
LIT 480	Literature of the Americas ***Prerequisite:*** *ENG 240 and LIT 100*	4.50

Bachelor of Arts in Digital Media Design

Academic Program Director: Scott Campbell; scampbell@nu.edu

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

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

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

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

Degree Requirements:

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

It is recommended that students take courses in the following order: MUL 201, MUL 203, MUL 308, MUL 312, MUL 316, MUL 390, MUL 345, MUL 353, MUL 309, MUL 365, MUL 461, MUL 465, MUL 462, MUL 372, MUL 375, MUL 356, MUL 483, MUL 485, MUL 487.

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

MUL 201	Intro to Graphic Design ***Prerequisite:*** *ENG 102*	4.50
MUL 203	Intro to Visual Storytelling ***Prerequisite:*** *ENG 102*	4.50

Students must complete all prep for major courses.

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

MUL 308	Vector Graphics ***Prerequisite:*** *ENG 102; MUL 201; MUL 203*	4.50
MUL 312	Digital Image Compositing ***Prerequisite:*** *ENG 102; MUL 201; MUL 203;* ***Recommended: Prior completion of:*** *MUL 308*	4.50
MUL 316	Applied Graphic Design ***Prerequisite:*** *ENG 102; MUL 201 and MUL 203;* ***Recommended: Prior completion of:*** *MUL 308; MUL 312*	4.50
MUL 390	User Interface Design ***Prerequisite:*** *ENG 102; MUL 201; MUL 203;* ***Recommended: Prior completion of:*** *MUL 308; MUL 312; MUL 316*	4.50
MUL 345	Applied Web Design ***Prerequisite:*** *ENG 102; MUL 201; MUL 203;* ***Recommended: Prior completion of:*** *MUL 308; MUL 312; MUL 316; MUL 390*	4.50
MUL 353	2-D Design & Interactivity ***Prerequisite:*** *ENG 102; MUL 201 and MUL 203;* ***Recommended: Prior completion of:*** *MUL 308; MUL 312; MUL 316; MUL 390; MUL 345*	4.50
MUL 309	Camera and Image ***Prerequisite:*** *ENG 102; MUL 201; MUL 203;* ***Recommended: Prior completion of:*** *MUL 308; MUL 312; MUL 316; MUL 390; MUL 345; MUL 353*	4.50
MUL 365	Digital Video Editing ***Prerequisite:*** *ENG 102; MUL 201 and MUL 203;* ***Recommended: Prior completion of:*** *MUL 308; MUL 312; MUL 316; MUL 390; MUL 345; MUL 353; MUL 309*	4.50
MUL 461	Motion Graphics Vis. Effects I ***Prerequisite:*** *ENG 102; MUL 201; MUL 203; MUL 365*	4.50
MUL 465	Motion Graphics Vis Effects II ***Prerequisite:*** *ENG 102; MUL 201; MUL 203; MUL 365; MUL 461*	4.50
MUL 462	Digital Audio Creation	4.50

	Prerequisite: *ENG 102; MUL 201; MUL 203;* ***Recommended: Prior completion of:*** *MUL 308; MUL 312; MUL 316; MUL 390; MUL 345; MUL 353; MUL 309; MUL 365; MUL 461; MUL 465*	
MUL 372	Foundations of 3D ***Prerequisite:*** *ENG 102; MUL 201; MUL 203; MUL 312;* ***Recommended: Prior completion of:*** *MUL 308; MUL 316; MUL 390; MUL 345; MUL 353; MUL 309; MUL 365; MUL 461; MUL 465; MUL 462*	4.50
MUL 375	3D Modeling for Game Art ***Prerequisite:*** *ENG 102; MUL 201; MUL 203; MUL 312; MUL 372*	4.50
MUL 356	Video Gaming AR/VR ***Prerequisite:*** *ENG 102; MUL 201; MUL 203; MUL 312; MUL 372; MUL 375*	4.50

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

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

MUL 483	Final Project I ***Prerequisite:*** *ENG 102; MUL 201; MUL 203; MUL 308; MUL 309; MUL 312; MUL 316; MUL 345; MUL 353; MUL 356; MUL 365; MUL 372; MUL 375; MUL 390; MUL 461; MUL 462; MUL 465*	4.50
MUL 485	Final Project II ***Prerequisite:*** *MUL 483*	4.50

Thesis Course (1 course; 4.5 quarter units)

Prior to beginning the Thesis Course, students must have completed and passed all requirements for the Major, as well as MUL 483 and MUL 485.

MUL 487	Dig Med Dsgn Portfolio, Thesis ***Prerequisite:*** *MUL 485*	4.50

Bachelor of Arts in Early Childhood Education

Academic Program Director: Susan Gilbert; sgilbert@nu.edu

The Bachelor of Arts degree in Early Childhood Education (BAECE) has been designed to include the competencies and guidelines as established by the National Association for the Education of Young Children (NAEYC) and meets the requirements of the State of California Child Development Permits.

Non-residents of California; military personnel or their dependents; and international students should contact the Department of Education of the state in which they reside or intend to reside, or the Ministry of Education of the country in which they live, to determine specific requirements for employment. State or country specific coursework, in addition to the BAECE degree program, may be required to obtain a permit, license or credential necessary for employment. Candidates assume the responsibility for determining and meeting these requirements.

The program is based on a conceptual framework of current theory, contemporary perspectives and sound research findings. Focus is on knowledge, attitudes, skills, practice, reflection and field experiences needed to become efficient, competent, and effective professionals in the field of early childhood education. Emphasis is on designing appropriate learning environments, individual and adaptive curricula, and instructional strategies and techniques to maximize learning outcomes. Topics demonstrated, both in writing and discussion, provide a broad-based foundation of child development in the areas of familial and socio-cultural influences on learning and brain development, parent empowerment, peer cooperation and collaboration, early cognition, emerging literacy (listening, speaking, reading and writing), ongoing participant observation and appropriate developmental screening assessments, child advocacy, law and ethics, and, most important, play as pedagogy.

Background Check

Agencies/schools collaborating with the Sanford College of Education to provide field experience often require a background check and TB clearance prior to acceptance of a student into their facility. Candidates who do not have a Certificate of Clearance will not be able to attend the field experience component of the course and, therefore, will be unable to complete their program of study. Any fee or cost associated with background checks and TB testing is the responsibility of the student.

Note: **ALL ECE prefix courses require field experience in an approved setting**. An approved setting is working with children from birth to Age 5 in a **general educational, inclusive setting**. Recommended sites are Early Head Start, Head Start, CA State Preschools and NAEYC accredited sites.

Students may be required to provide proof of current DTAP, MMR, and Flu vaccinations in order to complete their field work per SB792. Any fee or cost associated with this requirement is the responsibility of the student.

National Head Start Agency (NHSA) students may ONLY participate in a Certificate Pathway to the BA ECE. The pathway consists of 5 certificates that couple ECE courses with appropriate GE courses. See the Certificate section of the catalog for more detailed information. Note: NHSA students that have been awarded the CDA Credential will be eligible for credit for the following lower division, preparation for the major courses: ECE 201, ECE 210, and HED 220.

Arkansas Bachelor of Arts in Early Childhood Education Disclosure
Enrollment in the Bachelor of Arts in Early Childhood Education offered by National University may require Arkansas applicants/students to pursue teacher/administrator licensure in California and then earn an Arkansas educator or school administrator license by reciprocity. The State of Arkansas has additional course requirements in order to earn an Arkansas license in the program area or a similar program area, and Arkansas applicants/students must check the website for information on Arkansas reciprocity: http://www.arkansased.gov/divisions/educator%20effectiveness/educator-licensure.

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

- Identify essential concepts, inquiry tools, and structure of content areas and resources for Early Childhood Education.
- Develop oral, written and technological skills for communicating with families and very young children.
- Create environments that are healthy, respectful, supportive, and challenging for young children.
- Use systematic observations, documentation, and other assessment strategies in partnership with families and professionals to positively influence children's development and learning.
- Implement a curriculum that promotes development and learning outcomes for diverse young children.
- Demonstrate ethical, legal, and professional standards in Early Childhood Education.
- Create positive relationships and supportive interactions with young children.

Degree Requirements:

To receive a Bachelor of Arts in Early Childhood Education degree, students must complete at least 180 quarter units as articulated below, 45 of which must be completed in residence at National University, 76.5 of which must be completed at the upper-division level, and 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.

Preparation for the Major (4 courses; 18 quarter units)

ECE 201	The Growing Child: Zero to 8	4.50
ECE 210	Child, Family, School and Comm	4.50
ECE 211	Diversity: Development & Ed.	4.50

HED 220	Health, Nutrition and Safety	4.50

Requirements for the Major (12 courses; 54 quarter units)

ECE 464	Ethical and Legal Issues	4.50
ECE 330	Early Cognition ***Prerequisite:*** *ECE 201; ECE 210; HED 220 and ECE 211*	4.50
ECE 312	Infant and Toddler Care ***Prerequisite:*** *ECE 330*	4.50
ECE 410	Early Language and Literacy ***Prerequisite:*** *ECE 330*	4.50
ECE 415	Designing Emergent Curriculum ***Prerequisite:*** *ECE 330*	4.50
ECE 420	Nature, Numbers and Technology ***Prerequisite:*** *ECE 330*	4.50
ECE 430	Play as Pedagogy ***Prerequisite:*** *ECE 330*	4.50
ECE 440	Observing, Assessing & Plannin ***Prerequisite:*** *ECE 330*	4.50
ECE 443	Children with Special Needs ***Prerequisite:*** *ECE 330*	4.50
ECE 445	Strategies: Guiding Behaviors ***Prerequisite:*** *ECE 330*	4.50
ECE 452	Partnering With Families ***Prerequisite:*** *ECE 330*	4.50
ECE 450	Academic Seminar/Field Experie ***Prerequisite:*** *Satisfactory completion of all core courses with an average grade of "C" (2.0) or better in the core.*	4.50

Upper-Division Electives (4 courses; 18 quarter units)

Candidates must choose four (4) elective courses from the following:

ECE 435	Music, Movement, Drama, Dance	4.50
ECE 446	Literature and Young Children	4.50
ECE 451	Infant/Toddler Observe/Assess	4.50
ECE 453	Infant/Toddler Curriculum	4.50
ECE 454	Infant/Toddler Experiences	4.50
ECE 460	Program Administration	4.50
ECE 461	Leadership and Supervision	4.50
ECE 462	Financial Mgmt & Resources	4.50
ECE 465	Trauma-Informed Practice	4.50
ECE 466	Planning Physical Environments	4.50

National Head Start Agency (NHSA) students may ONLY participate in a Certificate Pathway to the BA ECE. **Units:** 181.50

The pathway consists of 5 certificates that couple ECE courses with appropriate GE courses. See the Certificate section of the catalog for more detailed information. Note: NHSA students that have been awarded the CDA Credential will be eligible for credit for the following lower division, preparation for the major courses: ECE 201, ECE 210, and HED 220.

Certificate 1 - Early Childhood Foundations (8 courses; 36 quarter units)	36.00

ECE 201	The Growing Child: Zero to 8	4.50
ECE 210	Child, Family, School and Comm	4.50
ECE 211	Diversity: Development & Ed.	4.50
HED 220	Health, Nutrition and Safety	4.50
ECE 330	Early Cognition ***Prerequisite:*** *ECE 201; ECE 210; HED 220 and ECE 211*	4.50
ECE 464	Ethical and Legal Issues	4.50
ECE 465	Trauma-Informed Practice	4.50
COM 120	Intro to Interpersonal Comm	4.50
Certificate 2 - Early Childhood Social Advocacy (8 courses; 36 quarter units)		36.00
ENG 102	Effective College English	4.50
ECE 410	Early Language and Literacy ***Prerequisite:*** *ECE 330*	4.50
SOC 100	Principles of Sociology	4.50
ECE 446	Literature and Young Children	4.50
SPN 100	Beginning Spanish I	4.50
SPN 101	Beginning Spanish II ***Prerequisite:*** *SPN 100*	4.50
ECE 222	Head Start History	4.50
ECE 220	Children Experiencing Poverty	4.50
Certificate 3 - ECE Curriculum Connections (8 courses; 36 quarter units)		36.00
ECE 312	Infant and Toddler Care ***Prerequisite:*** *ECE 330*	4.50
ECE 415	Designing Emergent Curriculum ***Prerequisite:*** *ECE 330*	4.50
PSYC 100	Introduction to Psychology	4.50
ENG 240	Advanced Composition ***Prerequisite:*** *ENG 102*	4.50
ECE 430	Play as Pedagogy ***Prerequisite:*** *ECE 330*	4.50
ECE 440	Observing, Assessing & Plannin ***Prerequisite:*** *ECE 330*	4.50
ECE 452	Partnering With Families ***Prerequisite:*** *ECE 330*	4.50
ILR 260	Academic Information Literacy ***Prerequisite:*** *ENG 102*	4.50
Certificate 4 - ECE STEAM Integration (9 courses; 37.5 quarter units)		37.50
ECE 420	Nature, Numbers and Technology ***Prerequisite:*** *ECE 330*	4.50
MTH 209A	Fundamentals of Mathematics I ***Prerequisite:*** *MTH 12A and MTH 12B*	4.50
BIO 100	Survey of Bioscience	4.50
BIO 100A	Survey of Bioscience Lab ***Prerequisite:*** *BIO 100 for non-science majors (GE), or BIO 163 for science majors*	1.50
COH 100	Personal Health	4.50
ECE 435	Music, Movement, Drama, Dance	4.50
MUS 327	World Music ***Prerequisite:*** *ENG 102*	4.50
THR 200	Theater Arts	4.50

ART 110	Visual Arts	4.50
Certificate 5 - Fostering ECE Leaders (8 courses; 36 quarter units)		36.00
ECE 445	Strategies: Guiding Behaviors ***Prerequisite:*** *ECE 330*	4.50
PSYC 301	Child Development ***Prerequisite:*** *ENG 102*	4.50
SOC 350	Cultural Diversity ***Prerequisite:*** *ENG 102*	4.50
ECE 443	Children with Special Needs ***Prerequisite:*** *ECE 330*	4.50
ECE 460	Program Administration	4.50
ECE 461	Leadership and Supervision	4.50
ECE 466	Planning Physical Environments	4.50
ECE 450	Academic Seminar/Field Experie ***Prerequisite:*** *Satisfactory completion of all core courses with an average grade of "C" (2.0) or better in the core.*	4.50

Bachelor of Arts in Liberal Arts

Academic Program Director: Daniel Thorburn; dthorbur@nu.edu

The Bachelor of Arts in Liberal Arts (BALA) provides a broad, rigorous education that introduces students to essential knowledge and connections across the disciplines and application of knowledge to life beyond the University. This degree gives students an enriched and provocative curriculum that prepares them for professional work in a changing cultural and economic environment.

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

- Demonstrate an understanding of interdisciplinary theory and the practice of critical thinking for the collection, validation, analysis, and synthesis of historical data and new information.
- Explain the integration of knowledge in a global context and engage in collaborative research across disciplines.
- Identify and appreciate the cultural perspectives of diverse world views.
- Use information communication technology for knowledge sharing and the interdisciplinary approach.
- Demonstrate a deep and flexible understanding of subject matter.

Degree Requirements:

To receive a Bachelor of Arts degree with a major in Liberal Arts, students must complete at least 180 quarter units as articulated below, 45 of which must be completed in residence at National University, 76.5 of which must be completed at the upper-division level and a minimum 69 units of the University General Education requirements. The following courses are specific degree requirements. If students intend to complete a teacher credentialing program, these courses will help prepare for the MSAT and Basic Skills requirement tests. 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.

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

LIT 100	Introduction to Literature ***Prerequisite:*** *ENG 102*	4.50

Select one of the following:		
HIS 220A	United States History I ***Prerequisite:*** *ENG 102*	4.50
OR		
HIS 220B	United States History II ***Prerequisite:*** *ENG 102*	4.50
OR		
HIS 233	World Civilizations I ***Prerequisite:*** *ENG 102*	4.50
OR		
HIS 234	World Civilizations II ***Prerequisite:*** *ENG 102*	4.50

Requirements for the Major (13 courses; 58.5 quarter units)

COM 380	Democracy in the Info. Age ***Prerequisite:*** *ENG 102*	4.50
SOC 350	Cultural Diversity ***Prerequisite:*** *ENG 102*	4.50
BIS 301	Intro to Interdisc. Studies	4.50
BIS 400	Interdis. Research Methods ***Prerequisite:*** *BIS 301 with a minimum grade of C-. Students that cannot pass BIS301 with a C- or better will be unlikely to succeed in this course.*	4.50
Capstone course		
BIS 499	Interdisciplinary Studies Proj ***Prerequisite:*** *BIS 301; BIS 400 and Any other FIVE program courses*	4.50
Select one 4.5 quarter unit course in literature (LIT)		
The following are recommended:		
LIT 321	American Literature I ***Prerequisite:*** *ENG 240 and LIT 100*	4.50
LIT 322	American Literature II ***Prerequisite:*** *ENG 240 and LIT 100*	4.50
LIT 338	Shakespeare ***Prerequisite:*** *ENG 240 and LIT 100*	4.50
LIT 345	Mythology ***Prerequisite:*** *ENG 240 and LIT 100*	4.50
LIT 430	Children's Literature ***Prerequisite:*** *ENG 240 and LIT 100*	4.50
LIT 446	Studies in Poetry ***Prerequisite:*** *ENG 240 and LIT 100*	4.50
LIT 450	Studies in the Novel ***Prerequisite:*** *ENG 240 and LIT 100*	4.50
LIT 460	Gender and Literature ***Prerequisite:*** *ENG 240 and LIT 100*	4.50
Select one 4.5 quarter unit course in social sciences (HIS, POL, SOC)		
The following are recommended:		
BIS 401	Interdisciplinary Practice: In ***Prerequisite:*** *BIS 301 and four additional courses from the major*	4.50
HIS 320	Culture of Global Capitalism ***Prerequisite:*** *ENG 102*	4.50
HIS 336	American Film and Society ***Prerequisite:*** *ENG 102*	4.50
HIS 340	Global Environmental History	4.50

	Prerequisite: *ENG 240; HIS 233; HIS 234*	
HIS 410	California History ***Prerequisite:*** *ENG 102*	4.50
SOC 325	Popular Culture ***Prerequisite:*** *ENG 102*	4.50
SOC 344	Love, Sex, and the Family ***Prerequisite:*** *ENG 102*	4.50
SOC 445	Contemporary Social Problems ***Prerequisite:*** *ENG 102*	4.50
SOC 440	Power and Social Change ***Prerequisite:*** *ENG 102*	4.50
Select one 4.5 quarter unit course in behavioral sciences (HUB, PSYC).		
The following are recommended:		
HUB 420	Human Communication ***Prerequisite:*** *ENG 102; PSYC 100*	4.50
HUB 440	Organizational Development ***Prerequisite:*** *ENG 102; PSYC 100*	4.50
PSYC 301	Child Development ***Prerequisite:*** *ENG 102*	4.50
PSYC 426	History and Philosophy Psych ***Prerequisite:*** *ENG 102; PSYC 100*	4.50
PSYC 427	Biological Psychology ***Prerequisite:*** *ENG 102; PSYC 100*	4.50
PSYC 428	Developmental Psychology ***Prerequisite:*** *ENG 102; PSYC 100*	4.50
PSYC 429	Intro to Personality Theory ***Prerequisite:*** *ENG 102; PSYC 100*	4.50
PSYC 432	Social Psychology ***Prerequisite:*** *ENG 102; PSYC 100*	4.50
PSYC 433	Cognitive Psychology ***Prerequisite:*** *ENG 102; PSYC 100*	4.50
Students should choose no fewer than 4.5 quarter units in natural science and 4.5 quarter units in mathematics. A third 4.5 quarter unit course (either SCI, BIO, EES, or MTH) must also be selected. Some of the mathematics courses may have more than one prerequisite.		
The following are recommended:		
SCI 300	Geography	4.50
BIO 330	Ecology ***Prerequisite:*** *BIO 161; BIO 162; BIO 163; BIO 169A; CHE 141; CHE 142; CHE 143; CHE 149A*	4.50
BIO 302	Biodiversity ***Prerequisite:*** *BIO 100 and BIO 100A or equivalent*	4.50
BIO 450	Natural History of California ***Prerequisite:*** *BIO 100 and BIO 100A, or BIO 161; BIO 162; BIO 163 and BIO 169A*	4.50
BIS 405	Interdisciplinary Sciences ***Prerequisite:*** *BIS 301;* ***Recommended: Prior completion of:*** *MTH 204, or MTH 215*	4.50
MTH 301	Fundamentals of Mathematics II ***Prerequisite:*** *MTH 209A*	4.50
MTH 317	Mathematical Modeling ***Prerequisite:*** *MTH 210; MTH 215*	4.50
MTH 410	Technology in Math Education ***Prerequisite:*** *MTH 215, or MTH 301*	4.50

MTH 411	Number Theory ***Prerequisite:*** *MTH 215; MTH 416*	4.50
MTH 412	History of Mathematics ***Prerequisite:*** *MTH 215, or MTH 301*	4.50
MTH 417	Foundations of Geometry ***Prerequisite:*** *MTH 215, or MTH 311*	4.50
MTH 418	Statistical Analysis ***Prerequisite:*** *MTH 210 and MTH 220*	4.50
Select nine (9.0) quarter units from the humanities complex (ART, ENG, HIS, MUS, PHL, SOC, SPN, THR).		
The following are recommended:		
ART 315	Film as Art ***Prerequisite:*** *ENG 102*	4.50
ART 323	Modern Art ***Prerequisite:*** *ENG 102*	4.50
ART 329	World Art ***Prerequisite:*** *ENG 102*	4.50
ENG 375	Nature Writing ***Prerequisite:*** *ENG 102; ENG 240, or ENG 334A*	4.50
HIS 345	Latin American Studies ***Prerequisite:*** *ENG 102*	4.50
HIS 348	Asian Studies ***Prerequisite:*** *ENG 102*	4.50
HIS 349	African Studies ***Prerequisite:*** *ENG 102*	4.50
MUS 326	American Music ***Prerequisite:*** *ENG 102*	4.50
MUS 327	World Music ***Prerequisite:*** *ENG 102*	4.50
PHL 320	World Religions ***Prerequisite:*** *ENG 102*	4.50
PHL 375	Environmental Ethics ***Prerequisite:*** *ENG 102*	4.50
PHL 337	Ethics ***Prerequisite:*** *ENG 102*	4.50
SOC 328	Art, Culture, and Civilization ***Prerequisite:*** *ENG 102*	4.50
SPN 340A	Spanish for the Work Place	4.50

Upper-Division Electives (2 courses; 9 quarter units)

Students should select any two courses from the lists above NOT being used to satisfy another requirement.

Bachelor of Arts in Liberal Arts with an Inspired Teaching and Learning Preliminary Multiple Subject Teaching Credential (California)

Academic Program Director: Daniel Thorburn; dthorbur@nu.edu,Joshua Olsberg; jolsberg@nu.edu

The Bachelor of Arts in Liberal Arts with a California Inspired Teaching Learning Preliminary Multiple Subjects Teaching Credential provides a broad, rigorous education preparing candidates for a teaching career at the elementary level. The program introduces candidates to essential knowledge and connections across the disciplines and applies knowledge of life beyond the University. This degree program gives candidates an enriched and thought-provoking curriculum incorporating content across subjects. This program prepares teacher candidates with the knowledge, skills and dispositions required for entry into California's teaching profession as a

teacher. It is designed for multiple subject teacher candidates who will be dedicated to inspiring all PK12 learners by ensuring for them: social-emotional thriving, meaningful academic achievement, and equitable and inclusive learning communities. The program and courses meet the California Commission on Teacher Credentialing (CTC) requirements for a Preliminary Multiple Subjects Teaching Credential. Completion of the Bachelor of Arts in Liberal Arts satisfies the California Commission on Teacher Credentialing (CTC) requirements for subject matter preparation in Liberal Arts; students who complete the Liberal Arts requirements will not be required to take the CSET exam.

For additional information on credential requirements, please see the Sanford College of Education Credential Information section of the catalog.

Program Disclosure Information
The Bachelor of Arts in Liberal Arts with a California Inspired Teaching and Learning Preliminary Multiple Subjects Teaching Credential Program is currently operating using credential guidelines for California only.

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:

- Demonstrate an understanding of interdisciplinary theory and the practice of critical thinking for the collection, validation, analysis, and synthesis of historical data and new information.
- Explain the integration of knowledge in a global context and engage in collaborative research across disciplines.
- Identify and appreciate the cultural perspectives of diverse world views.
- Use information communications technology for knowledge sharing and the interdisciplinary approach.

Degree Requirements:

To receive a Bachelor of Arts in Liberal Arts with an Inspired Teaching and Learning Multiple Subjects Teaching Credential (California), candidates must complete at least 180 quarter units as articulated below, 45 of which must be completed in residence at National University and 76.5 of which must be completed at the upper-division level, including a minimum 69 units of the University General Education. In the absence of transfer credit, additional general electives may be necessary to satisfy total units for the degree. The following courses are specific degree requirements.

Students should refer to the section on undergraduate admission procedures for specific information on admission and evaluation as well as the Sanford College of Education Credential Information section of the catalog.

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

LIT 100	Introduction to Literature ***Prerequisite:*** *ENG 102*	4.50
MTH 209A	Fundamentals of Mathematics I ***Prerequisite:*** *MTH 12A and MTH 12B*	4.50

Interdisciplinary Study Core Requirements (7 courses; 31.5 quarter units)

BIS 301	Intro to Interdisc. Studies	4.50
BIS 400	Interdis. Research Methods ***Prerequisite:*** *BIS 301 with a minimum grade of C-. Students that cannot pass BIS301 with a C- or better will be unlikely to succeed in this course.*	4.50
ENG 350	Fundamentals of Linguistics ***Prerequisite:*** *ENG 102*	4.50
HIS 410	California History	4.50

	Prerequisite: *ENG 102*	
MTH 301	Fundamentals of Mathematics II ***Prerequisite:*** *MTH 209A*	4.50
Choose ONE course in ART:		
ART 323	Modern Art ***Prerequisite:*** *ENG 102*	4.50
OR		
ART 329	World Art ***Prerequisite:*** *ENG 102*	4.50
OR		
ART 400	Expressive and Integrative Art	4.50
Capstone		
BIS 499	Interdisciplinary Studies Proj ***Prerequisite:*** *BIS 301; BIS 400 and Any other FIVE program courses*	4.50

Upper Division Electives (4 courses; 18 quarter units)

Choose FOUR of the following:		
BIS 401	Interdisciplinary Practice: In ***Prerequisite:*** *BIS 301 and four additional courses from the major*	4.50
BIS 405	Interdisciplinary Sciences ***Prerequisite:*** *BIS 301;* ***Recommended: Prior completion of:*** *MTH 204, or MTH 215*	4.50
COM 380	Democracy in the Info. Age ***Prerequisite:*** *ENG 102*	4.50
HIS 320	Culture of Global Capitalism ***Prerequisite:*** *ENG 102*	4.50
HIS 340	Global Environmental History ***Prerequisite:*** *ENG 240; HIS 233; HIS 234*	4.50
LIT 430	Children's Literature ***Prerequisite:*** *ENG 240 and LIT 100*	4.50
MTH 410	Technology in Math Education ***Prerequisite:*** *MTH 215, or MTH 301*	4.50
PSYC 301	Child Development ***Prerequisite:*** *ENG 102*	4.50
PSYC 428	Developmental Psychology ***Prerequisite:*** *ENG 102; PSYC 100*	4.50
SCI 300	Geography	4.50

Undergraduate Credential Inspired Teaching and Learning Preliminary Multiple Subject Teaching Credential

Academic Program Director: Ida Randall; irandall@nu.edu

Students are required to take the courses in this sequence.

PRIOR to beginning any of the Multiple Subject Methods courses, the candidate must have completed all Foundation courses, and meet Subject Matter Competency.
There is an application process for applying to student teaching (clinical practice).

Each credential course (ITL) includes a required 4-hour field experience in one or more K6 classrooms representing diverse student populations. The field experience is not associated with any clinical practice courses.

This coursework will **not** transfer as graduate level credit to National University or any other University 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.

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

- Integrate the knowledge needed for engaging/supporting all K-12 learners, including those with diverse learning needs.
- Integrate the knowledge needed for creating/maintaining effective learning environments for all K-12 learners, including those with diverse learning needs.
- Integrate the knowledge needed for making subject matter comprehensible for all K-12 learners, including those with diverse learning needs.
- Integrate the knowledge needed for designing/planning learning experiences for all K-12 learners, including those with diverse learning needs.
- Integrate the knowledge needed for assessing all K-12 learners, including those with diverse learning needs.
- Integrate the knowledge needed for being a legal, ethical, and professional educator for all K-12 learners, including those with diverse learning needs.
- Reflect critically about the application of the inspired teaching and learning principles.

Degree Requirements:

To receive the Multiple Subject Teaching Credential students must complete 14 courses, 58.5 quarter units.

Credential Admissions Requirements:

Prior to enrolling into ITL402, you will be required to submit the Initial Requirements e-form providing evidence/ proof of the following:

- Proof of Fingerprint Clearance through the CTC.
- Negative Tuberculosis (TB) Results-Valid within four years Or Tuberculosis Ricak Assessment with Certificate of Completion- Valid within four years

Credential Recommendation Requirements

- Verification of Meeting U.S. Constitution requirement
- Passage of Reading Instruction Competency Assessment (RICA)
- Possess a minimum of 3.0 GPA in Credential Coursework (D, F, and U grades are not accepted)
- Valid Adult, Child and Infant CPR
- Passage of CalTPA Cycles 1 and 2<

Your credential recommendation request will be reviewed by National University Credential Technicians who process the application, confirm credential eligibility, and submit a recommendation to the state. You will receive an email notification to go online and pay for the credential. After payment is confirmed, you will receive e-mail confirmation from the CTC that your document has been granted. You can look up your credential document on the CTC website at: www.ctc.ca.gov

Introductory Core Requirement (1 course; 4.5 quarter units)

ITL 400	Becoming a Teacher	4.50

Students must complete ITL 400 and Credential Packet prior to beginning ITL 402.

Foundation Courses (4 courses; 18 quarter units)

ITL 402	Context: Education in the U.S. ***Prerequisite:*** *ITL 400 and Students must complete the credential packet.*	4.50
ITL 404	Learners and Learning I	4.50

	Prerequisite: *ITL 402*	
ITL 406	Learners and Learning II ***Prerequisite:*** *ITL 404*	4.50
ITL 408	Design and Process of Teaching ***Prerequisite:*** *ITL 406*	4.50

Multiple Subject Credential Methods (5 courses; 22.5 quarter units)

PRIOR to beginning any of the Multiple Subject Credential Area Method courses below, the candidate must successfully complete all Foundation courses, meet Subject Matter Competency, and meet any other related program requirements. This coursework will not transfer as graduate level credit to National University or any other University 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.

ITL 516	Mathematics Integrative Design	4.50
ITL 518	Science Integrative Design ***Prerequisite:*** *ITL 516*	4.50
ITL 510	Language-Literacy: Foundations ***Prerequisite:*** *ITL 518*	4.50
ITL 512	Language/Literacy: Strategies ***Prerequisite:*** *ITL 510*	4.50
ITL 530	Optimized Learning Community	4.50

Student Teaching Requirements (4 courses; 13.5 quarter units)

PRIOR to beginning any of the student teaching courses below, the candidate must successfully complete all Core, Multiple Subject Credential Area Method, and upper division courses, meet the Subject Matter Competency, and submit a complete student teaching application. The student teaching application process must be completed at least three-months prior to the candidate's intended start of student teaching. Student teaching placements in K12 classrooms are made through a collaborative partnership of the university and respective school district. The student teaching placements must align to the subject matter credential sought. Student teaching is unpaid and composed of at least 600 instructional hours (16-18 weeks of full-time student teaching) in designated K12 classrooms. Note: The two seminar courses, below, ITL 551A and ITL 551B, are 2.25 quarter units each and will be taken concurrently with ITL 550A and ITL 550B, respectively.

ITL 550A	Student Teaching A ***Corequisite:*** *ITL 551A*	4.50
ITL 551A	ITL Seminar A ***Corequisite:*** *ITL 550A, or ITL 650A*	2.25
ITL 550B	Student Teaching B ***Corequisite:*** *ITL 551B;* ***Prerequisite:*** *ITL 550A*	4.50
ITL 551B	ITL Seminar B ***Prerequisite:*** *ITL 551A;* ***Corequisite:*** *ITL 550B, or ITL 650B*	2.25

Bachelor of Arts in Psychology

Academic Program Director: Allyson Washburn; awashburn@nu.edu,Tom Steiner; tsteiner@nu.edu

The Bachelor of Arts in Psychology program offers a comprehensive introduction to the contemporary discipline of psychology. Graduates of this program are well prepared to seek employment in many human services and business sectors. Specific jobs include human resource advisor, case manager, veterans or career counselor, parole/probation officer or victims' advocate, and information specialist or job analyst. Graduates are also prepared to seek admission to graduate programs in Psychology.

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

- Articulate major theories, concepts, and historical trends in psychology.
- Explain behavior, cognition, and emotion from multiple schools of thought and multicultural perspectives.
- Identify a problem in psychology, examine available evidence, analyze assumptions, and apply research methods to solve the problem. This includes the ability to interpret numbers and apply basic statistical procedures.
- Write papers in psychology using different literary formats, e.g., narrative, exposition, critical analysis, and APA format.
- Perform information searches relevant to psychology and organize and evaluate the soundness of the information.
- Use current technologies in both research and communication.

Degree Requirements:

To receive a Bachelor of Arts in Psychology degree, students must complete at least 180 quarter units as follows: a minimum of 69 units of the University General Education requirements; 76.5 units at the upper-division level, 45 units of which (including Senior Project) must be completed in residence at National University. The following courses are specific degree requirements. Without transfer credit, students may need to take additional general electives to satisfy the total units for the degree. Sequencing blocks organize program courses. Whenever possible, it is in the student's best interest to take required courses in the order identified by the blocks. Students should refer to the section on undergraduate admission procedures for specific information on admission and evaluation.

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

MTH 210	Probability and Statistics* ***Prerequisite:*** *MTH 12A and MTH 12B, or Accuplacer test placement evaluation*	4.50
PSYC 100	Introduction to Psychology*	4.50

*May be used to satisfy general education requirements.

Requirements for the Major: First Block (4 courses; 18 quarter units)

Students complete the first block of courses before moving to courses in the second block. Students can take courses within the first block in any order.

CHD 440	Drugs, Values and Society	4.50
PSYC 428	Developmental Psychology ***Prerequisite:*** *ENG 102; PSYC 100*	4.50
PSYC 429	Intro to Personality Theory ***Prerequisite:*** *ENG 102; PSYC 100*	4.50
PSYC 432	Social Psychology ***Prerequisite:*** *ENG 102; PSYC 100*	4.50

Requirements for the Major: Second Block (4 courses; 18 quarter units)

Students begin the second block of courses after completing the first block. Students can take courses within the second block in any order.

HUB 441	Research Design and Analysis ***Prerequisite:*** *ENG 102; MTH 210; PSYC 100*	4.50

PSYC 430	Intro to Psychopathology ***Prerequisite:*** *ENG 102; PSYC 100*	4.50
PSYC 441	Global Psychology ***Prerequisite:*** *PSYC 100*	4.50
PSYC 426	History and Philosophy Psych ***Prerequisite:*** *ENG 102; PSYC 100*	4.50

Requirements for the Major: Third Block (4 courses; 18 quarter units)

Students begin the third block of courses after completing the first and second blocks. Students can take PSYC433 and PSYC427 in any order but should take the project course as the final course of the degree.

PSYC 433	Cognitive Psychology ***Prerequisite:*** *ENG 102; PSYC 100*	4.50
PSYC 427	Biological Psychology ***Prerequisite:*** *ENG 102; PSYC 100*	4.50
PSYC 480A	Senior Project Course 1 ***Prerequisite:*** *CHD 440; HUB 441; MTH 210; PSYC 100; PSYC 426; PSYC 427; PSYC 428; PSYC 429; PSYC 430; PSYC 432; PSYC 433; PSYC 441*	4.50
PSYC 480B	Senior Project Course 2 ***Prerequisite:*** *PSYC 480A*	4.50

Upper-Division Electives (4 courses; 18 quarter units)

Students not pursuing the Concentration in Spanish or a minor must choose five Upper-Division Electives from the following:

BIO 420	Animal Behavior ***Prerequisite:*** *BIO 100A; BIO 161; BIO 162; BIO 163*	4.50
BIS 301	Intro to Interdisc. Studies	4.50
CJA 400	Gangs in America	4.50
CJA 431	Criminology	4.50
HUB 400	Group Structure & Dynamics ***Prerequisite:*** *ENG 102; PSYC 100*	4.50
HUB 401	Conflict Resolution ***Prerequisite:*** *ENG 102; PSYC 100*	4.50
HUB 410	Psychology for Managers ***Prerequisite:*** *ENG 102; PSYC 100*	4.50
HUB 420	Human Communication ***Prerequisite:*** *ENG 102; PSYC 100*	4.50
HUB 440	Organizational Development ***Prerequisite:*** *ENG 102; PSYC 100*	4.50
HUB 500	Cross-Cultural Dynamics ***Prerequisite:*** *ENG 102; PSYC 100*	4.50
PSY 302	Foundation of Sport Psychology ***Prerequisite:*** *ENG 102; PSYC 100*	4.50
PSY 340A	Counseling Techniques I ***Prerequisite:*** *ENG 102; PSYC 100*	4.50
PSYC 431	Psychological Testing ***Prerequisite:*** *ENG 102; PSYC 100*	4.50
PSY 445	Applied Sport Psychology ***Prerequisite:*** *PSYC 100; PSY 302*	4.50
PSYC 446	Positive Psychology	4.50

	Prerequisite: *ENG 102; PSYC 100*	
PSYC 454	Psychology of Religion ***Prerequisite:*** *ENG 102; PSYC 100*	4.50
PSYC 455	Psychology of Bereavement ***Prerequisite:*** *ENG 102; PSYC 100*	4.50
PSYC 457	Forensic Psychology ***Prerequisite:*** *ENG 102; PSYC 100*	4.50
PSYC 458	Health Psychology ***Prerequisite:*** *ENG 102; PSYC 100*	4.50
PSYC 469	Human Sexuality	4.50
SOC 344	Love, Sex, and the Family ***Prerequisite:*** *ENG 102*	4.50
SOC 443	Sociology of Deviance ***Prerequisite:*** *ENG 102*	4.50
SOC 445	Contemporary Social Problems ***Prerequisite:*** *ENG 102*	4.50

Other electives must be approved by the Academic Program Director.

Concentration in Spanish

Academic Program Director: Rachel VanWieren; rvanwieren@nu.edu

Through this concentration, students can improve their Spanish language skills and their marketability in various professions. The coursework focuses on increasing students' spoken and written fluency and their cultural competency for working with Spanish-speaking populations.

Students can enter directly into the concentration at the 300 Level if they have extensive experience with the Spanish language, either through their personal life or previous studies. Those at the beginner or intermediate level can take prerequisite courses SPN 100, SPN 101, and/or SPN 200 at NU. Placement can be established through prior coursework, testing options as described in the NU catalog, or an oral interview with SoALS faculty.

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

- Use Spanish language skills effectively (listening, speaking, reading, writing) for daily life, travel, and workplace related tasks at a level equivalent to ACTFL Advanced Low.
- Produce projects in Spanish related to student's chosen future profession.
- Demonstrate a greater understanding of the diversity of contemporary and past ways of life in the Spanish speaking world, including workplace culture.
- Analyze cultural artifacts and manifestations from Latin American, Spanish, and US Latino communities.

Degree Requirements:

The Concentration in Spanish requires four courses at and above the 300-level for a total of 18 quarter units. Required courses include SPN 303 and SPN 304. Students then choose two electives, one of which must be in Spanish.

Placement into prerequisite courses or directly into the concentration can be established through prior coursework at the high school or college level, testing options as described in the NU catalog, or an oral interview with SoALS faculty in the case of extensive personal experience speaking Spanish.

Total Requirements for the Concentration (4 courses;18 credit hours)
Requirements for the Concentration (2 courses; 9 credit hours) **Units:** 9.00

SPN 303	Virtual Study Abroad ***Prerequisite:*** *SPN 200 Prerequisite can be waived through prior coursework, testing options as described in the NU catalog, or an oral interview with SoALS faculty.*	4.50
SPN 304	Spanish for Professional Comm ***Prerequisite:*** *SPN 200 Prerequisite can be waived through prior coursework, testing options as described in the NU catalog, or an oral interview with SoALS faculty.*	4.50

Elective Courses in Spanish (1 course; 4.5 credit hours)

Students will need to select at least one course in Spanish from the list below as part of the Spanish Concentration.

SPN 350	Film and Culture ***Prerequisite:*** *SPN 303; SPN 304*	4.50
SPN 340A	Spanish for the Work Place	4.50

Elective Courses in English (1 course; 4.5 credit hours)

Students will need to select one elective course in English from the list below as part of the Spanish Concentration.

SPN 341	Cross-Cultural Communication	4.50
HIS 345	Latin American Studies ***Prerequisite:*** *ENG 102*	4.50
LIT 420	U.S. Latino Literature ***Prerequisite:*** *ENG 240 and LIT 100*	4.50
LIT 480	Literature of the Americas ***Prerequisite:*** *ENG 240 and LIT 100*	4.50

Bachelor of Arts in Sport Psychology

Academic Program Director: Doug Barba; dbarba@nu.edu

The Bachelor of Arts in Sport Psychology program offers a comprehensive introduction to the contemporary discipline of sport psychology. Graduates of this program are well prepared to seek employment in entry-level positions in athletics, personnel, and leadership, as well as admission to graduate psychology programs at the master's or doctoral level.

Bachelor of Arts in Sport Psychology to Master of Arts in Sport and Performance Psychology Transition Program

The BA in Sport Psychology (BASP) to MA in Sport and Performance Psychology (MASPP) program allows students who are enrolled in the BASP with a cumulative grade point average of at least 3.0 and who are within completing their last six courses to register for three courses in the MASPP program as electives for the bachelor's degree. Students may take the following courses: PSY 602, PSY 607A, and PSY 644. The three graduate courses are restricted to those that do not require a prerequisite. Students must complete all transition program coursework with a grade of B or better. Students must enroll in and complete the first class in the Master's degree within six months of the conferral date of their undergraduate degree. Further rules and requirements for Transition programs are located in the university catalog.

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

- Discuss current trends in psychological research in both individual and team contexts within sport and exercise psychology.
- Analyze how psychological factors influence performance in sport and exercise, and techniques to increase performance and reduce anxiety.
- Examine the history of sport psychology and its role in contemporary psychological theories and systems.
- Discuss the influences of diversity and multiculturalism on group interactions and performance.
- Apply psychological theory to coaching situations.
- Communicate orally and in writing using proper sport, exercise, and psychology terminology.
- Discuss the legal and ethical issues in sport and exercise psychology and performance enhancement.
- Discuss the physiological and motoric principles of performance in sport and physical activity.

Degree Requirements:

To receive a Bachelor of Arts in Sport Psychology degree, students must complete at least 180 quarter units as articulated below, 45 of which must be completed in residence at National University, 76.5 of which must be completed at the upper-division level, and a minimum 69 units of the University General Education requirements. In the absence of transfer credit, additional general electives may be necessary to satisfy total units for the degree. The following courses are specific degree requirements. Students should refer to the section on undergraduate admission procedures for specific information on admission and evaluation.

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

MTH 210	Probability and Statistics* ***Prerequisite:*** *MTH 12A and MTH 12B, or Accuplacer test placement evaluation*	4.50
PSYC 100	Introduction to Psychology*	4.50

*May be used to satisfy general education requirements.

Requirements for the Major (13 courses; 58.5 quarter units)

PSY 302	Foundation of Sport Psychology ***Prerequisite:*** *ENG 102; PSYC 100*	4.50
PSY 448	History of Sport & Sport Psych ***Prerequisite:*** *PSYC 100; PSY 302*	4.50
PSY 300	Social Psychology of Sport ***Prerequisite:*** *ENG 102; PSYC 100*	4.50
HUB 441	Research Design and Analysis ***Prerequisite:*** *ENG 102; MTH 210; PSYC 100*	4.50
PSY 303	Motor Learning ***Prerequisite:*** *ENG 102; PSYC 100*	4.50
PSY 305	Exercise Psychology ***Prerequisite:*** *PSYC 100*	4.50
PSY 443	Culture and Sport Psychology ***Prerequisite:*** *PSYC 100; PSY 302*	4.50
BIO 385	Biomechanics of Sport	4.50
BIO 386	Exercise Physiology	4.50
PSY 340A	Counseling Techniques I ***Prerequisite:*** *ENG 102; PSYC 100*	4.50
PSY 445	Applied Sport Psychology ***Prerequisite:*** *PSYC 100; PSY 302*	4.50
PSY 442	Case Studies Sport Psychology ***Prerequisite:*** *Successful completion of 10 courses in the BA Sport Psychology program.*	4.50

PSY 485	Sport Psychology Sr. Project ***Prerequisite:*** *Satisfactory completion of ALL Major requirements*	4.50

Upper Division Electives (3 courses; 13.5 quarter units)

Choose three upper division electives from the available offerings. It is STRONGLY RECOMMENDED that students select AT LEAST 2 of their required electives from the following 7 courses:

PSYC 427	Biological Psychology ***Prerequisite:*** *ENG 102; PSYC 100*	4.50
PSYC 428	Developmental Psychology ***Prerequisite:*** *ENG 102; PSYC 100*	4.50
PSYC 429	Intro to Personality Theory ***Prerequisite:*** *ENG 102; PSYC 100*	4.50
PSYC 430	Intro to Psychopathology ***Prerequisite:*** *ENG 102; PSYC 100*	4.50
PSYC 432	Social Psychology ***Prerequisite:*** *ENG 102; PSYC 100*	4.50
PSYC 433	Cognitive Psychology ***Prerequisite:*** *ENG 102; PSYC 100*	4.50
PSYC 446	Positive Psychology ***Prerequisite:*** *ENG 102; PSYC 100*	4.50

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.

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 69 units of the University General Education requirements. In the absence of transfer credit, additional general electives may be necessary to satisfy total units for the degree. The following courses are specific degree requirements. Refer to the section of undergraduate admission requirements for specific information regarding admission and evaluation.

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)

MTH 215	College Algebra & Trigonometry ***Prerequisite:*** *MTH 12A and MTH 12B, or Accuplacer test placement evaluation*	4.50
OR MNS 205	Intro to Quantitative Methods*	4.50
ECO 203	Principles of Microeconomics*	4.50
ECO 204	Principles of Macroeconomics*	4.50
LAW 204	Legal Aspects of Business I	4.50
ACC 201	Financial Accounting Funds.	4.50
ACC 202	Managerial Accounting Funds. ***Prerequisite:*** *ACC 201*	4.50

*May be used to meet General Education requirements ^ Eligible for Credit-by-exam waiver: Contact Academic 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	4.50
MGT 309	Prin. of Mgmt & Organizations	4.50
FIN 310	Business Finance ***Prerequisite:*** *ACC 201*	4.50
MKT 302A	Marketing Fundamentals	4.50
OR IBU 430	Survey of Global Business ***Prerequisite:*** *ECO 203 and ECO 204*	4.50

OR		
MNS 407	Management Science^ ***Prerequisite:*** *MNS 205 and MTH 210*	4.50

^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*	4.50
ACC 410B	Intermediate Accounting II ***Prerequisite:*** *ACC 410A*	4.50
ACC 410C	Intermediate Accounting III ***Prerequisite:*** *ACC 410B*	4.50
ACC 431	Advanced Accounting ***Prerequisite:*** *ACC 410C*	4.50
ACC 432A	Taxation-Individual ***Prerequisite:*** *ACC 201*	4.50
ACC 432B	Taxation-Business ***Prerequisite:*** *ACC 432A; ACC 431*	4.50
ACC 433	Managerial Accounting ***Prerequisite:*** *ACC 202*	4.50
ACC 434	Government and Nonprofit Acct ***Prerequisite:*** *ACC 201*	4.50
ACC 436	Applied Tech for Accountants ***Prerequisite:*** *ACC 201*	4.50
ACC 515	Accounting Ethics	4.50
ACC 555	Data Analytics	4.50
ACC 435A	Auditing I ***Prerequisite:*** *ACC 431*	4.50
ACC 435B	Auditing II ***Prerequisite:*** *ACC 435A*	4.50

Bachelor of Science in Biology

Academic Program Director: Michael Maxwell; mmaxwell@nu.edu

Offers personal and academic fulfillment and growth as students discover the amazing world of biology, preparing students for graduate and professional study, as well as careers in life science education, research, health sciences, and applied biology. Central to the program is an emphasis on hands-on laboratory coursework.The BS Biology provides a solid foundation in all levels of biological organization, from molecules to ecosystems. Such a comprehensive curriculum is crucial to meeting modern challenges in science, which include new and emerging diseases, rapid advances in our understanding of genetics, physiology and biodiversity, threats to species and ecosystem functioning, and global population increase and sustainability. A degree in biology is common preparation for careers in the various medical professions, genetics, molecular and cell biology, biotechnology, microbiology, conservation biology, evolutionary biology, ecology, animal and plant science, as well as science writing, editing and education.

Students who wish to include an interdisciplinary approach to their academic training should look closely at the benefits provided by this major. In addition to meeting requirements for BS Biology, this degree allows for the integration of study in the life sciences with coursework in the physical and earth sciences, as well as applied fields such as forensics. Furthermore, in keeping with the commitment of the School of Arts, Letters, and Sciences to the complete academic development of its students, science courses involve writing and diversity components, as well as fundamental critical thinking components.

Required courses for this program are offered fully onsite in San Diego.

Bachelor of Science in Biology to Master of Forensic Science Transition Program

The BS Biology to MFS transition program allows students who are enrolled in the BS Biology with a cumulative grade point average of at least 3.0 and who are within completing their last six courses to register for two courses in the MFS program as electives for the bachelor's degree. Students may choose from the following courses: FSC 630, FSC 633, FSC634, FSC 635 or FSC 642. The two graduate courses are restricted to those that do not require a prerequisite. Students must complete all transition program coursework with a grade of B or better. The number of courses required to earn an MFS degree for transition program students is reduced from 12 to as few as 10 courses. Graduate-level coursework taken as part of the Biology program cannot be applied as graduate credit to the Master of Forensic Science program, nor will it transfer as graduate level credit to any other university because it becomes part of the undergraduate degree program. Students must enroll in and complete the first class in the Master's degree within 6 months of the conferral date of their undergraduate degree. The MFS program must be completed within 4 years with no break in enrollment of 12 months or more. Further rules and requirements for Transition programs are located in the university catalog.

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

- Discuss biological processes at all levels of organization: molecular, cellular and microbial, organismal, population, and ecosystem.
- Explain the importance of unifying concepts in biology, including cell theory, genetics, and evolution.
- Describe the structure and function of Earth's organisms, as well as their roles in the natural world.
- Apply the scientific method in laboratory-based and field-based inquiry.
- Demonstrate effective oral, visual, and written communication and quantitative skills, including the critical analysis of data and scientific literature.
- Demonstrate computer and technology literacy, including the ability to access databases within the context of course research and project development.
- Evaluate historical developments and research in biology, as well as current and contemporary research and challenges.

Degree Requirements:

To earn a Bachelor of Science with a Major in Biology, students must complete at least 180 quarter units as detailed below. Of these, 45 units must be completed in residence at National University, 76.5 units must be at the upper division level, and a minimum of 69 units must satisfy the University's General Education requirements. If transfer credits are unavailable, additional general electives may be required to meet the total unit requirement for the degree. Please refer to the section on undergraduate admission requirements for specific information regarding admission and evaluation.

* Completing courses BIO 100, 100A, 201, 201A, 202, 202A, 203, and 203A is equivalent to the course sequence BIO 161, 162, 163, and 169A for fulfilling the BS Biology degree.

Preparation for the Major (16 courses; 60 quarter units)

MTH 210	Probability and Statistics* ***Prerequisite:*** *MTH 12A and MTH 12B, or Accuplacer test placement evaluation*	4.50
MTH 215	College Algebra & Trigonometry ***Prerequisite:*** *MTH 12A and MTH 12B, or Accuplacer test placement evaluation*	4.50
CHE 141	General Chemistry 1* ***Prerequisite:*** *MTH 204; MTH 215*	4.50
CHE 142	General Chemistry 2* ***Prerequisite:*** *CHE 141*	4.50
CHE 143	General Chemistry 3*	4.50

	Corequisite: *CHE 149A;* ***Prerequisite:*** *CHE 142*	
BIO 161	General Biology 1*	4.50
BIO 162	General Biology 2* ***Prerequisite:*** *BIO 161*	4.50
BIO 163	General Biology 3* ***Prerequisite:*** *BIO 161; BIO 162*	4.50
PHS 171	General Physics 1* ***Prerequisite:*** *MTH 215*	4.50
PHS 172	General Physics 2* ***Prerequisite:*** *PHS 171*	4.50
PHS 173	General Physics 3* ***Corequisite:*** *PHS 179A;* ***Prerequisite:*** *PHS 171; PHS 172*	4.50
CHE 150	Introductory Organic Chemistry ***Prerequisite:*** *CHE 101 and CHE 101A, or CHE 141 and CHE 142 and CHE 143 and CHE 149A; Prerequisites for this course are NOT required for BSCLS students.*	4.50
CHE 150A	Introductory Organic Chem Lab ***Prerequisite:*** *CHE 150 with a minimum grade of C-. A student must have passed the lecture to take the lab.*	1.50
BIO 169A	General Biology Lab ***Prerequisite:*** *BIO 161; BIO 162; BIO 163*	1.50
CHE 149A	General Chemistry Laboratory ***Corequisite:*** *CHE 143*	1.50
PHS 179A	General Physics Lab ***Prerequisite:*** *PHS 171 and PHS 172 and* ***Corequisite:*** *PHS 173*	1.50

*May be used to meet General Education requirements

Requirements for the Major (12 courses; 42 quarter units) These courses are onsite.

BIO 330	Ecology ***Prerequisite:*** *BIO 161; BIO 162; BIO 163; BIO 169A; CHE 141; CHE 142; CHE 143; CHE 149A*	4.50
BIO 305	Genetics ***Prerequisite:*** *BIO 100 and CHE 101, or BIO 162 and CHE 142*	4.50
BIO 310	Evolution ***Prerequisite:*** *BIO 161; BIO 162; BIO 163; and BIO 169A*	4.50
BIO 406	Cellular Biology ***Prerequisite:*** *BIO 161; BIO 162; BIO 163; BIO 169A; CHE 141; CHE 142; CHE 143; CHE 149A;* ***Corequisite:*** *BIO 406A*	4.50
BIO 406A	Cellular Biology Lab ***Corequisite:*** *BIO 406;* ***Prerequisite:*** *BIO 161; BIO 162; BIO 163; BIO 169A; CHE 141; CHE 142; CHE 143; CHE 149A*	1.50
BIO 407	Molecular Biology ***Prerequisite:*** *BIO 161; BIO 162; BIO 163; BIO 169A; CHE 141; CHE 142; CHE 143; CHE 149A; BIO 305;* ***Corequisite:*** *BIO 407A*	4.50
BIO 407A	Molecular Biology Lab ***Corequisite:*** *BIO 407;* ***Prerequisite:*** *BIO 161; BIO 162; BIO 163; BIO 169A; CHE 141; CHE 142; CHE 143; CHE 149A; BIO 305*	1.50
BIO 414	Invertebrate Zoology ***Prerequisite:*** *BIO 161; BIO 162; BIO 163; BIO 169A; CHE 141; CHE 142; CHE 143; CHE 149A;* ***Corequisite:*** *BIO 414A*	4.50

BIO 414A	Invertebrate Zoology Lab ***Corequisite:*** *BIO 414*	1.50
BIO 416	Vertebrate Zoology ***Corequisite:*** *BIO 416A;* ***Prerequisite:*** *BIO 161; BIO 162; BIO 163; BIO 169A; CHE 141; CHE 142; CHE 143; CHE 149A*	4.50
BIO 416A	Vertebrate Zoology Laboratory ***Corequisite:*** *BIO 416*	1.50
BIO 485	Contemporary Topics in Biology ***Prerequisite:*** *BIO 305, or BIO 310, or BIO 330*	4.50

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

Students may select only 300, 400, or 500 level in the School of Arts, Letters, & Sciences to complete the total of 76.5 quarter units of upper division for the degree. Suggested upper-division courses are given below.

BIO 420	Animal Behavior ***Prerequisite:*** *BIO 100A; BIO 161; BIO 162; BIO 163*	4.50
BIO 430	Immunology ***Recommended Preparation:*** *BIO 203, or BIO 406, or equivalent courses.*	4.50
BIO 440	Botany ***Prerequisite:*** *BIO 161; BIO 162; BIO 163; BIO 169A; CHE 141; CHE 142; CHE 143; CHE 149A*	4.50
BIO 450	Natural History of California ***Prerequisite:*** *BIO 100 and BIO 100A, or BIO 161; BIO 162; BIO 163 and BIO 169A*	4.50
BIO 460	Marine Biology ***Prerequisite:*** *BIO 161 with a minimum grade of C. Student must have taken General Biology or equivalent ; BIO 162 with a minimum grade of C. Student must have taken General Biology or equivalent ; BIO 163 with a minimum grade of C. Student must have taken General Biology or equivalent*	4.50
BIO 461	Marine Biology Field Studies[**] ***Recommended Preparation:*** *BIO 162 with a minimum grade of C. Student must have a grade of C or higher*	4.50
BIO 470	Bioinformatics ***Corequisite:*** *BIO 470A;* ***Prerequisite:*** *BIO 161 with a minimum grade of C-. Student must have passed the class with a C- or better; BIO 162 with a minimum grade of C-. Student must have passed the class with a C- or better; BIO 163 with a minimum grade of C-. Student must have passed the class with a C- or better*	4.50
BIO 470A	Bioinformatics Lab ***Corequisite:*** *BIO 470*	1.50
BIO 480	Studies in Biology	4.50
CHE 350	Organic Chemistry I ***Prerequisite:*** *CHE 142*	4.50
CHE 351	Organic Chemistry II ***Prerequisite:*** *CHE 350*	4.50
CHE 360	Biochemistry I ***Prerequisite:*** *CHE 350; CHE 351*	4.50
CHE 361	Biochemistry II ***Prerequisite:*** *CHE 360*	4.50
EES 322	Oceanography	4.50
MTH 317	Mathematical Modeling	4.50

	Prerequisite: *MTH 210; MTH 215*	
SCI 303	GIS: Geographic Info Systems	4.50
SCI 490	Guided Study	0.50

**Enrollment in this course requires Instructor's permission

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, the 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 on the website below:

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

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

Students interested in the Bachelor of Science in Clinical Laboratory Science at NU must reside in California.

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

National University is an approved institution meeting the educational requirements for the Medical Laboratory Scientist (MLS) certification through the American Medical Technologists (AMT).

For more information about AMT certification requirements, please visit AMT's website at https://americanmedtech.org/medical-laboratory-scientist

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

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

Degree Requirements:

To receive the Bachelor of Science degree with a Major in Clinical Laboratory Science, students must complete at least 180 quarter units as articulated below, 45 of which must be completed in residence at National University. Upper-Division Level must consist of 76.5 quarter units and General Education must be a minimum of 69 quarter

units. Refer to the section on Undergraduate Admission procedures for specific information regarding admission and evaluation. **Students interested in the Bachelor of Science in Clinical Laboratory Science at NU must reside in California.**

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

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

AND

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

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

OR

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

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

The BSCLS program will accept BIO 191A and BIO 193A in lieu of BIO201A and BIO 203A.

Preparation for the Major (12 courses; 45 quarter units)

MTH 215	College Algebra & Trigonometry ***Prerequisite:*** *MTH 12A and MTH 12B, or Accuplacer test placement evaluation*	4.50
BIO 161	General Biology 1*	4.50
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*	4.50
Student will need to choose between BIO 191A or BIO 201A.		
BIO 191A	Online Hum Anat and Phys I Lab ***Corequisite:*** *BIO 201;* ***Recommended: Prior completion of:*** *BIO 100; BIO 100A; CHE 101; CHE 101A*	1.50
OR		
BIO 201A	Human Anatomy and Physiol Lab* ***Corequisite:*** *BIO 201;* ***Recommended: Prior completion of:*** *BIO 100; BIO 100A; CHE 101; CHE 101A or equivalent courses.*	1.50
BIO 203	Introductory Microbiology* ***Corequisite:*** *BIO 193A; BIO 203A Students should take both lecture and lab courses concurrently and with the same instructor to ensure a consistent learning experience. Students who are retaking one of the two courses or present special circumstances should petition for exception to this requisite.;* ***Recommended: Prior completion of:*** *BIO 100 and BIO 100A; CHE 101 and CHE 101A or equivalent courses; BIO 201 and BIO 201A; BIO 202 and BIO 202A*	4.50
Student will need to choose between taking BIO 193A or BIO 203A.		
BIO 193A	Online Microbiology Lab ***Corequisite:*** *BIO 203;* ***Recommended: Prior completion of:*** *BIO 191A; BIO 201; CHE 101; CHE 101A*	1.50
OR		

BIO 203A	Introductory Microbiology Lab* ***Corequisite:*** *BIO 203;* ***Recommended: Prior completion of:*** *BIO 100; BIO 100A; CHE 101; CHE 101A; BIO 201 and BIO 201A; BIO 202 and BIO 202A*	1.50
CHE 150	Introductory Organic Chemistry ***Prerequisite:*** *CHE 101 and CHE 101A, or CHE 141 and CHE 142 and CHE 143 and CHE 149A; Prerequisites for this course are NOT required for BSCLS students.*	4.50
CHE 150A	Introductory Organic Chem Lab ***Prerequisite:*** *CHE 150 with a minimum grade of C-. A student must have passed the lecture to take the lab.*	1.50
CHE 141	General Chemistry 1 ***Prerequisite:*** *MTH 204; MTH 215*	4.50
CHE 142	General Chemistry 2* ***Prerequisite:*** *CHE 141*	4.50
CHE 350	Organic Chemistry I ***Prerequisite:*** *CHE 142*	4.50
PHS 104	Introductory Physics* ***Prerequisite:*** *MTH 204, or MTH 215*	4.50

* May be used to meet General Education requirements.

Core Requirements (10 courses; 45 quarter units)

BST 322	Intro to Biomedical Statistics	4.50
CLS 320	Clinical Lab Management	4.50
CLS 301	Clinical Biochemistry ***Recommended: Prior completion of:*** *CHE 142*	4.50
CLS 401	Quantitative Analysis ***Recommended: Prior completion of:*** *CHE 142*	4.50
CLS 305	Clinical Immunology ***Recommended: Prior completion of:*** *CHE 101; BIO 161; BIO 203 or equivalent*	4.50
CLS 315	Molecular Diagnostics ***Recommended: Prior completion of:*** *BIO 162 and CHE 142*	4.50
CLS 310	Clinical Virology ***Recommended: Prior completion of:*** *CHE 101; BIO 161; BIO 203 or equivalent*	4.50
CLS 405	Clinical Microbiology ***Recommended Preparation:*** *CLS 301 with a minimum grade of B.; CLS 305 with a minimum grade of B.; CLS 315 with a minimum grade of B.*	4.50
CLS 410	Clinical Hematology ***Recommended Preparation:*** *CLS 301 with a minimum grade of B.; CLS 315 with a minimum grade of B.; CLS 305 with a minimum grade of B.*	4.50
CLS 490	Individual Seminar/Research ***Prerequisite:*** *Requires prior approval from the Academic Program Director and Department Chair. ;* ***Recommended Preparation:*** *Must have completed all required Core classes and have a 2.5 overall GPA.*	4.50
OR		
CLS 495	Clinical Lab Science Capstone ***Prerequisite:*** *Must have completed all required core classes.*	4.50

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

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

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

Bachelor of Science in 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 Studies 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 may choose up to two (2) courses from the following course list: CSC 603 and CSC 605. The number of courses required to earn an MSCS degree for transition program students will be reduced from 13 to as few as 11, depending on the number of graduate classes completed within the BSCS with a grade of B or better.

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

- Analyze a complex computing problem and 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 69 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.

Prerequisites for the Major (8 courses; 36 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 (PHS104 and PHS104A or PHS130A are recommended).

MTH 215	College Algebra & Trigonometry ***Prerequisite:*** *MTH 12A and MTH 12B, or Accuplacer test placement evaluation*	4.50
CSC 208	Calculus for Comp. Science I* ***Prerequisite:*** *MTH 215*	4.50
CSC 242	Intro to Programming Concepts* ***Prerequisite:*** *MTH 215*	4.50
CSC 209	Calculus for Comp. Science II ***Prerequisite:*** *CSC 208*	4.50
CSC 252	Programming in C++* ***Prerequisite:*** *CSC 242*	4.50
CSC 262	Programming in JAVA* ***Prerequisite:*** *MTH 215*	4.50
CSC 220	Applied Probability & Stats. ***Prerequisite:*** *CSC 208, or MTH 221; EGR 220*	4.50
CSC 272	Advanced Programming in Java ***Prerequisite:*** *CSC 262*	4.50

* May be used to meet a General Education requirement.

Requirements for the Major (17 courses; 73.5 quarter units)

Students may take courses in any order if course prerequisites are satisfied.

CSC 310	Linear Algebra and Matrix Comp ***Prerequisite:*** *CSC 252, or CSC 272*	4.50

CSC 331	Discrete Structures and Logic ***Prerequisite:*** *CSC 252, or CSC 272*	4.50
EGR 320	Scientific Problem Solving ***Prerequisite:*** *CSC 208, or EGR 220*	4.50
CSC 300	Object Oriented Design ***Prerequisite:*** *CSC 252, or CSC 272*	4.50
CSC 335	Data Structures and Algorithms ***Prerequisite:*** *CSC 300; CSC 331*	4.50
CSC 350	Computer Ethics	4.50
CSC 340	Digital Logic Design ***Prerequisite:*** *CSC 331;* ***Corequisite:*** *CSC 340L*	4.50
CSC 340L	Digital Logic Design Lab ***Prerequisite:*** *CSC 331;* ***Corequisite:*** *CSC 340*	1.50
CSC 338	Algorithm Design ***Prerequisite:*** *CSC 335*	4.50
CSC 342	Computer Architecture ***Prerequisite:*** *CSC 340 and CSC 340L*	4.50
CSC 400	OS Theory and Design ***Prerequisite:*** *CSC 335*	4.50
CSC 422	Database Design ***Prerequisite:*** *CSC 300*	4.50
CSC 436	Comp. Communication Networks ***Prerequisite:*** *CSC 331*	4.50
CSC 430	Programming Languages ***Prerequisite:*** *CSC 300*	4.50
CSC 480A	Computer Science Project I ***Prerequisite:*** *Completion of requirements for the major and electives or permission of the program director.*	4.50
CSC 480B	Computer Science Project II ***Prerequisite:*** *CSC 480A*	4.50
CSC 480C	Computer Science Project III ***Prerequisite:*** *CSC 480B*	4.50

Approved Electives (4 courses; 18 quarter units)

The program requires 4 Upper Division Technical Electives. Students may customize and select four courses from the approved list below.

CSC 441	Web App Development ***Prerequisite:*** *CSC 300 and CSC 422*	4.50
CSC 443	Mobile App Development ***Prerequisite:*** *CSC 300 and CSC 422*	4.50
CSC 447	Software Testing & Automation ***Prerequisite:*** *CSC 300*	4.50
CSC 449	Software Engineering ***Prerequisite:*** *CSC 300 and CSC 422*	4.50
CSC 450	Artificial Intelligence ***Prerequisite:*** *CSC 335*	4.50
CIS 301	Mgmt Information Systems	4.50
CIS 310	Technology Project Management	4.50
CIS 320	Systems Analysis & Integration ***Prerequisite:*** *CIS 301*	4.50
CIS 475	Big Data and Cloud Computing	4.50

	Prerequisite: *CSC 422*	
CIS 430	Web/EB Design & Development ***Prerequisite:*** *CIS 350*	4.50
CYB 331	Secure Linux System Admin ***Prerequisite:*** *CYB 216*	4.50
CYB 332	Secure Windows Administration ***Prerequisite:*** *CYB 331*	4.50
CYB 333	Security Automation ***Prerequisite:*** *CYB 332*	4.50

Students may select other courses as electives outside this list with approval from the CS Program Director.

Concentration in Artificial Intelligence Systems

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

The Artificial Intelligence Systems concentration within the Undergraduate Computer Science program provides comprehensive coverage of the AI field, blending theoretical knowledge with practical skills. This program equips students to design, implement, analyze, and deploy intelligent systems by focusing on the core principles and techniques of AI. The concentration explores current technologies, techniques, and tools for developing AI solutions across various application domains, while fostering a critical understanding of the importance of explainability in AI systems and their societal impact.

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

- Design, implement and deploy variety of AI systems
- Build and train AI models using neural networks
- Track and utilize current technical trends and approaches in the AI system development
- Discuss explainability and societal impact of AI system

Requirements for the Concentration in AI (4 courses; 18 quarter units)		**Units:** 18.00
CSC 448	Python Programming for AI ***Prerequisite:*** *CSC 310 and CSC 220 and CSC 272, or CSC 252*	4.50
CSC 446	AI & Machine Learning ***Prerequisite:*** *CSC 448*	4.50
CSC 453	Neural Network Design and Appl ***Prerequisite:*** *CSC 448*	4.50
CSC 457	Reinf Learn and Gen AI ***Prerequisite:*** *CSC 453 and CSC 446*	4.50

Concentration in Software Development

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

This concentration builds student proficiency in design, implementation, testing, and management of large-scale, secure software systems. It covers the concepts and skills in constructing software from inception to deployment, using current industry practices and tools. The concentration examines processes and activities that go into each stage of the Software Development Lifecycle. The focus is on Web and Mobile Application Design, development tools, frameworks, and testing strategies.

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

- Describe, evaluate, and implement the processes and activities that go into engineering and building software systems.
- Design, develop, modify, and deploy software systems using relevant tools and technologies.
- Develop software testing plans and conduct automated software testing.

Degree Requirements:

This concentration requires completion of the four Technical Electives listed under the Program Description for a total of 18 quarter units.

Requirements for Area of Concentration (4 courses; 18 quarter units)		**Units:** 18.00
CSC 449	Software Engineering ***Prerequisite:*** *CSC 300 and CSC 422*	4.50
CSC 441	Web App Development ***Prerequisite:*** *CSC 300 and CSC 422*	4.50
CSC 443	Mobile App Development ***Prerequisite:*** *CSC 300 and CSC 422*	4.50
CSC 447	Software Testing & Automation ***Prerequisite:*** *CSC 300*	4.50

Bachelor of Science in Construction Management

Academic Program Director: Ed Brayton; ebrayton@nu.edu

The purpose of the Bachelor of Science in Construction Management program is to provide students with a well-rounded education in technical construction fundamentals, written and verbal communication, mathematics, business, law, humanities, and natural sciences. This degree program will prepare the student for careers in management, administrative, and ownership positions in the construction industry such as construction executive, project manager, project engineer/coordinator, field engineer, planning/scheduling engineer, cost estimator, quality and safety controller, construction superintendent, and facilities engineer.

In support of the National University mission, the educational objectives of the Construction Management degree program are to prepare graduates to achieve success within a few years of graduation. The graduates are expected to:

1. Succeed in pursuing chosen career path and demonstrate technical competence in utilizing construction management principles and skills in industry, academia, or the public sector.
2. Engage in sustained learning through graduate education, professional development, and self-study in construction management, engineering, and other professionally related fields.
3. Function well on a diverse and multidisciplinary team with effective communication skills.
4. Exhibit leadership, high standards of ethical conduct, and societal responsibility in the practice of construction management.

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

- Demonstrate knowledge of mathematics, science, and engineering and its application in identifying, formulating, and solving construction problems.
- Design a construction system, process, or procedure to meet desired needs.
- Indicate a fundamental understanding of mechanical, electrical and structural systems, and sustainability.
- Integrate and apply field inspection and survey techniques, safety standards, and regulatory compliance.
- Apply the principles of project management, accounting, cost estimating, and scheduling techniques in construction processes.
- Develop and test hypotheses, analyze and interpret data, and use scientific judgment to draw conclusions.
- Communicate effectively through written, verbal, and graphical media with a range of audiences.

- Understand legal aspects, ethical issues, and professional responsibilities in global, economic, environmental, and societal contexts.
- Function effectively on teams that establish goals, plan tasks, meet deadlines, and analyze risk and uncertainty.

Degree Requirements:

To receive a Bachelor of Science in Construction Management, students must complete at least 180 quarter units to include a minimum of 69 units of the University General Education requirements; 76.5 units must be completed at the upper-division level and 45 units must be taken in residence, including the capstone project classes. 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.

Preparation for the Major (10 courses; 42 43.5 quarter units)

COM 103	Public Speaking	4.50
MTH 215	College Algebra & Trigonometry ***Prerequisite:*** *MTH 12A and MTH 12B, or Accuplacer test placement evaluation*	4.50
PHS 104	Introductory Physics ***Prerequisite:*** *MTH 204, or MTH 215*	4.50
PHS 104A	Introductory Physics Lab ***Prerequisite:*** *PHS 104, or PHS 171 for Science Majors.*	1.50
OR PHS 130A	Physics Lab for Engineering^	1.50
ILR 260	Academic Information Literacy ***Prerequisite:*** *ENG 102*	4.50
EGR 219	Intro to Graphics and Auto CAD ***Prerequisite:*** *MTH 215*	4.50
EGR 220	Engineering Mathematics ***Prerequisite:*** *MTH 215*	4.50
EGR 225	Statics & Strength of Material ***Prerequisite:*** *EGR 220*	4.50
ACC 201	Financial Accounting Funds.	4.50
CSC 220	Applied Probability & Stats. ***Prerequisite:*** *CSC 208, or MTH 221; EGR 220*	4.50

^For online students only

Requirements for the Major (19 courses; 82.5 quarter units)

MGT 309	Prin. of Mgmt & Organizations	4.50
EGR 310	Engineering Economics ***Prerequisite:*** *MTH 215*	4.50
EGR 320	Scientific Problem Solving ***Prerequisite:*** *CSC 208, or EGR 220*	4.50
EGR 320L	Scientific Problem Solving-LAB	1.50

	Prerequisite: *EGR 320 with a minimum grade of C. The laboratory experiments in EGR 320L build on the content covered in EGR 320 (mechanical, electrical, and thermodynamics problem solving concepts).*	
EGR 316	Legal&Ethicl Const/Engr Issues	4.50
DEN 308	Computer Aided Engineering I ***Prerequisite:*** *EGR 219*	4.50
CEN 320	Surveying, Metrics and GIS ***Prerequisite:*** *EGR 219*	4.50
CEN 323	Structural Analysis ***Prerequisite:*** *EGR 220 and EGR 225*	4.50
CEN 325	Soil Mechanics and Foundation ***Prerequisite:*** *CEN 323*	4.50
CEN 410	Constr Materials and Methods ***Prerequisite:*** *MTH 215*	4.50
CEN 413	Plans and Specifications ***Prerequisite:*** *EGR 219*	4.50
CEN 416	Mech and Electrical Systems ***Prerequisite:*** *MTH 215*	4.50
CEN 419	Est., Scheduling and Control ***Prerequisite:*** *CEN 410*	4.50
EGR 440	Project Management Fundamental	4.50
CEN 420	Est., Scheduling & Control II ***Prerequisite:*** *CEN 419*	4.50
CEN 422	Field Inspection and Safety ***Prerequisite:*** *CEN 410*	4.50
CEN 421	Constr, Acct, Finance and Law ***Prerequisite:*** *ACC 201*	4.50
CEN 425	Design & Const Process Integra	4.50
CEN 480	Sustainable Construction	4.50

Construction Senior Project (3 courses; 13.5 quarter units)

CEN 486A	Construction Senior Project I ***Prerequisite:*** *Completion of 10 core courses in construction program.*	4.50
CEN 486B	Construction Senior Project II ***Prerequisite:*** *CEN 486A*	4.50
CEN 486C	Construction Senior ProjectIII ***Prerequisite:*** *CEN 486B*	4.50

Bachelor of Science in Data Science

Academic Program Director: Jodi Reeves; jreeves@nu.edu

This program explores the Data Science Life Cycle of Data Acquisition, preparation, management, mining, modeling, and visualization. Major courses apply analytical methods to solve real-world problems and prepare for entry-level careers in Data Science. Concentrations are available in Machine Learning and Artificial Intelligence, Cybersecurity, or Bioinformatics. The program culminates in a three-month capstone where publicly available data is used in a project to demonstrate mastery of the Data Science Life Cycle in the chosen concentration area.

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

- Apply theory, methods, and tools throughout the Data Science Life Cycle to satisfy stakeholders' needs.
- Analyze a complex Data Science problem by applying principles of computing and mathematics to identify solutions.
- Synthesize a computing-based solution to meet a given set of requirements in the context of Data Science.
- Communicate effectively in a variety of professional contexts.
- Recognize legal and ethical professional responsibilities to make informed judgments in Data Science practice.
- Function effectively as a member of a Data Science Team.

Degree Requirements:

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

Preparation for Major (5 courses; 22.5 quarter units)		**Units:** 22.50-24.00
ANA 200	Intro to Data Science	4.50
ANA 230	Intro to Data Visualization ***Prerequisite:*** *ANA 200*	4.50
MTH 210	Probability and Statistics ***Prerequisite:*** *MTH 12A and MTH 12B, or Accuplacer test placement evaluation*	4.50
MTH 215	College Algebra & Trigonometry ***Prerequisite:*** *MTH 12A and MTH 12B, or Accuplacer test placement evaluation*	4.50
CSC 350	Computer Ethics	4.50

Major in Data Science (11 courses; 49.5 quarter units)		**Units:** 49.50
ANA 310	Data Acquisition ***Prerequisite:*** *ANA 200 and ANA 230*	4.50
ANA 320	Data Management and Governance ***Prerequisite:*** *ANA 310*	4.50
MTH 330	Applied Statistical Methods ***Prerequisite:*** *MTH 210*	4.50
ANA 330	Data Preparation ***Prerequisite:*** *ANA 320 and MTH 330*	4.50
MTH 220	Calculus I ***Prerequisite:*** *MTH 215, or Accuplacer test placement*	4.50
ANA 340	Data Mining ***Prerequisite:*** *ANA 330*	4.50
ANA 350	Data Modeling ***Prerequisite:*** *ANA 340*	4.50
MTH 325	Discrete Mathematics ***Prerequisite:*** *MTH 215*	4.50
MTH 435	Linear Algebra ***Prerequisite:*** *MTH 325*	4.50
ANA 420	Advanced Data Management ***Prerequisite:*** *ANA 350*	4.50
ANA 430	Advanced Data Visualization ***Prerequisite:*** *ANA 420*	4.50

Capstone (3 courses; 13.5 quarter units)	**Units:** 13.50

ANA 499A	Data Science Project I ***Prerequisite:*** *Prior completion of all Major Prep, Major, and Concentration classes in BS Data Science program are to be completed before registering for this course.; ANA 485, or CYB 456, or BIO 471*	4.50
ANA 499B	Data Science Project II ***Prerequisite:*** *ANA 499A*	4.50
ANA 499C	Data Science Project III ***Prerequisite:*** *ANA 499B*	4.50

Concentration in AI and Machine Learning

Academic Program Director: Jodi Reeves; jreeves@nu.edu

The Concentration in AI and Machine Learning provides for greater depth in Computer Science topics, including Algorithms and Database Design in Artificial Intelligence and Machine Learning.

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

- Apply the principles of Computer Science to Data Science problems.
- Demonstrate knowledge of the fundamental concepts of data structures, algorithms, and database design.
- Analyze a complex set of data by applying principles of Neural Networks and Machine Learning Methods.
- Effectively communicate technical information in written and oral form to audiences within and outside the discipline of Artificial Intelligence and Machine Learning.

Degree Requirements:

Requirements for the Concentration (7 courses; 31.5 quarter units)

Requirements for the Concentration (7 courses; 31.5 quarter units)		**Units:** 31.50
CSC 300	Object Oriented Design* ***Prerequisite:*** *CSC 252, or CSC 272*	4.50
CSC 335	Data Structures and Algorithms** ***Prerequisite:*** *CSC 300; CSC 331*	4.50
CSC 338	Algorithm Design ***Prerequisite:*** *CSC 335*	4.50
CSC 422	Database Design ***Prerequisite:*** *CSC 300*	4.50
CSC 450	Artificial Intelligence ***Prerequisite:*** *CSC 335*	4.50
ANA 480	Machine Learning Methods ***Prerequisite:*** *ANA 430*	4.50
ANA 485	Neural Networks ***Prerequisite:*** *ANA 480*	4.50

*CSC 252 or CSC 272 prerequisites are being waived for students in this concentration. **CSC 331 prerequisite is being waived for students in this concentration.

Concentration in Bioinformatics

Academic Program Director: Rachel Simmons; rsimmons@nu.edu

The Concentration in Bioinformatics will provide students with the Biological Literacy necessary to evaluate techniques essential to Bioinformatics, including practical knowledge of databases, relevant libraries, verifying and evaluating analyses, developing a research project, and communicating results to Biologists.

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

- Describe key biological concepts such as cellular, molecular, organismal, and evolutionary processes, and how they frame Bioinformatics questions.
- Implement and evaluate programs and libraries in relation to the contexts of Molecular and Cellular Biology and Genomics Research.
- Analyze and evaluate Bioinformatics Data to discover patterns, critically evaluate conclusions and generate predictions for subsequent experiments.
- Effectively communicate scientific information in written and oral form to audiences within and outside the discipline of Bioinformatics.

Degree Requirements:

Requirements for the Concentration (8 courses; 30 quarter units)

Requirements for Concentration (8 courses: 30 quarter units)		**Units:** 30.00
BIO 100	Survey of Bioscience	4.50
CHE 101	Introductory Chemistry ***Recommended Preparation:*** *MTH 204*	4.50
BIO 305	Genetics ***Prerequisite:*** *BIO 100 and CHE 101, or BIO 162 and CHE 142*	4.50
BIO 306	Survey of Molecular Biology ***Prerequisite:*** *BIO 305*	4.50
BIO 470	Bioinformatics* ***Corequisite:*** *BIO 470A;* ***Prerequisite:*** *BIO 161 with a minimum grade of C-. Student must have passed the class with a C- or better; BIO 162 with a minimum grade of C-. Student must have passed the class with a C- or better; BIO 163 with a minimum grade of C-. Student must have passed the class with a C- or better*	4.50
BIO 470A	Bioinformatics Lab ***Corequisite:*** *BIO 470*	1.50
BIO 471	Adv. Bioinformatics ***Corequisite:*** *BIO 471A;* ***Prerequisite:*** *BIO 470*	4.50
BIO 471A	Adv. Bioinformatics Lab ***Corequisite:*** *BIO 471;* ***Prerequisite:*** *BIO 470A*	1.50

* BIO 100 will fulfill the prerequisite for students only in this concentration.

Concentration in Cybersecurity Analytics

Academic Program Director: Christopher Simpson; csimpson@nu.edu

The Concentration in Cybersecurity Analytics provides for greater depth in Computer Science topics including: Networking, Cybersecurity, Cloud Computing, Incidence Response, and Network Analytics.

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

- Apply the principles of Data Science to solve a Cybersecurity problem.
- Analyze a complex set of Cybersecurity Data by applying principles of Cybersecurity, incident response techniques, and other relevant disciplines to determine the cause of a cyber attack.
- Communicate the results of a cybersecurity investigation.
- Demonstrate knowledge of the fundamental concepts of operating systems, networks, and cloud computing.

Degree Requirements:

Requirements for the Concentration (7 courses; 31.5 quarter units)

Requirements for the Concentration (7 courses; 31.5 quarter units)		**Units:** 31.50
CYB 202	Introduction to Networking	4.50
CYB 206	Introduction to Cybersecurity ***Prerequisite:*** *CYB 204*	4.50
CYB 215	Fund of Virt and Cloud Comp* ***Prerequisite:*** *CYB 213*	4.50
CYB 451	Incident Handling/Response ** ***Prerequisite:*** *CYB 340*	4.50
CYB 453	Network Defense ***Prerequisite:*** *CYB 452*	4.50
CYB 455	Network Data Analysis ***Prerequisite:*** *CYB 453*	4.50
CYB 456	Data Analytics for Cybersec ***Prerequisite:*** *CYB 455*	4.50

* CYB 204 prerequisite is being waived for students in this concentration. ** CYB 340 prerequisite is being waived for students in this concentration.

Bachelor of Science in Electrical and Computer Engineering

Academic Program Director: Peilin Fu; pfu@nu.edu

The Electrical and Computer Engineering program involves the study of hardware, software, communications, and the interactions between them. Its curriculum focuses on the theories, principles, and practices of traditional electrical engineering and mathematics and applies them to the design of computers and computer-based devices. Electrical and Computer Engineering students study the design of digital hardware systems including communications systems, computers, and devices that contain computers. They study software development, focusing on software for digital devices and their interfaces with users and other devices. The program emphasizes a balanced approach between hardware and software, both built on an engineering and mathematics foundation. Currently, a dominant area within Electrical and Computer Engineering is embedded systems, the development of devices that have software and hardware embedded within. For example, devices such as cell phones, digital audio players, digital video recorders, alarm systems, x-ray machines, and laser surgical tools all require integration of hardware and embedded software and all are the result of computer engineering. The undergraduate program is structured to establish analytical thinking and design skills in areas such as computer architecture, digital logic design, circuits analysis, computer communication networks, digital computer control, integrated circuit engineering, project management, VLSI design, digital signal processing and embedded systems.

In support of the mission of National University, the educational objective of the Electrical and Computer Engineering is to prepare graduate to achieve success in one or more of the following with a few years after graduation.

1. Succeed in pursuing chosen career path and demonstrate technical competence in utilizing electrical and computer engineering principles and skills in industry, academia or the public sector.

2. Engage in sustained learning through graduate education, professional development and self-study in engineering and other professionally related fields.
3. Function well on a diverse and multidisciplinary team with effective communication skills.
4. Exhibit leadership, high standards of ethical conduct and societal responsibility in the practice of engineering.

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

- Identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.
- Apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.
- Communicate effectively with a range of audiences.
- Recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.
- Function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
- Develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.
- Acquire and apply new knowledge as needed, using appropriate learning strategies.

Degree Requirements:

To receive a Bachelor of Science in Electrical and Computer Engineering, students must complete at least 180 quarter units to include a minimum of 69 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 (CEE498A, CEE498B, and CEE498C), 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.

Prerequisites for the Major (8 courses; 33 quarter units)

MTH 215	College Algebra & Trigonometry ***Prerequisite:*** *MTH 12A and MTH 12B, or Accuplacer test placement evaluation*	4.50
PHS 104	Introductory Physics ***Prerequisite:*** *MTH 204, or MTH 215*	4.50
PHS 104A	Introductory Physics Lab ***Prerequisite:*** *PHS 104, or PHS 171 for Science Majors.*	1.50
CSC 208	Calculus for Comp. Science I ***Prerequisite:*** *MTH 215*	4.50
CSC 242	Intro to Programming Concepts ***Prerequisite:*** *MTH 215*	4.50
CSC 209	Calculus for Comp. Science II ***Prerequisite:*** *CSC 208*	4.50
CSC 252	Programming in C++ ***Prerequisite:*** *CSC 242*	4.50
CSC 220	Applied Probability & Stats. ***Prerequisite:*** *CSC 208, or MTH 221; EGR 220*	4.50

Requirements for the Major (24 Courses; 93 quarter units)

PHS 231	Calculus-based Physics 1 ***Prerequisite:*** *PHS 104 and MTH 220, or CSC 208 and MTH 221, or CSC 209*	4.50
PHS 232	Calculus-based Physics 2 ***Prerequisite:*** *PHS 104 and PHS 231; MTH 220, or CSC 208; MTH 221, or CSC 209*	4.50
CSC 310	Linear Algebra and Matrix Comp ***Prerequisite:*** *CSC 252, or CSC 272*	4.50
CSC 331	Discrete Structures and Logic ***Prerequisite:*** *CSC 252, or CSC 272*	4.50
CEE 300	Advanced Engineering Math ***Prerequisite:*** *CSC 209 and CSC 310*	4.50
CSC 300	Object Oriented Design ***Prerequisite:*** *CSC 252, or CSC 272*	4.50
CEE 310	Circuit Analysis ***Prerequisite:*** *CEE 300;* ***Corequisite:*** *CEE 310L*	4.50
CEE 310L	Circuit Analysis Lab ***Corequisite:*** *CEE 310*	1.50
CSC 340	Digital Logic Design ***Prerequisite:*** *CSC 331;* ***Corequisite:*** *CSC 340L*	4.50
CSC 340L	Digital Logic Design Lab ***Prerequisite:*** *CSC 331;* ***Corequisite:*** *CSC 340*	1.50
CSC 350	Computer Ethics	4.50
CSC 342	Computer Architecture ***Prerequisite:*** *CSC 340 and CSC 340L*	4.50
CEE 420	Microelectronics ***Prerequisite:*** *CEE 310;* ***Corequisite:*** *CEE 420L*	4.50
CEE 420L	Microelectronics Lab ***Corequisite:*** *CEE 420*	1.50
CSC 436	Comp. Communication Networks ***Prerequisite:*** *CSC 331*	4.50
CEE 324	Linear Systems and Signals ***Prerequisite:*** *CEE 310;* ***Corequisite:*** *CEE 324L*	4.50
CEE 324L	Linear Systems and Signals Lab ***Corequisite:*** *CEE 324*	1.50
CEE 340	Embedded Systems ***Prerequisite:*** *CSC 252 and CEE 420 and CSC 340;* ***Corequisite:*** *CEE 340L*	4.50
CEE 340L	Embedded Systems Lab ***Corequisite:*** *CEE 340*	1.50
CEE 430	Digital Signal Processing ***Prerequisite:*** *CEE 324*	4.50
CEE 440	VLSI Design ***Prerequisite:*** *CEE 420*	4.50
CEE 498A	Capstone Design Project I ***Prerequisite:*** *Complete all core courses except capstone courses OR permission by the program lead.*	4.50
CEE 498B	Capstone Design Project II ***Prerequisite:*** *CEE 498A*	4.50
CEE 498C	Capstone Design Project III ***Prerequisite:*** *CEE 498B*	4.50

Bachelor of Science in Manufacturing Design Engineering Technology

Academic Program Director: Ronald Uhlig; ruhlig@nu.edu

The Bachelor of Science in Manufacturing Design Engineering Technology 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 and manufacture of engineering products and 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 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 backgrounds, skills, and experience.

In support of the National University mission, the educational objectives of the Manufacturing Design Engineering Technology degree program are to prepare graduates to achieve success within a few years of graduation. The graduates are expected to:

1. Succeed in pursuing chosen career path and demonstrate technical competence in utilizing manufacturing design engineering technology principles and skills in industry, academia, or the public sector.

2. Engage in sustained learning through graduate education, professional development, and self-study in manufacturing design engineering technology, and other professionally related fields.

3. Function well on a diverse and multidisciplinary team with effective communication skills.

4. Exhibit leadership, high standards of ethical conduct, and societal responsibility in the practice of manufacturing design engineering technology.

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 of Science in Manufacturing Design Engineering Technology, 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 69 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.

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

MTH 215	College Algebra & Trigonometry* ***Prerequisite:*** *MTH 12A and MTH 12B, or Accuplacer test placement evaluation*	4.50
PHS 104	Introductory Physics* ***Prerequisite:*** *MTH 204, or MTH 215*	4.50
PHS 104A	Introductory Physics Lab* ***Prerequisite:*** *PHS 104, or PHS 171 for Science Majors.*	1.50
OR PHS 130A	Physics Lab for Engineering	1.50
CHE 101	Introductory Chemistry* ***Recommended Preparation:*** *MTH 204*	4.50
CHE 101A	Introductory Chemistry Lab* ***Prerequisite:*** *CHE 101, or CHE 141 for Science Majors.*	1.50
OR CHE 120A	Intro to Chemistry Lab for Eng ***Prerequisite:*** *CHE 101*	1.50
EGR 219	Intro to Graphics and Auto CAD ***Prerequisite:*** *MTH 215*	4.50
EGR 220	Engineering Mathematics ***Prerequisite:*** *MTH 215*	4.50
EGR 225	Statics & Strength of Material ***Prerequisite:*** *EGR 220*	4.50
EGR 230	Electrical Circuits & Systems ***Prerequisite:*** *MTH 215*	4.50
CSC 208	Calculus for Comp. Science I* ***Prerequisite:*** *MTH 215*	4.50
CSC 220	Applied Probability & Stats. ***Prerequisite:*** *CSC 208, or MTH 221; EGR 220*	4.50

*May be used to satisfy a general education requirement.

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

EGR 316	Legal&Ethicl Const/Engr Issues	4.50
EGR 320	Scientific Problem Solving ***Prerequisite:*** *CSC 208, or EGR 220*	4.50
EGR 320L	Scientific Problem Solving-LAB ***Prerequisite:*** *EGR 320 with a minimum grade of C. The laboratory experiments in EGR 320L build on the content covered in EGR 320 (mechanical, electrical, and thermodynamics problem solving concepts).*	1.50
DEN 308	Computer Aided Engineering I ***Prerequisite:*** *EGR 219*	4.50
EGR 310	Engineering Economics ***Prerequisite:*** *MTH 215*	4.50
DEN 411	Computer Aided Engineering II ***Prerequisite:*** *EGR 219*	4.50
DEN 417	Computer Aided Engineering IV ***Prerequisite:*** *EGR 219*	4.50
DEN 420	Computer Aided Engineering V	4.50

	Prerequisite: *EGR 219; DEN 411 with a minimum grade of C. Student must have a working knowledge of the basics of SolidWorks to be successful in DEN 420; DEN 417 with a minimum grade of C. Student must have a working knowledge of the basics of MatLab to be successful in DEN 420*	
DEN 422	Materials and Manufacturing ***Prerequisite:*** *EGR 225*	4.50
DEN 423	Human Factors in Engineering ***Prerequisite:*** *MTH 215*	4.50
DEN 426	Reliability Engineering ***Prerequisite:*** *MTH 215*	4.50
DEN 429	Product Design Optimization ***Prerequisite:*** *MTH 215*	4.50
DEN 432	Concurrent Design Engineering ***Prerequisite:*** *MTH 210, or CSC 220*	4.50
DEN 435	Design & Analysis of Experimen ***Prerequisite:*** *CSC 220; DEN 417*	4.50
EGR 440	Project Management Fundamental	4.50

Engineering Senior Project (3 courses; 13.5 quarter units)

DEN 495A	Capstone Design Project I ***Prerequisite:*** *DEN 308; DEN 417; DEN 420; DEN 423; DEN 426; DEN 429; EGR 320; EGR 320L; EGR 440 and satisfactory completion of other requirements for the major as specified by the Academic Program Director*	4.50
DEN 495B	Capstone Design Project II ***Prerequisite:*** *DEN 495A*	4.50
DEN 495C	Capstone Design Project III ***Prerequisite:*** *DEN 495B*	4.50

Bachelor of Science in Mathematics

Academic Program Director: Igor Subbotin; isubboti@nu.edu

The Bachelor of Science in Mathematics provides a strong foundation in mathematics and its applications. Designed to help address our nation's increasing need for mathematical scientists, technicians and especially teachers, the program emphasizes reflective and conceptual understanding and technique.

The program includes two concentrations: 1) Data Analytics; and 2) Subject Matter Competency.

1) Concentration in Data Analytics provides students with the fundamental mathematical knowledge to formulate and solve problems in industry and research related to data analysis. This program concentration is designed as a solid preparation for future careers in application of mathematics to computer sciences areas, especially to data sciences.

Note: As part of NU's recent partnership with Google, students in the Data Analytics concentration are encouraged to satisfy the prerequisite courses (ANA 200 and 230) by completion of the **Google Data Analytics certificate.**

2) The Subject Matter Competency Concentration was created to train mathematics teachers who want to provide quality mathematical instruction to students in secondary schools. Students who complete the BS in Mathematics program will not be required to take the California Subject Examination for Teachers (CSET) in mathematics to pursue their teaching credentials. The program emphasizes a strong foundation in mathematical content together with activities designed to help future teachers assume leadership roles in an increasingly complex educational world.

The Department of Mathematics and Natural Sciences is committed to the complete academic development of its students. Consequently, where practical, mathematics and science courses are writing-intensive and incorporate a

diversity component. Students are advised that all mathematics courses encourage critical thinking by their very nature.

The study of mathematics must encompass the discipline in its broadest sense. The future mathematician should develop in an academic environment that stresses scholarship, diversity, and growth through a rigorous and focused curriculum of advanced mathematics that incorporates problem-solving, mathematics as communication, reasoning, and mathematical connections. The Bachelor of Science in Mathematics program provides such sound preparation and training to a diverse population of nontraditional learners whose goal is to work professionally in mathematics or teach Mathematics in California public schools.

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

- Employ reasoning skills and strategies to solve mathematics problems.
- Demonstrate the use of language and symbols to communicate ideas, connections, and interplay in mathematics.
- Distinguish mathematical technology such as computers, calculators, graphing tools, video, and interactive programs relevant to the study of mathematics.
- Employ algebra and number theory as a base for a language of mathematics in research and communication.
- Demonstrate a fundamental knowledge of geometry.
- Model real-world problems with algebraic and transcendental functions.
- Use advanced statistics and probability concepts and methods.

Degree Requirements:

To receive a Bachelor of Science in Mathematics degree, students must complete at least 180 quarter units as articulated below, 45 of which must be completed in residence at National University and 76.5 of which must be completed at the upper-division level. In the absence of transfer credit, students may need to take additional general electives to satisfy total units for the degree. Refer to the section on undergraduate admission procedures for specific information regarding admission and evaluation.

Preparation for the Major (6 courses; 27 quarter units)		**Units:** 27.00
MTH 210	Probability and Statistics ***Prerequisite:*** *MTH 12A and MTH 12B, or Accuplacer test placement evaluation*	4.50
MTH 215	College Algebra & Trigonometry ***Prerequisite:*** *MTH 12A and MTH 12B, or Accuplacer test placement evaluation*	4.50
ANA 200	Intro to Data Science*	4.50
ANA 230	Intro to Data Visualization* ***Prerequisite:*** *ANA 200*	4.50
MTH 220	Calculus I ***Prerequisite:*** *MTH 215, or Accuplacer test placement*	4.50
MTH 221	Calculus II ***Prerequisite:*** *MTH 220*	4.50

*Students in the Data Analytics concentration are encouraged to satisfy the prerequisite courses ANA 200 and ANA 230 by completion of the Google Data Analytics certificate.

Requirements for the Major (12 courses; 54 quarter units)		**Units:** 54.00
MTH 322	Calculus III	4.50

	Prerequisite: *MTH 221*	
MTH 323	Calculus IV ***Prerequisite:*** *MTH 322*	4.50
MTH 311	Topics from Geometry ***Prerequisite:*** *MTH 215, or Accuplacer test placement*	4.50
MTH 325	Discrete Mathematics ***Prerequisite:*** *MTH 215*	4.50
MTH 435	Linear Algebra ***Prerequisite:*** *MTH 325*	4.50
MTH 433	Differential Equations ***Prerequisite:*** *MTH 323 and MTH 435*	4.50
MTH 411	Number Theory ***Prerequisite:*** *MTH 215; MTH 416*	4.50
MTH 416	Algebraic Structures ***Prerequisite:*** *MTH 325; MTH 435*	4.50
MTH 417	Foundations of Geometry ***Prerequisite:*** *MTH 215, or MTH 311*	4.50
MTH 330	Applied Statistical Methods ***Prerequisite:*** *MTH 210*	4.50
MTH 432	Advanced Calculus ***Prerequisite:*** *MTH 323*	4.50
MTH 412	History of Mathematics ***Prerequisite:*** *MTH 215, or MTH 301*	4.50

Upper-Division Concentration Requirements (4 courses, 18 quarter units)

Students will choose from one of the concentration areas listed below:

Concentration in Data Analytics

Academic Program Director: Igor Subbotin; isubboti@nu.edu

Concentration in Data Analytics provides students with the fundamental mathematical knowledge to formulate and solve problems in industry and research related to data analysis. This program concentration is designed as a solid preparation for future careers in the application of mathematics to computer sciences areas, especially to data sciences.

Note: As part of NU's recent partnership with Google, students in the Data Analytics concentration are encouraged to satisfy the prerequisite courses (ANA 200 and 230) by completing the **Google Data Analytics Certificate.**

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

- Apply main approaches to data visualization.
- Use main methods of acquisition, management, and preparation of data for analysis.
- Apply main mathematical and statistical models to appropriately formulate and use data analysis.

Requirements for Concentration (4 courses, 18 quarter units) **Units:** 18.00

ANA 310	Data Acquisition ***Prerequisite:*** *ANA 200 and ANA 230*	4.50
ANA 320	Data Management and Governance ***Prerequisite:*** *ANA 310*	4.50

ANA 330	Data Preparation ***Prerequisite:*** *ANA 320 and MTH 330*	4.50
MTH 450A	Mathematics Project Course ***Prerequisite:*** *Students must complete the major for a BS in Mathematics and complete an interview with the mathematics lead faculty before taking a project course. ; MTH 210; MTH 215, or MTH 220; MTH 221; MTH 322; MTH 323; MTH 311; MTH 325; MTH 435; MTH 433; MTH 411; MTH 416; MTH 417; MTH 330; MTH 432; MTH 412; ANA 200; ANA 230 and Completion of the following three courses within one concentration from either list:; ANA 310; ANA 320; ANA 330, or MTH 410; MTH 460; MTH 461*	4.50

Concentration in Subject Matter Competency

Academic Program Director: Igor Subbotin; isubboti@nu.edu

The Subject Matter Competency Concentration trains Mathematic teachers to provide quality mathematical instruction to students in secondary schools. Students who complete the BS in Mathematics program will not be required to take the California Subject Examination for Teachers (CSET) in Mathematics to pursue their teaching credentials. The program emphasizes a strong foundation in mathematical content together with activities designed to help future teachers assume leadership roles in an increasingly complex educational world.

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

- Use up-to-date computer-based technology in the mathematics classroom.
- Apply problem solving strategies to examine and analyze mathematics questions.
- Apply main methods and models of teaching mathematics.

Requirements for the Concentration (4 courses; 18 quarter units) **Units:** 18.00

MTH 410	Technology in Math Education ***Prerequisite:*** *MTH 215, or MTH 301*	4.50
MTH 460	Problem Solving Strategies ***Prerequisite:*** *MTH 416 and MTH 417*	4.50
MTH 461	Methods of Teaching Math ***Prerequisite:*** *MTH 311 and MTH 412 and MTH 210 and MTH 460*	4.50
MTH 450A	Mathematics Project Course ***Prerequisite:*** *Students must complete the major for a BS in Mathematics and complete an interview with the mathematics lead faculty before taking a project course. ; MTH 210; MTH 215, or MTH 220; MTH 221; MTH 322; MTH 323; MTH 311; MTH 325; MTH 435; MTH 433; MTH 411; MTH 416; MTH 417; MTH 330; MTH 432; MTH 412; ANA 200; ANA 230 and Completion of the following three courses within one concentration from either list:; ANA 310; ANA 320; ANA 330, or MTH 410; MTH 460; MTH 461*	4.50

Bachelor of Science in Paralegal Studies

Academic Program Director: Bryan Hance; bhance@nu.edu

The Bachelor of Science degree in Paralegal Studies is approved by the American Bar Association. The degree program is approved to be offered online, onsite, and in hybrid format at the Los Angeles, College of the Canyons, and Cerritos College campuses. Students in this program will earn certificates in three legal specializations: Corporations, Litigation, and Criminal Law. The program is designed to equip students with the professional skills needed to serve the legal community effectively and ethically as paralegals or legal assistants. It offers a

comprehensive academic curriculum and practical training in the paralegal role within a legal environment. The curriculum enables students to understand legal theory and apply it ethically in professional paralegal practice.

Program Disclosure Information

This program is not intended for students to practice law. The coursework taken in this program is not transferable to law school. Paralegals are not lawyers and are not licensed to practice law. Paralegals may not provide legal services directly to the public, except as permitted by law. Paralegals have a limited scope practice depending on the State. Please check local, state and federal laws as these restrictions vary. Students must take at least nine (9) semester credits or the equivalent of legal specialty courses through synchronous instruction to complete the program or receive a degree.

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

- Describe the American legal system and major areas of the law, such as Torts, Contracts, Property, and others, and understand the legal terminology in those areas.
- Identify legal issues and apply basic legal analysis in the context of a legal problem.
- Conduct legal research using manual and computer-assisted methods.
- Identify and apply proper legal remedies in the context of a legal problem.
- Use computers and other technology for law office and case management, document preparation, discovery, law and motion, and trial preparation.
- Demonstrate effective communication skills and the ability to convey relevant information to attorneys, clients, witnesses, and other persons.
- Demonstrate the ability to assist with preparing legal documents, and handling pre-trial and trial preparation tasks.
- Perform paralegal tasks competently in a law office, corporate law department, governmental agency, judicial setting, or other comparable legal environment.
- Integrate legal theory with the practical aspects of working as a paralegal in a law practice.
- Articulate applicable ethics laws and codes of ethical conduct.

Degree Requirements:

To receive a Bachelor of Science, paralegal degree students must complete at least 180 quarter units, 76.5 of which must be completed at the upper division level, 45 units which must be completed in residence at National University, and a minimum 69 units of the University General Education requirements. A minimum of 27 quarter units of general education coursework is required by the American Bar Association to be completed in at least three disciplines, such as social sciences, natural sciences, mathematics, humanities, foreign language, and English. The paralegal degree coursework comprises 18 legal specialty courses and one English for Professionals course as set forth below. In the absence of transfer credit, additional general electives may be necessary to satisfy the 180 quarter units for the paralegal degree. Students should refer to the section on undergraduate admission procedures for specific information on admission and evaluation.

Preparation for the Major (9 courses; 40.5 quarter units)

PLA 210	Legal Theory & Ethics	4.50
PLA 211	English for Professionals	4.50
PLA 212	Torts	4.50
PLA 213	Leg Res Writg Brfg/Analysis	4.50
PLA 214	Contracts	4.50
PLA 215	Leg Res Wrtg-Legal Memo	4.50
PLA 216	Computers and the Law	4.50
PLA 217	Property	4.50
PLA 218	Leg Res Wrtg-Persuasive Wrtg.	4.50

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

PLA 303	Law Office Administration	4.50
PLA 318	Remedies & Dispute Resolution ***Prerequisite:*** *PLA 212 and PLA 214; PLA 217*	4.50
PLA 325	Litigation I	4.50
PLA 329	Corporations I	4.50
PLA 333	Criminal Law I	4.50
PLA 426	Litigation II ***Prerequisite:*** *PLA 325*	4.50
PLA 430	Corporations II ***Prerequisite:*** *PLA 329*	4.50
PLA 434	Criminal Law II ***Prerequisite:*** *PLA 333*	4.50
PLA 495	Objective Writing Capstone ***Prerequisite:*** *All other courses required for the major (except PLA 496) must be completed prior to enrolling in this course.*	4.50
PLA 496	Persuasive Writing Capstone ***Prerequisite:*** *All other courses required for the major must be completed prior to enrolling in this course.*	4.50

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 Science in Paralegal Studies. Students can select from the following recommended electives or choose from any upper-division course in the College of Law and Public Service.

LAW 402	The Art of Negotiation	4.50
LAW 427	Demystifying AI: Law	4.50
LAW 430	Constitutional Law	4.50
LAW 440	Comparative International Law	4.50
ADR 400	Alternative Dispute Resolution	4.50
ADR 405	Negotiation Fundamentals	4.50
ADR 415	Mediation Fundamentals	4.50
ADR 430	Ethics and Neutrality	4.50

Paralegals may not provide legal services directly to the public, except as permitted by law. Students must take at least nine semester credits or the equivalent of legal specialty courses through synchronous instruction.

Paralegal Specialist Certificate - Corporations

Academic Program Director: Bryan Hance; bhance@nu.edu

The Paralegal Specialist Certificate in Corporations is approved by the American Bar Association. The certificate program is offered online, as well as onsite and in hybrid format at the Los Angeles campus. It is intended to introduce students to the legal skills required to serve the community effectively and ethically in a corporate law practice. The program provides an academic and practical education of uncompromising quality. The Corporations Specialization covers case analysis, legal research, and documents for the formation, management, and dissolution of corporate entities.

Program Disclosure Information

This program is not intended for students to practice law. The coursework taken in this program is not transferable to law school. Paralegals are not lawyers and are not licensed to practice law. Paralegals may not provide legal services directly to the public, except as permitted by law. Paralegals have a limited scope practice depending on the State. Please check local, state and federal laws as these restrictions vary. Students

must take at least nine (9) semester credits or the equivalent of legal specialty courses through synchronous instruction to complete the program or receive a degree.

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

- Discuss broad legal principles from the primary areas of law, such as Torts, Contracts, Real Property, and others, and explain the definitions of certain basic legal terms and phrases.
- Conduct legal research using manual and computer-assisted methods.
- Demonstrate the basic process of legal reasoning and analysis.
- Describe the paralegal's role in a corporate law practice.
- Recognize how broad ethical principles apply to paralegals in a corporate law practice.

Degree Requirements:

This program option requires the completion of 90 quarter units of coursework. It includes 8 courses, all of which are legal specialty courses. Please note that a minimum of 27 quarter units of general education course work (across at least three disciplines, such as social science, natural science, mathematics, humanities, foreign language, and English) are required by the American Bar Association.

All lower division general education courses must be completed at National University or another regionally-accredited institution. In the absence of transfer credit, additional general electives may be necessary to satisfy total units for the degree.

Students may earn more than one Paralegal Specialist Certificate. Generally, any course completed for any one Paralegal Specialist Certificate need not be repeated and will apply towards other Paralegal Specialist Certificates. Each certificate is tailored to include training in substantive legal analysis, drafting legal documents, and understanding procedural matters.

The Corporations Specialization covers case analysis, legal research, and documents for the formation, management, and dissolution of corporate entities. The following courses are specific certificate requirements.

Requirements for the Certificate (8 courses; 36 quarter units)

PLA 214	Contracts	4.50
PLA 213	Leg Res Writg Brfg/Analysis	4.50
PLA 215	Leg Res Wrtg-Legal Memo	4.50
PLA 216	Computers and the Law	4.50
PLA 212	Torts	4.50
PLA 217	Property	4.50
PLA 326	Legal Writing Project ***Prerequisite:*** *PLA 213; PLA 215*	4.50
PLA 331	Essentials of Corporate Law	4.50

Paralegals may not provide legal services directly to the public, except as permitted by law. Students must take at least nine semester credits or the equivalent of legal specialty courses through synchronous instruction.

Paralegal Specialist Certificate - Criminal Law

Academic Program Director: Bryan Hance; bhance@nu.edu

The Paralegal Specialist Certificate in Criminal Law is approved by the American Bar Association. The certificate program is offered online, as well as onsite and in hybrid format at the Los Angeles campus. The Paralegal Specialist Certificate in Criminal Law is intended to introduce students to the legal skills required to serve the

community effectively and ethically in a criminal law practice. The program provides an academic and practical education of uncompromising quality.

Program Disclosure Information

This program is not intended for students to practice law. The coursework taken in this program is not transferable to law school. Paralegals are not lawyers and are not licensed to practice law. Paralegals may not provide legal services directly to the public, except as permitted by law. Paralegals have a limited scope practice depending on the State. Please check local, state and federal laws as these restrictions vary. Students must take at least nine (9) semester credits or the equivalent of legal specialty courses through synchronous instruction to complete the program or receive a degree.

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

- Discuss broad legal principles from the primary areas of law, such as Torts, Contracts, Real Property, and others, and explain the definitions of certain basic legal terms and phrases.
- Conduct legal research using manual and computer-assisted methods.
- Demonstrate the basic process of legal reasoning and analysis.
- Describe the paralegal's role in a criminal law practice.
- Recognize how broad ethical principles apply to paralegals in a criminal law practice.

Degree Requirements:

Degree Requirements:

This program option requires the completion of 90 quarter units of coursework. It includes 8 courses (36 quarter units), all of which are legal specialty courses. Please note that a minimum of 27 quarter units of general education course work (across at least three disciplines, such as social science, natural science, mathematics, humanities, foreign language, and English) are required by the American Bar Association.

All lower-division general education courses must be completed at National University or another regionally-accredited institution. In the absence of transfer credit, additional general electives may be necessary to satisfy total units for the degree.

Students may earn more than one Paralegal Specialist Certificate. Generally, any course completed for any one Paralegal Specialist Certificate need not be repeated and will apply towards other Paralegal Specialist Certificates. Each certificate is tailored to include training in substantive legal analysis, drafting legal documents, and understanding procedural matters.

The Criminal Law Specialization covers case analysis, legal research, drafting pleadings, motion and discovery documents, evidence, and preparation of cases for trial. The following courses are specific certificate requirements.

Requirements for the Certificate (8 courses; 36 quarter units) 1. PLA 212 2. PLA 213 3. PLA 214 4. PLA 215 5. PLA 216 6. PLA 217 7. PLA 326 8. PLA 336 **Units:** 36.00

PLA 212	Torts	4.50
PLA 213	Leg Res Writg Brfg/Analysis	4.50
PLA 214	Contracts	4.50
PLA 215	Leg Res Wrtg-Legal Memo	4.50
PLA 216	Computers and the Law	4.50
PLA 217	Property	4.50
PLA 326	Legal Writing Project ***Prerequisite:*** *PLA 213; PLA 215*	4.50
PLA 336	Essentials of Criminal Law	4.50

Undergraduate Minors

Group Based

Minor in Business Analytics

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

Designed for students who want to enhance their major degrees with data-driven skills, analytical methods, and data-informed decision-making mindsets. Most BA/BS degrees include learning outcomes focused on collecting, organizing, analyzing, modeling, forecasting, and presenting data to support decision-making. However, not all of them provide the essential courses necessary for this. This applies to degrees in Accounting, Business Administration, Public Administration, Healthcare Administration, Criminal Justice Administration, Economics, Finance Management, Human Resource Management, Project Management, Construction Management, Logistics Management, Homeland Security Management, Cybersecurity, Marketing, Social Sciences, Interdisciplinary Studies, and more.

Coursework emphasizes cutting-edge analytics and data science, including statistical methods, data management, visualization, and data communication. No programming is required (no R, no Python), but students develop advanced analytical software skills in Excel, Solver, Tableau, Orange, and additional Excel Add-Ins.

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

- Apply the concepts and methods of business analytics to business problems.
- Evaluate data sets, data analysis methods, and data analytical tools.
- Create viable and ethical data-driven solutions to support business decision making processes.
- Effectively communicate data findings and model assumptions in written, oral, and visual formats for both technical and non-technical audiences.

Requirements for the Minor (8 courses; 36 quarter units)		**Units:**
Prerequisites for the Minor (3 courses; 13.5 quarter units)		**Units:** 13.50
MNS 205	Intro to Quantitative Methods	4.50
MTH 210	Probability and Statistics ***Prerequisite:*** *MTH 12A and MTH 12B, or Accuplacer test placement evaluation*	4.50
MNS 407	Management Science ***Prerequisite:*** *MNS 205 and MTH 210*	4.50
Core Requirements (5 courses; 22.5 quarter units)		**Units:** 22.50
BAN 300	Intro to Business Analytics ***Prerequisite:*** *MNS 205 and MTH 210*	4.50
BAN 400	Business Data Visualization ***Prerequisite:*** *BAN 300*	4.50
BAN 405	Regression and Forecasting ***Prerequisite:*** *BAN 300*	4.50
BAN 410	Data Mining for Bus Analytics ***Prerequisite:*** *BAN 300; BAN 405*	4.50
BAN 415	Mgmt Models and Simulations ***Prerequisite:*** *BAN 300; MNS 407*	4.50

Undergraduate Certificates

Group Based

Paralegal Specialist Certificate - Corporations

Academic Program Director: Bryan Hance; bhance@nu.edu

The Paralegal Specialist Certificate in Corporations is approved by the American Bar Association. The certificate program is offered online, as well as onsite and in hybrid format at the Los Angeles campus. It is intended to introduce students to the legal skills required to serve the community effectively and ethically in a corporate law practice. The program provides an academic and practical education of uncompromising quality. The Corporations Specialization covers case analysis, legal research, and documents for the formation, management, and dissolution of corporate entities.

Program Disclosure Information

This program is not intended for students to practice law. The coursework taken in this program is not transferable to law school. Paralegals are not lawyers and are not licensed to practice law. Paralegals may not provide legal services directly to the public, except as permitted by law. Paralegals have a limited scope practice depending on the State. Please check local, state and federal laws as these restrictions vary. Students must take at least nine (9) semester credits or the equivalent of legal specialty courses through synchronous instruction to complete the program or receive a degree.

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

- Discuss broad legal principles from the primary areas of law, such as Torts, Contracts, Real Property, and others, and explain the definitions of certain basic legal terms and phrases.
- Conduct legal research using manual and computer-assisted methods.
- Demonstrate the basic process of legal reasoning and analysis.
- Describe the paralegal's role in a corporate law practice.
- Recognize how broad ethical principles apply to paralegals in a corporate law practice.

Degree Requirements:

This program option requires the completion of 90 quarter units of coursework. It includes 8 courses, all of which are legal specialty courses. Please note that a minimum of 27 quarter units of general education course work (across at least three disciplines, such as social science, natural science, mathematics, humanities, foreign language, and English) are required by the American Bar Association.

All lower division general education courses must be completed at National University or another regionally-accredited institution. In the absence of transfer credit, additional general electives may be necessary to satisfy total units for the degree.

Students may earn more than one Paralegal Specialist Certificate. Generally, any course completed for any one Paralegal Specialist Certificate need not be repeated and will apply towards other Paralegal Specialist Certificates. Each certificate is tailored to include training in substantive legal analysis, drafting legal documents, and understanding procedural matters.

The Corporations Specialization covers case analysis, legal research, and documents for the formation, management, and dissolution of corporate entities. The following courses are specific certificate requirements.

Requirements for the Certificate (8 courses; 36 quarter units)

PLA 214	Contracts	4.50
PLA 213	Leg Res Writg Brfg/Analysis	4.50
PLA 215	Leg Res Wrtg-Legal Memo	4.50
PLA 216	Computers and the Law	4.50
PLA 212	Torts	4.50

PLA 217	Property	4.50
PLA 326	Legal Writing Project ***Prerequisite:*** *PLA 213; PLA 215*	4.50
PLA 331	Essentials of Corporate Law	4.50

Paralegals may not provide legal services directly to the public, except as permitted by law. Students must take at least nine semester credits or the equivalent of legal specialty courses through synchronous instruction.

Paralegal Specialist Certificate - Criminal Law

Academic Program Director: Bryan Hance; bhance@nu.edu

The Paralegal Specialist Certificate in Criminal Law is approved by the American Bar Association. The certificate program is offered online, as well as onsite and in hybrid format at the Los Angeles campus. The Paralegal Specialist Certificate in Criminal Law is intended to introduce students to the legal skills required to serve the community effectively and ethically in a criminal law practice. The program provides an academic and practical education of uncompromising quality.

Program Disclosure Information

This program is not intended for students to practice law. The coursework taken in this program is not transferable to law school. Paralegals are not lawyers and are not licensed to practice law. Paralegals may not provide legal services directly to the public, except as permitted by law. Paralegals have a limited scope practice depending on the State. Please check local, state and federal laws as these restrictions vary. Students must take at least nine (9) semester credits or the equivalent of legal specialty courses through synchronous instruction to complete the program or receive a degree.

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

- Discuss broad legal principles from the primary areas of law, such as Torts, Contracts, Real Property, and others, and explain the definitions of certain basic legal terms and phrases.
- Conduct legal research using manual and computer-assisted methods.
- Demonstrate the basic process of legal reasoning and analysis.
- Describe the paralegal's role in a criminal law practice.
- Recognize how broad ethical principles apply to paralegals in a criminal law practice.

Degree Requirements:

This program option requires the completion of 90 quarter units of coursework. It includes 8 courses (36 quarter units), all of which are legal specialty courses. Please note that a minimum of 27 quarter units of general education course work (across at least three disciplines, such as social science, natural science, mathematics, humanities, foreign language, and English) are required by the American Bar Association.

All lower division general education courses must be completed at National University or another regionally-accredited institution. In the absence of transfer credit, additional general electives may be necessary to satisfy total units for the degree.

Students may earn more than one Paralegal Specialist Certificate. Generally, any course completed for any one Paralegal Specialist Certificate need not be repeated and will apply towards other Paralegal Specialist Certificates. Each certificate is tailored to include training in substantive legal analysis, drafting legal documents, and understanding procedural matters.

The Criminal Law Specialization covers case analysis, legal research, drafting pleadings, motion and discovery documents, evidence, and preparation of cases for trial. The following courses are specific certificate requirements.

Requirements for the Certificate (8 courses; 36 quarter units)

PLA 212	Torts	4.50
PLA 213	Leg Res Writg Brfg/Analysis	4.50
PLA 214	Contracts	4.50
PLA 215	Leg Res Wrtg-Legal Memo	4.50
PLA 216	Computers and the Law	4.50
PLA 217	Property	4.50
PLA 326	Legal Writing Project ***Prerequisite:*** *PLA 213; PLA 215*	4.50
PLA 336	Essentials of Criminal Law	4.50

Paralegals may not provide legal services directly to the public, except as permitted by law. Students must take at least nine semester credits or the equivalent of legal specialty courses through synchronous instruction.

Paralegal Specialist Certificate - Legal Technology & E-Discovery

Academic Program Director: Bryan Hance; bhance@nu.edu

THIS CERTIFICATE IS CURRENTLY NOT ACCEPTING STUDENTS.

The Paralegal Specialist Certificate in Legal Technology & E-Discovery is approved by the American Bar Association. This certificate is designed to introduce students to the legal technology and e-discovery skills required to compete in today's rapidly evolving legal market. Upon completion of the program, students will have gained an understanding of and be able to evaluate and use software for a variety of purposes, including document organization, processing and management, electronic and traditional discovery, case management, billing, and word processing. Students will also learn how to use various software programs to make common tasks in a legal environment more efficient and cost effective.

Program Disclosure Information

This program is not intended for students to practice law. The coursework taken in this program is not transferable to law school. Paralegals are not lawyers and are not licensed to practice law. Paralegals may not provide legal services directly to the public, except as permitted by law. Paralegals have a limited scope practice depending on the State. Please check local, state and federal laws as these restrictions vary. Students must take at least 13.5 quarter units or the equivalent of legal specialty courses through synchronous instruction to complete the program or receive a degree.

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

- Demonstrate proficiency in a variety of software applications commonly used in law offices.
- Draft common legal documents using various software programs.
- Identify, collect, and review electronically stored information using e-discovery software.
- Select the appropriate software application for a given legal task.
- Demonstrate proficiency when using trial preparation and presentation software.
- Integrate the use of law office technology with legal ethics.

Degree Requirements:

This program option requires the completion of 90 quarter units of coursework. It includes 9 courses (40.5 quarter units), all of which are legal specialty courses. Please note that a minimum of 27 quarter units of general education course work (across at least three disciplines, such as social science, natural science, mathematics, humanities, foreign language, and English) are required by the American Bar Association.

All lower division general education courses must be completed at National University or another regionally-accredited institution. In the absence of transfer credit, additional general electives may be necessary to satisfy total units for the degree.

Students may earn more than one Paralegal Specialist Certificate. Generally, any course completed for any one Paralegal Specialist Certificate need not be repeated and will apply towards other Paralegal Specialist Certificates. Each certificate is tailored to include training in substantive legal analysis, drafting legal documents, and understanding procedural matters.

Upon completion of The Legal Technology & E-Discovery program, students will have gained an understanding of and be able to evaluate and use software for a variety of purposes, including document organization, processing and management, electronic and traditional discovery, case management, billing, and word processing.

Requirements for the Certificate (9 courses; 40.5 units)		**Units:** 40.50
PLA 212	Torts	4.50
PLA 213	Leg Res Writg Brfg/Analysis	4.50
PLA 214	Contracts	4.50
PLA 215	Leg Res Wrtg-Legal Memo	4.50
PLA 217	Property	4.50
PLA 216	Computers and the Law	4.50
PLA 326	Legal Writing Project ***Prerequisite:*** *PLA 213; PLA 215*	4.50
PLA 337	Advanced Legal Technology	4.50
PLA 338	E-Discovery	4.50

Paralegals may not provide legal services directly to the public, except as permitted by law. Students must take at least nine semester credits or the equivalent of legal specialty courses through synchronous instruction.	**Units:**

Paralegal Specialist Certificate - Litigation

Academic Program Director: Bryan Hance; bhance@nu.edu

The Paralegal Specialist Certificate in Litigation is approved by the American Bar Association. The certificate program is offered online, as well as onsite and in hybrid format at the Los Angeles campus. The Paralegal Specialist Certificate in Litigation is intended to introduce students to the legal skills required to serve the community effectively and ethically in a litigation practice. The Litigation Specialization covers case analysis, legal research, drafting pleadings, motion and discovery documents, evidence, and preparation of cases for trial. The program provides an academic and practical education of uncompromising quality.

Program Disclosure Information

This program is not intended for students to practice law. The coursework taken in this program is not transferable to law school. Paralegals are not lawyers and are not licensed to practice law. Paralegals may not provide legal services directly to the public, except as permitted by law. Paralegals have a limited scope practice depending on the State. Please check local, state and federal laws as these restrictions vary. Students must take at least nine (9) semester credits or the equivalent of legal specialty courses through synchronous instruction to complete the program or receive a degree.

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

- Discuss broad legal principles from the primary areas of law, such as Torts, Contracts, Real Property, and others, and explain the definitions of certain basic legal terms and phrases.
- Conduct legal research using manual and computer-assisted methods.
- Demonstrate the basic process of legal reasoning and analysis.
- Explain the litigation process and the paralegal's role in pre-trial, trial, and post-trial proceedings.
- Recognize how broad ethical principles apply to paralegals in a litigation practice.

Degree Requirements:

This program option requires the completion of 90 quarter units of coursework. It includes 8 courses, all of which are legal specialty courses. Please note that a minimum of 27 quarter units of general education course work (across at least three disciplines, such as social science, natural science, mathematics, humanities, foreign language, and English) are required by the American Bar Association.

All lower division general education courses must be completed at National University or another regionally-accredited institution. In the absence of transfer credit, additional general electives may be necessary to satisfy total units for the degree.

Students may earn more than one Paralegal Specialist Certificate. Generally, any course completed for any one Paralegal Specialist Certificate need not be repeated and will apply towards other Paralegal Specialist Certificates. Each certificate is tailored to include training in substantive legal analysis, drafting legal documents, and understanding procedural matters.

The Litigation Specialization covers case analysis, legal research, drafting pleadings, motion and discovery documents, evidence, and preparation of cases for trial. The following courses are specific certificate requirements.

Requirements for the Certificate (8 courses; 36 quarter units)

PLA 212	Torts	4.50
PLA 213	Leg Res Writg Brfg/Analysis	4.50
PLA 214	Contracts	4.50
PLA 215	Leg Res Wrtg-Legal Memo	4.50
PLA 216	Computers and the Law	4.50
PLA 217	Property	4.50
PLA 326	Legal Writing Project ***Prerequisite:*** *PLA 213; PLA 215*	4.50
PLA 327	Litigation Essentials	4.50

Paralegals may not provide legal services directly to the public, except as permitted by law. Students must take at least nine semester credits or the equivalent of legal specialty courses through synchronous instruction.

Graduate Degree

Group Based

Master of Arts in Counseling Psychology (California)

Academic Program Director: Monica Wilson; mwilson2@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 Faculty Advisor. The PCC pathway, or Combined MFT-PCC Option, 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. 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 an admissions advisor 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

Course Material Fees (CMF) will be used to cover access fees for our practicum management program and preparatory materials for the California licensing examination.

Program Requirements

- Students must complete a minimum of 10 hours of individual, marital, family, and group psychotherapy before taking PSY 644C and another 15 hours before graduation for a total of 25 hours.
- Students must obtain a total of 225 hours (Standard Program) 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 should consider joining the California Association of Marriage and Family Therapy and/or the American Association of Marriage and Family Therapists. Students in the Combined Option should also 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.
- **NOTE:** The courses in the online version of the program are designed to be mostly asynchronous. However, some classes require attendance at prescheduled, live meetings. In many of these meetings, students participate in live, online role-play practice of psychotherapy skills. These live, online meetings will be scheduled by the instructor. 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. The live meeting schedule is announced ahead of each course. Students are encouraged to reach out to instructors when they have any questions about the schedule.

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 (Standard Program) 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 as an LMFT and/or an LPCC.

Program Disclosure Information
The MA in Counseling Psychology degree is designed for California only, and either option may not meet requirements in other states. Students should consult the licensing boards of the appropriate states for information about licensure outside of California.

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

Live Class Session Disclosure

The courses in the online version of the program are designed to be mostly asynchronous. However, these classes require attendance at prescheduled, live meetings. In clinical courses, students participate in live, online role-play practice of psychotherapy skills. These live, online meetings are scheduled to meet twice a week on Tuesdays and Thursdays. In non-clinical coursework, students meet once a week on a Tuesday.The practicum sequence includes a required video presentation and live consultation with faculty each week. The schedule for these requirements differs by instructor and situation.The live meeting schedule is announced ahead of each course.Students are encouraged to reach out to instructors when they have any questions about the schedule.

Practicum Courses Information

Students must complete 10 consecutive months of practicum classes while placed at a practicum site. The courses are designed to serve several purposes, chief among them provide faculty multiple opportunities to monitor students' clinical development and provide direct feedback. Due to the design and intent of the practicum courses, they cannot be overlapped or skipped. Students must complete the full 10 months in class with MAC faculty.

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, including critical evaluation of the relevant methods of research used in the study of behavior and their limitations.
- Demonstrate current professional standards of ethics, values, and laws related to the practice of professional psychotherapists.
- Demonstrate cultural competence, including recognition of one’s own potential biases, intersectionality (including systems of power, privilege, and oppression), and appreciation of cultural diversity in addressing the mental health needs of people of diverse backgrounds and circumstances with an emphasis on historically underserved populations.
- Assess and diagnose psychological distress and client problems according to stated theoretical principles of conceptualization while integrating and adjusting for the client’s cultural and social identities, and physical ability.
- Establish, maintain, and evaluate the therapeutic relationship to serve the mental health needs of diverse clients.
- Develop culturally appropriate strategies, treatment plans, and interventions for work with diverse client groups in various clinical contexts and using a variety of psychotherapeutic models and modalities, including telehealth.
- Evaluate outcomes of clinical work and demonstrate an ability to integrate supervisor feedback into the student's treatment planning.
- 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 expression and sexuality, and trauma/crisis, including suicidality.

- Evaluate norms and principles of public mental health work including (but not limited to) case management, collaborative treatment, evidence-based practice, strength-based model, resiliency, trauma-informed care, and recovery-oriented care to work with clients.
- Demonstrate an understanding of the principles of practicing self-care, with particular awareness of the impact of vicarious trauma on the therapist's wellbeing, as the student develops a professional identity.
- Integrate personal and professional development through self-reflection emphasizing capacities such as self-awareness, integrity, sensitivity, flexibility, insight, compassion, imagination, personal presence, and the impact on the therapeutic relationship.

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.

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	4.50
PSY 501B	Foundations in Counseling II	4.50

Core Requirements I (7 courses; 31.5 quarter units) The following courses cannot be overlapped: PSY 644A PSY 644B PSY 612A PSY612B

Students will take classes from this sequence, then take 3 area of specialization courses, Core Course Sequence II.

PSY 605	Lifespan & Sexual Development ***Prerequisite:*** *Bachelor's Degree in Psychology , or PSY 501A and PSY 501B*	4.50
PSY 637	Cultural & Social Justice Iss. ***Prerequisite:*** *PSY 501A; PSY 501B*	4.50
PSY 610	Community Mental Health ***Prerequisite:*** *Bachelor's Degree in Psychology, or PSY 501A and PSY 501B*	4.50
PSY 644A	Therapeutic Skills & Theory A	4.50
PSY 644B	Therapeutic Skills & Theory B ***Prerequisite:*** *PSY 644A*	4.50
PSY 612A	Clinical Assessment I	4.50
PSY 612B	Clinical Assessment II ***Prerequisite:*** *PSY 612A*	4.50

Core Requirements II: MFT Coursework (3 courses; 13.5 quarter units) The following courses cannot be overlapped or taken out of order: PSY 636 PSY 632 PSY 632A

Students will take these courses between Core Sequence I and III.

PSY 636	Child and Adolescent Therapy	4.50
PSY 632	Couples Therapy & Sexuality	4.50
PSY 632A	Family Therapy	4.50

Core Requirements III (13 Courses; 45 quarter units) The following courses cannot be overlapped or taken out of order: PSY 644C PSY 681A PSY 628 PSY 681B PSY 681C PSY 681D

PSY 627	Legal & Ethical Issues	4.50
PSY 644C	Therapeutic Skills & Theory C ***Prerequisite:*** *PSY 644A; PSY 644B*	4.50
PSY 681A	Practicum A ***Prerequisite:*** *PSY 644C with a minimum grade of S. Student must pass the prerequisite.*	1.50
PSY 628	Group Therapy	4.50
PSY 681B	Practicum B ***Prerequisite:*** *PSY 681A with a minimum grade of S. Student must pass to move forward in sequence.*	1.50
PSY 646	Holistic Treatment	4.50
PSY 640A	Treatment of Addictions	4.50
PSY 681C	Practicum C ***Prerequisite:*** *PSY 681B with a minimum grade of S. Student must pass to move forward in sequence.*	1.50
PSY 679A	Found. & Trauma-Focused Care	4.50
PSY 679B	Relational & Systemic Trauma	4.50
PSY 681D	Practicum D ***Prerequisite:*** *PSY 681C with a minimum grade of S. Student must pass to move forward in sequence.*	3.00
PSY 678	Psychopharmacology	4.50
PSY 681E	Practicum E ***Prerequisite:*** *PSY 681D with a minimum grade of S. Student must pass to move forward in sequence.*	1.50

Optional Sequence IV: Combined MFT/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	4.50
PSY 624A	Testing and Assessment	4.50
PSY 645A	Career Counseling	4.50

Supplemental Coursework (2 courses; 3 quarter units) The following course cannot be overlapped or taken out of order: PSY 681E **Units:** 3.00

Courses in this sequence are not required. They may be taken upon faculty approval.

PSY 680E	Early Practicum	1.50
PSY 680S	Supplemental Practicum ***Prerequisite:*** *PSY 680E*	1.50

Master of Education in Inspired Teaching and Learning with a Preliminary Multiple or Single Subject Teaching Credential and Internship Option (CA)

Academic Program Director: Torrence Temple; ttemple@nu.edu

The Master of Education in Inspired Teaching and Learning with a Multiple or Single Subject Teaching Credential and Internship Option is designed for candidates dedicated to inspiring all K-12 learners by ensuring social-emotional thriving, meaningful academic achievement, and equitable and inclusive learning communities. Courses meet the new California Commission on Teacher Credentialing (CTC) Program Standards, including the new 45 Teaching Performance Expectations (TPEs), composing the TPEs six domains, and Teaching Performance Assessments (TPA) associated with the revised 2.0 CalTPA model. This degree meets all CTC requirements for a Preliminary Multiple or Single Subject teaching credential and those requirements for a master's degree. Students in this degree complete a three-course emphasis in one of the following areas: English Learner Equity and Academic Achievement, Inspired Teaching Practices, Social Emotional Learning or STEAM (PK-6) or STEM (7-12) Education.

***Please Note**: Students need to satisfy/pass the Subject Matter Competency Requirement early (prior to Credential Area Methods coursework) into their programs to avoid interruptions to program progress and/or financial aid arrangements.

For additional information on credential requirements, please see the Sanford College of Education Credential Information section of the catalog.

Program Disclosure Information

The Master of Education in Inspired Teaching and Learning with a Preliminary Multiple and Single Subject Teaching Credential and Intern Option program is currently operating using credential guidelines for California only. Students who wish to use this program for credential in other states must contact the appropriate regulatory board for more information.

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 the knowledge needed for engaging/supporting all K-12 learners, including those with diverse learning needs.
- Integrate the knowledge needed for creating/maintaining effective learning environments for all K-12 learners, including those with diverse learning needs.
- Integrate the knowledge needed to make subject matter comprehensible for all K-12 learners, including those with diverse learning needs.
- Integrate the knowledge needed for designing/planning learning experiences for all K-12 learners, including those with diverse learning needs.
- Integrate the knowledge needed for assessing all K-12 learners, including those with diverse learning needs.
- Integrate the knowledge needed for being a legal, ethical, and professional educator for all K-12 learners, including those with diverse learning needs.
- Reflect critically about professional beliefs and practices in the application of teaching, learning principles, and research needed to inspire K-12 learners as well as being an inspired teacher.

Degree Requirements:

To receive a Master of Education with California Inspired Teaching and Learning Preliminary Multiple Subject Teaching Credential candidates must complete at least 67.5 quarter units, or a Master of Education with California Inspired Teaching and Learning Preliminary Single Subject Teaching Credential, candidates must complete at least 67.5 quarter units. Students must complete 54 units in residence at National University. Further information on graduate admission and evaluation can be found in the Academic Information for Graduate Degrees section of the catalog.

The Subject Matter must be met prior to beginning the Multiple Subject or Single Subject Methods courses.

Each Teacher Education/credential course (ITL) includes a required 4-hour field experience in a K-12 classroom representing the candidates' credential area and a diverse student population, with the exception of the clinical practice courses.

Candidates choosing the Internship option to obtain the Preliminary Multiple or Single Subject Teaching Credential will need to meet the Internship Eligibility requirements as outlined in the Sanford College of Education Credential Information section of the catalog and specific requirements below for this program.

Credential Admissions Requirements:

Prior to enrolling into ITL604, you will be required to submit the Initial Requirements e-form providing evidence/ proof of the following:

- Proof of Fingerprint Clearance through the CTC.
- Negative Tuberculosis (TB) Results-Valid within four years Or Tuberculosis Ricak Assessment with Certificate of Completion- Valid within four years
- Subject Matter Competency attempt, registration or passage. Passage is required prior to starting the multiple or single subject credential methods courses.

Credential Recommendation Requirements

- Verification of Meeting U.S. Constitution requirement
- Multiple Subject only: Passage of Reading Instruction Competency Assessment (RICA)
- Possess a minimum of 3.0 GPA in Credential Coursework (D, F, and U grades are not accepted)
- Valid Adult, Child and Infant CPR
- Passage of CalTPA Cycles 1 and 2

Your credential recommendation request will be reviewed by National University Credential Technicians who process the application, confirm credential eligibility, and submit a recommendation to the state. You will receive an email notification to go online and pay for the credential. After payment is confirmed, you will receive e-mail confirmation from the CTC that your document has been granted. You can look up your credential document on the CTC website at: www.ctc.ca.gov

Internship Option: The Commission on Teacher Credentialing (CTC) mandates all approved intern programs provide a minimum of 120 hours of pre-service coursework prior to becoming intern eligible. Candidates can meet the 120 hours requirement through one of two pathways. Complete the foundation sequence of ITL 600, ITL 604, ITL 606, and ITL 608; meet Basic Skills; meet Subject Matter; and have a school or district letter verifying a teaching position job offer as the 'teacher of record'.

The CA Education Code stipulates a minimum of 144 hours of support and supervision must be provided to the candidate each year of intern employment and documented. Interns without a valid English Learner (EL) Authorization from CTC will be required to receive an additional 45 hours of EL preparation support each year of intern employment (Total: 189 hours).

This Internship Option requires the successful completion of the internship clinical practice experience (minimum 1 year).

The CA Commission on Teacher Credentialing requires an intern-candidate holding a valid University Internship Credential to be continuously enrolled in clinical practice support and supervision. During the first-year, the intern will take ITL 650A and ITL 551A, ITL 650B, and ITL 551B. In the event, the intern has not met all program requirements during the first year and the intern's employment continues during the second year, for National University to provide additional ongoing support and supervision, the intern will be enrolled in ITL 650C and, if needed ITL 650D. To be granted an extension for the third year of the internshipp, and if the intern is still employed, then, for those interns who can document a medical emergency or other extreme circumstance(s), one (ITL 650E) or both (ITL 650E and ITL 650F) courses may be granted through the University's petition process, with decisions considered on a case-by-case basis.

Interns in the Early Completion Option (ECO) route are still required to receive the general support and supervision provided to all interns while they are serving on an Intern credential.

Program Requirements (Multiple Subject 16 courses; 67.5 quarter units or Single Subject 16 courses; 67.5 quarter units)

Includes all foundation, credential area method courses, and those clinical practice courses granting graduate credit.

Introductory Core Requirement (1 course; 4.5 quarter units)

All students must complete ITL 600 and complete the credential packet prior to beginning ITL 604.

ITL 600	Becoming a Teacher	4.50

Foundation Core Courses (3 courses; 13.5 quarter units)

ITL 604	Learners and Learning I	4.50
ITL 606	Learners and Learning II ***Prerequisite:*** *ITL 604*	4.50
ITL 608	Design and Process of Teaching ***Prerequisite:*** *ITL 606*	4.50

All Foundation Courses meet CTC requirements for Intern Pre-Service coursework.

Multiple Subject Methods Courses (5 courses; 22.5 quarter units)

PRIOR to beginning any of the Multiple Subject Credential Area Method courses below, the candidate must successfully complete all Core courses, meet basic skills, meet subject matter, and meet any other related program requirements.

ITL 516	Mathematics Integrative Design	4.50
ITL 518	Science Integrative Design ***Prerequisite:*** *ITL 516*	4.50
ITL 510	Language-Literacy: Foundations ***Prerequisite:*** *ITL 518*	4.50
ITL 512	Language/Literacy: Strategies ***Prerequisite:*** *ITL 510*	4.50

*Upon issuance of the University Intern Credential, this course must be taken first.

ITL 530	Optimized Learning Community*	4.50

OR

Single Subject Methods Courses (5 courses; 22.5 quarter units)

PRIOR to beginning any of the Single Subject Credential Area Methods courses below, the candidate must successfully complete all Core courses, meet basic skills, meet subject matter, and meet any other related program requirements.

ITL 526	SS Integrated Design I	4.50
ITL 528	SS Integrated Design II ***Prerequisite:*** *ITL 526*	4.50
ITL 520	Academic Language & Literacy ***Prerequisite:*** *ITL 528*	4.50
ITL 522	Content Area Literacy ***Prerequisite:*** *ITL 520*	4.50

*Upon issuance of the University Intern Credential, this course must be taken first.

ITL 530	Optimized Learning Community*	4.50

AND

Clinical Practice Pathways: Student Teaching or Internship (Student Teaching—4 courses; 13.5 quarter units or Internship—4-8 courses; 13.5–31.5 quarter units)

Candidates will complete the clinical practice experience through student teaching or the internship. The clinical practice (K12 classroom) experience courses (ITL 550A, ITL 550B, ITL 650A, ITL 650B, ITL 650C, ITL 650D, ITL 650E, ITL 650F) do NOT grant graduate credit.

Student Teaching (4 courses; 13.5 quarter units)

PRIOR to beginning any of the student teaching courses below, the candidate must successfully complete all Core courses, meet basic skills and subject matter, complete all Multiple or Single Subject Credential Area Method courses, and submit a successful student teaching application. The student teaching application process must be completed at least three-months prior to the candidate's intended start of student teaching. Student teaching placements in K12 classrooms are made through a collaborative partnership of the university and respective school district. The student teaching placements must align to the CSET credential sought. Student teaching is unpaid and composed of at least 600 instructional hours (16-18 weeks of full-time student teaching) in designated K12 classrooms. Note: The two seminar courses, below, ITL 551A and ITL 551B, are 2.25 quarter units, each and will be taken concurrently with ITL 550A and ITL 550B, respectively.

ITL 550A	Student Teaching A* ***Corequisite:*** *ITL 551A*	4.50
ITL 551A	ITL Seminar A ***Corequisite:*** *ITL 550A, or ITL 650A*	2.25
ITL 550B	Student Teaching B* ***Corequisite:*** *ITL 551B;* ***Prerequisite:*** *ITL 550A*	4.50
ITL 551B	ITL Seminar B ***Prerequisite:*** *ITL 551A;* ***Corequisite:*** *ITL 550B, or ITL 650B*	2.25

or

*Does NOT grant academic credit.

Internship (4-8 courses; 13.5 – 31.5 quarter units)

PRIOR to beginning the intern courses below, the candidates must successfully complete all Core courses, meet basic skills and subject matter, and meet all CTC requirements related to the University Intern Credential. Placement in an internship occurs as a result of the candidate holding employment in an approved CA public school and in partnership with National University. Intern placements must align to the subject matter of the credential or authorization area of credential, be in compliance with the Commission on Teacher Credentialing, and with National University's requirements. Interns need to be in good standing with the employer and National University for the duration of the active University Internship Teaching Credential. The intern serves as the teacher of record in an approved K-12 classroom and is paid by the school or school district. The University Internship Teaching Credential is good for two-years and requires the candidate to be employed in the district and enrolled in National University's intern teacher credential program. As long as the candidate holds the intern credential and is employed, they have up to two-years to earn a multiple or single subject credential. For a third year as an intern, the Commission must approve an extension of the intern credential and the candidate must obtain an

approved CAS petition from National University documenting a medical emergency or other extreme circumstances necessitating an "exception to policy" and consideration on a case by case basis. If the petition is granted, the intern will be required to complete one or both courses of the following courses during the third year: ITL 650E, ITL 650F, respectively.

ITL 650A	CP Internship A: Year 1* ***Corequisite:*** *ITL 551A*	4.50
ITL 551A	ITL Seminar A ***Corequisite:*** *ITL 550A, or ITL 650A*	2.25
ITL 650B	CP Internship B: Year 1* ***Corequisite:*** *ITL 551B;* ***Prerequisite:*** *ITL 650A*	4.50
ITL 551B	ITL Seminar B ***Prerequisite:*** *ITL 551A;* ***Corequisite:*** *ITL 550B, or ITL 650B*	2.25
ITL 650C	CP Internship C: Year 2* ***Prerequisite:*** *ITL 650B*	4.50
ITL 650D	CP Internship D: Year 2* ***Prerequisite:*** *ITL 650C*	4.50
ITL 650E	CP Internship E: Year 3* ***Prerequisite:*** *ITL 650D*	4.50
ITL 650F	CP Internship F: Year 3* ***Prerequisite:*** *ITL 650E*	4.50

*Does NOT grant academic credit.

Students must also enroll in one of the following emphases.

Emphasis in STEAM (PK-6) and STEM (7-12) Education

Academic Program Director: Zhonghe Wu; zwu@nu.edu

This emphasis is intended for teacher candidates and practicing teachers. The focus is on interdisciplinary STEAM (PK-6) and STEM (7-12) education in PK-12 classrooms and how to empower interdisciplinary STEAM (PK-6) and STEM (7-12) students. Candidates select and study a topic in the interdisciplinary area of STEAM (PK-6) and STEM (7-12) education through the lens of STEAM (PK-6) and STEM (7-12) principles, standards, and programs. Candidates develop and evaluate interdisciplinary STEAM (PK-6) and STEM (7-12) teaching strategies and apply classroom practice strategies that allow students in PK-12 to become more deeply immersed in the STEAM (PK-6) and STEM (7-12) disciplines.

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

- Analyze principles, standards, and curriculum trends and challenges in interdisciplinary STEAM (PK-6) and STEM (7-12).
- Evaluate teaching strategies in interdisciplinary STEAM (PK-6) and STEM (7-12) education.
- Develop an action research proposal applying instructional strategies to improve STEAM (PK-6) and STEM (7-12) teaching and learning in PK-12 education.

Degree Requirements:

This emphasis consists of 3 courses for a total of 13.5 units.

Emphasis Requirements (3 courses; 13.5 quarter units)		**Units:** 13.50
ITI 681	Interdisciplinary STEAM/STEM	4.50

	Prerequisite: *ITL 600; ITL 604; ITL 606; ITL 608*	
ITI 683	Inst Strategies STEAM/STEM ***Prerequisite:*** *ITI 681*	4.50
ITI 685	Action Research in STEAM/STEM ***Prerequisite:*** *ITI 681; ITI 683*	4.50

Emphasis English Learner Equity and Academic Achievement

Academic Program Director: Nilsa Thorsos; nthorsos@nu.edu

The Master of Education in Inspired Teaching and Learning Preliminary Multiple and Single Subject Teaching Credential with Specialization in English Learner Equity and Academic Achievement is designed to improve the quality of education for English Learners in grades K-12 in California public schools. Candidates will gain experience, professional knowledge and skills when identifying, examining, implementing and evaluating sustained best practices for the education of English Learners in public school classrooms through content learning and course-embedded research practicum I, II & III.

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

- Assess multiple theoretical frameworks and inclusion practices based on knowledge of Identity and Equity for the improvement of the education of K-12 English Learners.
- Design culturally responsive inter-disciplinary curricular unit(s) developed to support meaningful and sustained academic achievement for English Learners (ELs) with the use of multiple measures.
- Synthesize the findings and implications from an English Learner based inquiry project designed to investigate evidence-based curricular and instructional improvements for ensuring meaningful academic achievement and social-emotional thriving of K-12 English Learners.

Specialization Requirements (3 courses; 13.5 quarter units)

ITI 660	Identity, Inclusion and Equity	4.50
ITI 662	Linguistics- Academic Language ***Prerequisite:*** *ITI 660*	4.50
ITI 664	EL Achievement in Content Area ***Prerequisite:*** *ITI 662*	4.50

Emphasis in Inspired Teaching Practices

Academic Program Director: Torrence Temple; ttemple@nu.edu

Candidates explore a blending of current educational research theory with effective classroom application. Student-centered curricular practices are created using engaging instructional strategies, applying successful classroom management techniques, and adopting appropriate assessment procedures. Candidates explore a wide variety of Information Communication Technologies (ICT) digital tools and resources to become more competent users of learning technologies in their own instructional practices.

An overarching Inquiry-Based Research Proposal will be developed and written over the three courses of this emphasis. Candidates identify a research question, complete a review of literature, and design the data collection strategies. An overview of the completed proposal will be presented in a digital format along with the written document.

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

- Develop a standards-based, engaging content and assessment plan that includes strategies to help all students succeed.
- Evaluate a variety of instructional practices that facilitate the differentiation of instruction as applied to teaching, content development, classroom management and assessment.
- Create a personal inquiry document that demonstrates the mastery of Inspired Teaching Inquiry research skills supported by digital tools.
- Employ effective ICT (Information and Communication Technologies) in a multidisciplinary unit of study.
- Design an Action Research proposal, including a research question connected to Inspired Teaching Practices.

Degree Requirements:

The emphasis Inspired Teaching Practices requires 13.5 quarter units.

Emphasis Requirements (3 Courses, 13.5 units)

ITI 691	Inspired Teaching Inquiry ***Prerequisite:*** *ITL 600; ITL 604; ITL 606*	4.50
ITI 693	Inspired Student Learning ***Prerequisite:*** *ITI 691*	4.50
ITI 695	Inspired Learning Technology ***Prerequisite:*** *ITI 693*	4.50

Emphasis in Social Emotional Learning

Academic Program Director: Maggie Broderick; mbroderick@nu.edu

The Social Emotional Learning (SEL) specialization resides in the Master of Education degree program. This emphasis provides current or future teachers with a foundation of social emotional learning theories and evidence-based practices to support the development of social emotional learning skills within classrooms. Candidates will have the opportunity to self-reflect on their own knowledge and skills and examine evidence-based strategies and interventions to support their role of a classroom teacher. Candidates will compose a full research proposal in the area of SEL to include research questions, literature review, methodology and reflection to support their work in making positive changes in their everyday practice.

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

- Evaluate social emotional learning theories and evidence-based practices.
- Self-reflect about own knowledge and skills of evidence-based practices.
- Create a full research proposal in the area of SEL to include research questions, literature review, methodology and reflection.

Degree Requirements:

The emphasis in Social Emotional Learning requires 13.5 quarter units.

Requirements for Specialization (3 courses; 13.5 quarter units)

ITI 670	Introduction to SEL ***Prerequisite:*** *ITL 600; ITL 604; ITL 606*	4.50
ITI 672	SEL in Action ***Prerequisite:*** *ITI 670 minimum standards*	4.50
ITI 674	Research in SEL ***Prerequisite:*** *ITI 672*	4.50

Master of Arts in English

Academic Program Director: Franz Potter; fpotter@nu.edu

The Master of Arts in English program provides a comprehensive graduate study program in English, including core courses in literature and a rich array of electives covering the large area of academic study under the umbrella term English. The program is ideal for teachers who desire a content M.A. beyond the credential. It is also excellent preparation for doctoral studies in English, teaching in the two-year college, or other careers requiring a high degree of literacy.

The program's core requirements include five seminars--theory, research, and three core literature courses: a literary period course, a major author course, and a theme course. Students have the opportunity to select their course content from a variety of available topics. For example, for the major author seminar, we offer courses in Chaucer, Shakespeare, Austen, Dickens, The Brontes, Edgar Allan Poe, Whitman, T.S.
Eliot, and Steinbeck, Hemingway, and James Baldwin, among others. Students are allowed four elective courses. Those wanting a deeper study of English or American literature can select additional seminars in literary periods, major authors, or themes as their electives.

Courses in creative writing, rhetoric, and film studies are also offered as electives for students with interests in those areas. Special topics courses occasionally are offered for credit. Consult the course schedule or your academic advisor for information.

Students wanting one of the optional specializations in either Rhetoric or Gothic Studies should refer to the catalog description of those specializations.

The curriculum covers major approaches to literature, including theoretical, historical, comparative, thematic, multicultural, and genre studies. The program provides students with the critical vocabulary, tools, and research ability to produce scholarship of professional quality and to participate in the ongoing scholarly discussions of issues in the field of English. In their capstone project, students write a scholarly paper to the standards of a scholarly journal of their choice, and a number of our graduates have succeeded in publishing their capstone projects.

BA English/MA English Transition Program

Students enrolled in the BA English program who have a cumulative GPA of at least 3.0 and are within six courses of completing the BA program may register for the BA English/MA English transition program. Students wishing to enroll in the transition program should contact their academic advisor.

Students in the BA English/MA English transition program may take one MA English class (4.5 quarter units), excluding ENG 697 and ENG 699, as an upper division elective for the BA English, reducing the total required number of courses for the MA English from ten to nine.

Students must apply to and begin the MA English program within six months of completing the BA English program. A complete description of Transition Program requirements can be found in the Policies and Procedures section of this Catalog.

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

- Research and apply relevant criticism in sustained analyses and interpretations of specific works of fiction, non-fiction, and poetry.
- Evaluate the relevance and validity of different theoretical approaches (e.g., historicist, biographical, etc.) to the understanding of specific works of literature.
- Engage in informed critical discussion, both oral and written, of theoretical issues pertaining to the study of literature.
- Engage in informed critical discussion, both oral and written, of the works and criticism of a specific literary period or movement.
- Participate in rigorous critiques of the scholarly works of others.
- Revise and expand a scholarly paper to submit for publication in a scholarly or literary journal.

Degree Requirements:

To receive the Master of Arts in English, students must complete at least 45 quarter units. 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 General Catalog section on graduate admission requirements for specific information regarding admission and evaluation.

Core Requirements (6 courses; 27 quarter units)

ENG 599	Intro to Grad English Studies	4.50
ENG 600	Seminar in Literary Theory	4.50
ONE course from the 620 series:		
ENG 620A	Variable Topic Literary Period	4.50
OR		
ENG 620C	Metafiction	4.50
OR		
ENG 620D	Contemporary Science Fiction	4.50
OR		
ENG 620E	Dark English Romanticism	4.50
OR		
ENG 620F	American Gothic	4.50
OR		
ENG 620G	Medieval Literature	4.50
OR		
ENG 620H	American Romanticism	4.50
OR		
ENG 620I	18th Century English Novel	4.50
OR		
ENG 620J	Sensation Novel	4.50
OR		
ENG 620K	Greatest Generation	4.50
OR		
ENG 620L	Harlem Renaissance	4.50
ONE course from the 680 series:		
ENG 680A	Variable Topic Literary Theme	4.50
OR		
ENG 680C	Literary Noir/Noir Mediascape	4.50
OR		
ENG 680D	Detective Fiction	4.50
OR		
ENG 680E	Vampires	4.50
OR		
ENG 680F	Gothic Literature	4.50
OR		
ENG 680G	The Female Gothic	4.50
OR		
ENG 680H	Gothic Prisons	4.50
OR		
ENG 680I	Modern Gothic	4.50
OR		
ENG 680J	Home in British Literature	4.50

OR		
ENG 680K	Home in American Literature	4.50
OR		
ENG 680L	Modernism	4.50
ONE course from the 690 series:		
ENG 690A	Variable Topic Major Author	4.50
OR		
ENG 690C	Jane Austen	4.50
OR		
ENG 690D	The Brontë Sisters	4.50
OR		
ENG 690E	Edgar Allan Poe	4.50
OR		
ENG 690F	William Shakespeare	4.50
OR		
ENG 690G	T. S. Eliot	4.50
OR		
ENG 690H	Walt Whitman	4.50
OR		
ENG 690I	Geoffrey Chaucer	4.50
OR		
ENG 690J	John Steinbeck	4.50
OR		
ENG 690K	Ann Radcliffe	4.50
OR		
ENG 690L	James Baldwin	4.50
OR		
ENG 690M	Virginia Woolf	4.50
ONE Capstone course:		
ENG 699	English Capstone Course	4.50
OR		
ENG 697	Capstone Project in Rhetoric ***Prerequisite:*** *ENG 655; ENG 656; ENG 657 and ENG 668A, or ENG 680A* *Topic: Literary Noir/Noir Mediascape*	4.50

Elective Requirements (4 courses; 18 quarter units)

Select four courses NOT taken to meet Core Requirements:		
ENG 620A	Variable Topic Literary Period	4.50
ENG 620C	Metafiction	4.50
ENG 620D	Contemporary Science Fiction	4.50
ENG 620E	Dark English Romanticism	4.50
ENG 620F	American Gothic	4.50
ENG 620G	Medieval Literature	4.50
ENG 620H	American Romanticism	4.50
ENG 620I	18th Century English Novel	4.50
ENG 620J	Sensation Novel	4.50
ENG 620K	Greatest Generation	4.50
ENG 620L	Harlem Renaissance	4.50
ENG 625	Seminar in Creative Nonfiction	4.50
ENG 635	Seminar in Fiction	4.50

ENG 640	Seminar in Poetry	4.50
ENG 645	Seminar in Poetry	4.50
ENG 655	Composition Pedagogy	4.50
ENG 656	History of Rhetoric	4.50
ENG 657	Modern Rhetoric	4.50
ENG 665	Film Theory	4.50
ENG 666	Silent Film	4.50
ENG 667	American Film History	4.50
ENG 668A	Variable Topic Film Genre Stud	4.50
ENG 668C	Science Fiction Film	4.50
ENG 668D	Horror Film	4.50
ENG 668E	The Musical	4.50
ENG 668F	Animation	4.50
ENG 669	World Film	4.50
ENG 680A	Variable Topic Literary Theme	4.50
ENG 680C	Literary Noir/Noir Mediascape	4.50
ENG 680D	Detective Fiction	4.50
ENG 680E	Vampires	4.50
ENG 680F	Gothic Literature	4.50
ENG 680G	The Female Gothic	4.50
ENG 680H	Gothic Prisons	4.50
ENG 680I	Modern Gothic	4.50
ENG 680J	Home in British Literature	4.50
ENG 680K	Home in American Literature	4.50
ENG 685	American Directors	4.50
ENG 686	International Directors	4.50
ENG 690A	Variable Topic Major Author	4.50
ENG 690C	Jane Austen	4.50
ENG 690D	The Brontë Sisters	4.50
ENG 690E	Edgar Allan Poe	4.50
ENG 690F	William Shakespeare	4.50
ENG 690G	T. S. Eliot	4.50
ENG 690H	Walt Whitman	4.50
ENG 690I	Geoffrey Chaucer	4.50
ENG 690J	John Steinbeck	4.50
ENG 690K	Ann Radcliffe	4.50
ENG 690L	James Baldwin	4.50
ENG 690M	Virginia Woolf	4.50

Specialization in Gothic Studies

Academic Program Director: Franz Potter; fpotter@nu.edu

The Master of Arts in English with a Specialization in Gothic Studies provides a balanced and comprehensive program of graduate study in literature as well as a rigorous examination of the historical, theoretical, and critical reception of the Gothic from its origins in the eighteenth century through to a range of contemporary works in both literature and film. The program is appropriate for students seeking preparation for doctoral study or college-level teaching in English and related fields or general cultural enrichment.

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

- Research relevant criticism in sustained analyses and interpretations of specific works of fiction, non-fiction, and poetry.
- Evaluate the relevance and validity of different theoretical approaches (e.g., historicist, biographical, etc.) to the understanding of specific texts.
- Compare informed critical discussions of theoretical issues pertaining to textual analysis.
- Synthesize current theory and practice in the study of Gothic literature.
- Evaluate the complexities of canon formation.
- Assess informed critical discussions, both oral and of the works and criticism of the Gothic literary period and movement.

Degree Requirements:

Specialization Requirements (4 courses; 18 quarter units)

Choose FOUR from the following:

ENG 620E	Dark English Romanticism	4.50
ENG 620F	American Gothic	4.50
ENG 620J	Sensation Novel	4.50
ENG 640	Seminar in Poetry	4.50
ENG 668D	Horror Film	4.50
ENG 680E	Vampires	4.50
ENG 680F	Gothic Literature	4.50
ENG 680G	The Female Gothic	4.50
ENG 680H	Gothic Prisons	4.50
ENG 680I	Modern Gothic	4.50
ENG 690D	The Brontë Sisters	4.50
ENG 690E	Edgar Allan Poe	4.50
ENG 690K	Ann Radcliffe	4.50
ENG 620A	Variable Topic Literary Period	4.50
ENG 668A	Variable Topic Film Genre Stud	4.50
ENG 680A	Variable Topic Literary Theme	4.50
ENG 690A	Variable Topic Major Author	4.50

Specialization in Rhetoric

Academic Program Director: Christine Photinos; cphotinos@nu.edu

The Master of Arts in English with a Specialization in Rhetoric provides a program of graduate study in literature as well as a wide range of cultural productions, from classical oration to contemporary cinema, with particular attention paid to how language and image are used to produce various effects and meanings. Students study literary texts and other cultural artifacts across a variety of media forms, developing readings that are grounded in contextual understanding. They complete course work in literary studies, classical and modern rhetoric, composition pedagogy, media studies, and film studies. The prescribed curriculum contains several variable-topic courses, allowing students to pursue broad program goals in topic areas matched to their individual interests. The program is appropriate for students seeking preparation for doctoral study or college-level teaching in English and related fields, or general cultural enrichment.

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

- Produce sustained textual analyses and interpretations that are informed by relevant published criticism.
- Evaluate the relevance and validity of different theoretical approaches to the understanding of specific texts.
- Produce rigorous critiques of the scholarly works of others.

- Interrogate and synthesize key theories and practices within Composition Studies.
- Analyze how language and image are used to produce various effects and meanings across a variety of media forms.
- Produce a work of rhetorical criticism suitable for publication in a scholarly journal.

Degree Requirements:

Specialization Requirements (4 courses; 18 quarter units)

ENG 655	Composition Pedagogy	4.50
ENG 656	History of Rhetoric	4.50
ENG 657	Modern Rhetoric	4.50
Choose ONE of the following:		
ENG 668A	Variable Topic Film Genre Stud	4.50
OR		
ENG 668C	Science Fiction Film	4.50
OR		
ENG 668D	Horror Film	4.50
OR		
ENG 668E	The Musical	4.50
OR		
ENG 668F	Animation	4.50
OR		
ENG 680C	Literary Noir/Noir Mediascape	4.50

Master of Arts in Social Emotional Learning

Academic Program Director: Maggie Broderick; mbroderick@nu.edu

Master of Arts in Social Emotional Learning (SEL) is intended to be a catalyst for transformational change in school communities. SEL impacts ALL students and educators everywhere every day. This program will equip the educator with research-based knowledge and skills in self-care, cognition, trauma and the ability to create healthy environments and relationships that are culturally responsive, equitable and supportive for the whole child. A deep dive into personal identity, culture, leadership, community and programs will provide a SEL foundation where a positive school climate thrives.

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

- Conduct and complete an action research project based on SEL research, theory and practice that will create inclusive environments for the whole child.
- Evaluate the impact of SEL competencies on student success metrics at the various developmental levels.
- Distinguish the intersectionality between SEL, equity, cognition, and cultural responsiveness in educational communities.
- Examine SEL communities, frameworks, programs and policies.
- Develop SEL leadership skills to support teachers, administrators, and families in transforming school culture and climate.

Degree Requirements:

To receive a Master of Social Emotional Learning students must complete 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 if the units were not used in earning another advanced degree and provided the coursework was completed within the past 7 years.

Transfer Credits

Students who complete the Master of Arts in Social Emotional Learning program and enroll in the Doctor of Education with a specialization in Social Emotional Learning can transfer up to 6 semester credit hours toward the degree requirements. The following equivalences would be applied in satisfying these degree requirements.

- SEL600 SEL Education Communities will transfer for SEL-7100 Foundations of SEL
- SEL630 SEL Strategies will transfer for SEL-7200 Implementing SEL in the Modern Classroom

Students who complete the Master of Arts in Social Emotional Learning program and enroll in the Doctor of Education with a specialization in Trauma-informed Education Practices can transfer up to 6 semester credit hours toward the degree requirements. The following equivalences would be applied in satisfying these degree requirements.

- SEL625 Trauma in Education will transfer for TRA-7100 Foundations of SEL
- SEL635 Leadership and SEL in Context will transfer for TRA-7300 Integrating SEL into School Culture and Climate

Students must pass the courses with a B or better grade to receive transfer credit.

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

SEL 600	SEL Education Communities	4.50
SEL 605	Identity and Culture ***Prerequisite:*** *SEL 600*	4.50
SEL 610	Cognition and Emotion ***Prerequisite:*** *SEL 605*	4.50
SEL 615	SEL Action Research Methods ***Prerequisite:*** *SEL 610*	4.50
SEL 620	SEL Frameworks ***Prerequisite:*** *SEL 615*	4.50
SEL 625	Trauma in Education ***Prerequisite:*** *SEL 620*	4.50
SEL 630	SEL Strategies ***Prerequisite:*** *SEL 625*	4.50
SEL 635	Leadership and SEL in Context ***Prerequisite:*** *SEL 630*	4.50
SEL 640	SEL and Assessment ***Prerequisite:*** *SEL 635*	4.50
SEL 680	SEL Capstone ***Prerequisite:*** *SEL 600 SEL 605, SEL 610, SEL 615, SEL 620, SEL 625, SEL 630, SEL 635, & SEL 640*	4.50

Master of Arts in Sport and Performance Psychology Specialization in Applied Mental Performance

Academic Program Director: Doug Barba; dbarba@nu.edu

The Master of Arts in Sport and Performance Psychology with Specialization in Applied Mental Performance program (MASPPAMP) provides rigorous training to facilitate students' growth in becoming knowledgeable, effective mental performance practitioners and professionals. Experiential training is guided by theory, evidence-based practice, ethical, and professional standards. Students who complete this unique program can integrate the core elements of assessment, counseling skills, research methods, performance enhancement, and multicultural

humility while developing their philosophy of practice across the disciplines of sport and performance psychology, business, coaching, counseling, fine arts, combat, military psychology, and sport sciences.

Following the completion of the first ten courses in the program, all students must pass the Comprehensive Written Exam (CWE). Following the successful completion of the first ten courses and passing the CWE, students will move on to the specialization requirements.

Students taking the Applied Mental Performance specialization will complete eleven additional courses, including extensive mentored training, a comprehensive exit exam, and the culminating 2-month Applied Project. The Applied Mental Performance specialization is designed to meet the academic requirements and mentored experience hours (minimum 200 direct client contact hours) for the CMPC certification (administered by AASP - Association for Applied Sport Psychology), enabling students to complete the 72-quarter unit program in 22 months.

Online Class Attendance Disclosure:

The courses in this program are designed to be mostly asynchronous. However, some classes will also require attendance at pre-scheduled, live meetings. In these courses, students participate in live class meetings with faculty and fellow students which will consist of lectures; discussions around course content such as readings, assignments, and/or best practices/trends in the field; and online role-play practice of assessment techniques, counseling skills, and performance enhancement interventions. These live online meetings are scheduled to meet twice for each 4-week course that requires the synchronous component. In the mentored applied training coursework, students meet once per week for Group Supervision, generally on a Wednesday, for the duration of internship training. Additionally, while completing internships, students will meet online weekly with their assigned individual supervisor. The schedule for these requirements differs by instructor/supervisor and course. The live meeting schedule is announced ahead of each course. Students are encouraged to reach out to instructors when they have any questions about the schedule.

Bachelor of Arts in Sport Psychology to Master of Arts in Sport and Performance Psychology Transition Program

The BA in Sport Psychology (BASP) to MA in Sport and Performance Psychology (MASPP) program allows students who are enrolled in the BASP with a cumulative grade point average of at least 3.0 and who are within completing their last six courses to register for three courses in the MASPP program as electives for the bachelor's degree. Students may take the following courses: PSY 602, PSY 607A, and PSY 644. The three graduate courses are restricted to those that do not require a prerequisite. Students must complete all transition program coursework with a grade of B or better. Students must enroll in and complete the first class in the Master's degree within six months of the conferral date of their undergraduate degree. Further rules and requirements for Transition programs are located in the university catalog.

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

- Describe, explain, synthesize, apply, and critique theoretical perspectives from Sport and Performance Psychology and related fields whilst demonstrating continuous development of their philosophy of practice to inform their work.
- Describe and explain potential sources of bias within themselves and clients, in addition, to synthesizing, applying, and critiquing concepts whilst adapting their skills to promote inclusive practice with a diverse range of populations, with an emphasis on continuing education.
- Describe, explain, synthesize, apply, and critique professional ethical standards in a culturally appropriate manner whilst utilizing decision-making principles in relation to ethical considerations.
- Describe, explain, synthesize, apply, and critique various assessment tools whilst identifying potential clinical concerns and applying referral procedures appropriately in a continuous and evolving process to create effective action plans.
- Describe, explain, synthesize, apply, and critique counseling skills to develop a working relationship with clients whilst demonstrating awareness and subsequent action of how the self may impact the client-consultant relationship.
- Describe, explain, synthesize, apply, and critique performance enhancement skills with individuals and teams.

- Describe, explain, synthesize, apply, and critique established and current research from Sport and Performance Psychology and related fields whilst demonstrating continuous development of their philosophy of practice to inform their work.

Degree Requirements: To receive the Master of Arts in Sport and Performance Psychology with a Specialization in Applied Mental Performance, students must complete a minimum of 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. Students should refer to the section on graduate admission requirements for specific information regarding application and evaluation.
Total Degree Requirements (72 quarter units)
Core Requirements (11 courses; 45 quarter units)

PSY 98 is a no-credit course.

PSY 602	Sport/Performance Psychology	4.50
PSY 607A	Ethics Sport & Perform Psych	4.50
PSY 644	Performance Enhancement	4.50
PSY 614A	Counseling in Sprt & Perf Psy	4.50
PSY 647	Assessment Strategies	4.50
PSY 656	Mindful Performance	4.50
PSY 657	Leadership & Team Building	4.50
PSY 648	Research Methods	4.50
PSY 637B	Multicul Iss Sprt/Prfrm Consul	4.50
PSY 649	Counseling Skills	4.50
PSY 98	Benchmark Written Exam ***Prerequisite:*** *PSY 602; PSY 644; PSY 648; PSY 647; PSY 649; PSY 656; PSY 607A; PSY 637B; PSY 614A*	0.00

Specialization in Applied Mental Performance

Status: *Historical-Review all addendums*
Academic Program Director: Doug Barba; dbarba@nu.edu

Students taking the Applied Mental Performance Specialization will complete six courses, including extensive mentored training, a comprehensive oral exam, and the culminating 2-month Applied Project. The Applied Mental Performance Specialization is designed to meet the academic requirements and mentored experience hours (minimum 200 direct client contact hours) for the CMPC certification (administered by AASP - Association for Applied Sport Psychology).

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

- Describe, explain, synthesize, apply, and critique theoretical perspectives from Sport and Performance Psychology and related fields whilst demonstrating continuous development of their philosophy of practice to inform their work.
- Describe, explain, synthesize, apply, and critique professional ethical standards in a culturally appropriate manner whilst utilizing decision-making principles in relation to ethical considerations.
- Describe and explain potential sources of bias within themselves and clients, in addition, to synthesizing, applying, and critiquing concepts whilst adapting their skills to promote inclusive practice with a diverse range of populations, with an emphasis on continuing education.

- Describe, explain, synthesize, apply, and critique various assessment tools whilst identifying potential clinical concerns and applying referral procedures appropriately in a continuous and evolving process to create effective action plans.
- Describe, explain, synthesize, apply, and critique counseling skills to develop a working relationship with clients whilst demonstrating awareness and subsequent action of how the self may impact the client-consultant relationship.
- Describe, explain, synthesize, apply, and critique performance enhancement skills with individuals and teams.
- Describe, explain, synthesize, apply, and critique established and current research from Sport and Performance Psychology and related fields whilst demonstrating continuous development of their philosophy of practice to inform their work.

Specialization Requirements (11 courses; 27 quarter units) **Units:** 27.00

PSY 659A	Mentored Appl Training Exp A	1.50
PSY 682	Adv Performance Enhancement ***Prerequisite:*** *PSY 644*	4.50
PSY 659B	Mentored Applied Training Exp ***Prerequisite:*** *PSY 659A*	1.50
PSY 658	Psychopathology Assessment	4.50
PSY 659C	Mentored Appl Training Exp C ***Prerequisite:*** *PSY 659B*	1.50
PSY 684	Advanced Sport Psychology ***Prerequisite:*** *PSY 602*	4.50
PSY 659D	Mentored Appl Training Exp D ***Prerequisite:*** *PSY 659C*	1.50
PSY 685	Applied Project ***Prerequisite:*** *PSY 657; PSY 682; PSY 658; PSY 684*	4.50
PSY 659E	Mentored Appl Training Exp E ***Prerequisite:*** *PSY 659D*	1.50
PSY 659F	Mentored Appl Training Exp F ***Prerequisite:*** *PSY 659E*	1.50
PSY 99	Comprehensive Exit Exam *Historical-Review all addendums* ***Prerequisite:*** *PSY 685*	0.00

Optional Elective (1 course: 4.5 quarter units) **Units:** 4.50

Students who wish to expand their knowledge of Motor Behavior should also enroll in the following course.

PSY 606	Motor Behavior	4.50

Master of Arts in Strategic Communications

Academic Program Director: Federica Fornaciari; ffornaciari@nu.edu

The Master of Arts in Strategic Communications (MASC) is designed to equip students with the skills and insights necessary for high-impact careers in a wide range of sectors. This program offers a comprehensive, real-world approach to strategic communication, preparing graduates for pivotal roles in today's dynamic and interconnected global marketplace. Through a blend of theoretical foundations and hands-on practice, students gain expertise in crafting, managing, and assessing strategic communication initiatives that help organizations reach their goals and thrive amidst uncertainty.

Each course in the MASC program builds a robust foundation for employability by cultivating essential skills, including adaptability, crisis management, leadership, emotional intelligence, advanced communication, problem-solving, research, and teamwork. This skill set aligns directly with industry demands, making graduates employable in competitive fields.

Upon graduation, students are prepared for diverse roles such as Public Relations Specialist, Public Relations Manager, and Media and Communication Specialist, where they can influence public perception, drive brand messaging, and oversee communication strategies across sectors. With training in audience analysis, persuasive communication, and cross-cultural campaign management, graduates are also well-suited for leadership positions such as Fundraising Manager and Advertising and Promotions Manager—where strategic communication is key to advancing organizational goals.

The MASC curriculum equips students with professional-level writing and presentation skills, advanced analytical tools to assess organizational needs, and the practical expertise to conduct audience analysis and design targeted communication strategies. With a strong emphasis on ethics, students learn to develop and implement impactful communication initiatives across traditional and emerging channels, including social networks, blogs, podcasts, innovative media, and generative AI tools. This unique blend of knowledge, hands-on experience, and ethical insight ensures that graduates are well-prepared to thrive in high-demand roles in the communication field, where they can drive meaningful and responsible change.

This degree requires that students be able to write in English at an advanced level. If writing skills need improvement, the student may be required to enroll in a writing course before continuing in the program. Applicants for whom English is a second language are encouraged to take the Accuplacer English as a Second Language Placement Test.

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

- Produce multi-public, multi-channel communication campaign planning documents.
- Manage communication campaigns by producing budgets, task lists, and schedules.
- Apply formative research to develop communication campaigns and messages.
- Create persuasive campaigns that meet professional ethical standards.
- Evaluate communication campaigns by conducting summative research.
- Deliver professional communication presentations online.
- Demonstrate leadership and collaborative skills by participating in group tasks and presentations as leader and team member.

Degree Requirements:

To receive a Master of Arts in Strategic Communications, students must complete at least 45 quarter units of graduate work, of which a minimum of 40.5 quarter units must be taken in residence at National University. Students can transfer up to 4.5 quarter units at the graduate level from a regionally accredited institution in the areas of communication or business, provided the units have not been used to satisfy the requirements of an awarded degree. Students wishing to transfer credits into the program should contact the program faculty advisor. Refer to the graduate admission requirements section for additional specific information regarding application and matriculation.

Core Requirements (10 courses; 45 quarter units)

COM 600	Comm in Global Environment	4.50
COM 603	Emerging Interactive Media	4.50
COM 610	Integrated Marketing Comm	4.50
COM 615	Applied Research Methods	4.50
COM 620	Crisis Communications	4.50
COM 625	Campaign & Program Management	4.50
COM 630	Campaign & Program Evaluation ***Prerequisite:*** *COM 610, or COM 625*	4.50
COM 640	Persuasion	4.50
COM 650	Legal and Ethical Issues	4.50
COM 660	Capstone Project	4.50

Master of Science in Applied Behavioral Analysis

Academic Program Director: Faheema Abdool-Ghany; fabdoolghany@nu.edu

The Master of Science in Applied Behavioral program prepares students with the course work required for understanding the role of an applied behavior analyst. The curriculum includes a 10 course sequence, of which 8 courses are verified by the Behavior Analyst Certification Board. This course work along with the additional 2000 hours of approved supervision allows a student to be eligible to sit for the BCBA exam. Behavior analysts provide services to individuals, families, group homes, schools, mental health agencies, hospitals, industrial and business settings, and other agencies working with individuals who require intensive behavioral training and/or consultation. This program is designed to prepare candidates for acceptable behavior management techniques and strategies to be used in a wide range of settings. Students will be required to develop, implement, analyze, and evaluate, behaviorally accepted methods for positive behavior change across various environments. Information about becoming certified through the BACB can be found at www.bacb.com.

Program Disclosure

National University MS ABA program currently only satisfies the educational/coursework component for this certification. In addition to the educational requirements, graduates of this program will need to also meet additional requirements established by the BCBA® including supervised field experiences, applications, examinations, and background checks to become certified.

Some states and/or territories require applicants to also obtain the Licensed Behavior Analyst (LBA) credential, to practice in that state, which could include additional requirements. It is strongly recommended that the applicant contact their state board of Psychology or the issuing governing board of the LBA for more information.

BCBA Exam Prep Platform

Students in the ABA program are required to utilize an exam preparation platform to develop critical skills aligned with key program learning outcomes. Please see the Tuition and Fees section of the catalog for associated fees.

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

- Understand key principles of behavior analysis, including terminology and foundational concepts.
- Apply behavior analytic techniques to design and implement effective interventions for behavior change.
- Develop behavior change programs that incorporate individualized strategies, data collection methods, and measurement systems.
- Assess the ethical considerations involved in behavior analysis practices, including client rights and professional conduct.
- Integrate knowledge and skill in the identification of the function of the behavior and the development of an intervention.
- Collaborate effectively with interdisciplinary teams, including educators, psychologists, and healthcare professionals, to achieve behavior change goals.

Degree Requirements:

To receive a Master of Science in Applied Behavior Analysis, 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. To effectively transfer units to this degree, the transferable units were not previously used in earning another advanced degree. In addition, the coursework was completed within the past 7 years. Course equivalence cannot be granted for life experience. Please refer to the graduate information section of the University catalog for admission and evaluation.

Transfer Credit

Students who complete the Master of Science in Applied Behavior Analysis program and enroll in the Doctor of Education or the Doctor of Philosophy in Education, with a specialization in Leadership in Curriculum and Teaching, Special Education, or General Education, the Doctor of Education or the

Doctor of Philosophy in Educational and Organizational Leadership can transfer up to 6 semester credit hours toward the degree requirements. The following equivalences would be applied to satisfying these degree requirements.

General Education

- ABA634 Supervision and Management will transfer as EDL-9100 Leadership for Diversity, Equity, Inclusion, and Social Justice
- ABA626 Functional Behavioral Assessment will transfer as EDL-9400 PK-12 Curriculum, Instruction, and Assessment

Leadership in Curriculum and Teaching

- ABA620 Philosophical underpinning ABA will transfer for LCT-7100 Dispositions of Learner and Teacher
- ABA634 Supervision and Management will transfer as EDL-9100 Leadership for Diversity, Equity, Inclusion, and Social Justice

Special Education

- ABA624 Measurement and Design will transfer as SE-7200 Analyzing Data and Monitoring Student Progress
- ABA628 Behavioral Change Procedures will transfer as SE-7400 Implementing Programs for Students with Intellectual and Learning Disabilities
- ABA630 Developing ABA Interventions will transfer as SE-7500 Implementing Programs for Students with Emotional and Behavioral Disorders

Doctor of Education or Doctor of Philosophy in Educational and Organizational Leadership

- ABA634 Supervision and Management will transfer as EDL-9100 Leadership for Diversity, Equity, Inclusion, and Social Justice
- ABA626 Functional Behavioral Assessment will transfer as EDL-9400 PK-12 Curriculum, Instruction, and Assessment

Students must pass the courses with a B or better grade to receive transfer credit.

Program Requirements (10 courses; 45 quarter units)

ABA 620	Philosophical Underpinning ABA	4.50
ABA 622	Concepts and Principles of ABA ***Prerequisite:*** *ABA 620*	4.50
ABA 624	Measurement and Design ***Prerequisite:*** *ABA 622*	4.50
ABA 626	Functional Behavior Assessment ***Prerequisite:*** *ABA 624*	4.50
ABA 628	Behavioral Change Procedures ***Prerequisite:*** *ABA 626*	4.50
ABA 630	Developing ABA Interventions ***Prerequisite:*** *ABA 628*	4.50
ABA 632	Ethics Compliance Code ***Prerequisite:*** *ABA 630*	4.50
ABA 634	Supervision and Management ***Prerequisite:*** *ABA 632*	4.50
ABA 636	Application of ABA Skills ***Prerequisite:*** *ABA 634*	4.50

ABA 670	ABA Capstone Project ***Prerequisite:*** *ABA 636*	4.50

Master of Science in Computer Science

Academic Program Director: Mudasser Wyne; 858 309 3433 mwyne@nu.edu

The Master of Science in Computer Science (MSCS) degree program at National University provides students with a solid foundation in advanced programming, operating systems, computer security, user interface design, software engineering, and database design and implementation. The program exposes students to best practice methodologies using a variety of tools and techniques required for solving real-world problems.

National University's computer science students are taught to put theory into practice thus preparing them for the fast-growing, rapidly evolving opportunities in the field. MSCS students will complete a three-course capstone project in which they apply what they have learned to solve some of the current technological problems facing society today. In addition, graduates are prepared to clearly discuss issues, trends, and solutions with both technical and non-technical audiences. Every part of the curriculum is devoted to developing required communication skills, ethics, and standards of professionalism.

The Master of Science in Computer Science (MSCS) curriculum is designed for professionals currently working in business, government, or industry who want to advance their careers. People without a previous computer science degree who want to prepare for a career as a working computer science professional can meet with an advisor to discuss pathways into the program. National University's approach prepares graduates to immediately become highly productive members of a real-world computing team.

Integration
Three master's project classes provide an integrating mechanism for acquiring realistic experience through building a computationally complex project. It is a three-month project solving a real problem for a real client against a time deadline using all available tools and resources as students work together in teams. This component addresses the need to integrate a broad range of technologies and skills. Students are given the opportunity to crystallize the ideas learned earlier and to implement comprehensive systems across an organization.

Career Tracks
In the MSCS program, graduates are proficient in analytical and critical thinking skills, have a sense of professionalism, and are instilled with a strong set of values essential for success in computer science. This program reflects current and future industry needs, and graduates are trained and prepared to assume a leadership role in the field.

Admission Requirements

Candidates seeking admission to the program should possess a baccalaureate degree in Computer Science (CS), Computer Engineering (CE), Software Engineering (SE), or Information Systems (IS). Students from other undergraduate majors can fulfill the program prerequisites either by taking CSC242, CSC252 and CSC262 or by demonstrating proficiency through additional equivalent coursework or taking a course challenge exam for CSC 242, CSC252 and CSC262 before starting MSCS program.

MSCS Transition Program

Students must complete their MSCS program within four years with no break exceeding 12 months. Students may choose up to two (2) courses from the following course list: CSC 603 and CSC 605. The number of courses required to earn an MSCS degree for transition program students will be reduced from 13 to as few as 11, depending on the number of graduate classes completed within the BSCS with a grade of B or better.

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

- Create software requirements specifications, design and develop complex software systems.
- Evaluate computer security vulnerabilities, threats, and counter measures that are effective and ethical.

- Design and develop database solutions by translating given application requirements into sound database design and implementation.
- Analyze and design complex front-end applications and integrate them with backend databases.
- Compare and contrast computing concepts and systems.
- Demonstrate ability to conduct in-depth research, both individually as well as in teams, in a specific computer science area.
- Demonstrate critical thinking and ability to analyze computer science concepts.

Degree Requirements:

To receive a Master of Science in Computer Science, students must complete 58.5 quarter units of graduate coursework. A total of 13.5 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. The degree program consists of ten courses and a three-part MSCS graduate project (three courses, 4.5 quarter units each) that cannot be taken until CSC605, CSC607, CSC670 and CSC680 courses have been completed.

It is important to note that capstone course sequence CSC686, CSC687 and CSC688 needs to be taken in the consecutive months. In case a student is not able to complete this course sequence in consecutive months, they will be required to start with the CSC686 course in the future, whenever this course sequence is offered.

Program Prerequisites (3 courses; 13.5 quarter units)

Candidates seeking admission to the program should possess a baccalaureate degree in Computer Science (CS), Computer Engineering (CE), Software Engineering (SE), or Information Systems (IS). Students from other undergraduate majors can fulfill the program prerequisites either by taking CSC242, CSC252 and CSC262 courses or by demonstrating proficiency through additional equivalent coursework or taking a course challenge exam for CSC 242, CSC252 and CSC262 before starting MSCS program.

CSC 242	Intro to Programming Concepts ***Prerequisite:*** *MTH 215*	4.50
CSC 252	Programming in C++ ***Prerequisite:*** *CSC 242*	4.50
CSC 262	Programming in JAVA ***Prerequisite:*** *MTH 215*	4.50

Core Requirements (13 courses; 58.5 quarter units)

It is important to note that capstone course sequence CSC686, CSC687 and CSC688 needs to be taken in the consecutive months.

CSC 600	Advanced Programming ***Prerequisite:*** *CSC 242 and CSC 252 and CSC 262; Students with a baccalaureate degree in Computer Science (CS), Computer Engineering (CE), Software Engineering (SE), or Information Systems (IS) do not need these prerequisites.*	4.50
CSC 603	Software Eng Fundamentals	4.50
CSC 605	Software Architecture Principl ***Prerequisite:*** *CSC 603*	4.50
CSC 606	Modern Operating Systems ***Prerequisite:*** *CSC 600*	4.50
CSC 607	Security in Computing ***Prerequisite:*** *CSC 606*	4.50
CSC 670	User Interface Engineering	4.50

	Prerequisite: *CSC 600*	
CSC 675	Database Design and Impl. ***Prerequisite:*** *CSC 600*	4.50
CSC 678	Advanced Database Programming ***Prerequisite:*** *CSC 675*	4.50
CSC 680	Database Web Interface ***Prerequisite:*** *CSC 678*	4.50
CSC 685	Topics in Computing	4.50
CSC 686	Computer Science Project I ***Prerequisite:*** *CSC 605 and CSC 607 and CSC 670 and CSC 680*	4.50
CSC 687	Computer Science Project II ***Prerequisite:*** *CSC 686*	4.50
CSC 688	Computer Science Project III ***Prerequisite:*** *CSC 687*	4.50

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, which serves to better facilitate effective and efficient project/program managers.
- Systems Engineering which focuses on how 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 student's 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.

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. This will apply for their eligibility to the program. 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 work experience and the following program prerequisite:

- CSC 220 – Applied Probability Stats
    - This course is a required prerequisite for ALL students.

If a student has completed this course, they have to follow the CAS petition process. CSC 220 offerings are planned before the MS Engineering Management program sequence starts. Advisors should check the CSC 220 schedule to enable the student to meet the pre-requisite requirements.

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.
- 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 a 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, 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 course; 4.5 quarter units)

CSC 220	Applied Probability & Stats. ***Prerequisite:*** *CSC 208, or MTH 221; EGR 220*	4.50

* Standard graduate admissions requirements also apply and are found in the catalog.

Degree Requirements (9 courses; 40.5 quarter units)

All six CORE Courses must be completed before students can enroll in the first course, to one of the two Specializations students have chosen from.

Core Requirements (6 courses; 27 quarter units)

ENM 600	Engineering Management	4.50
ENM 601	Project Management	4.50
ENM 603	Operations & Supply Chain Mgmt ***Prerequisite:*** *ENM 600*	4.50
ENM 605	Advanced Engineering Economics	4.50
ENM 604	Quality Engineering	4.50
TMG 610	Global Economic & Tech Trends	4.50

Capstone Requirements (3 courses; 13.5 quarter units) **Units:** 13.50

Students must complete and pass all the courses in their Specialization prior to being enrolled in the Capstone Courses.

ENM 607A	Capstone Course I ***Prerequisite:*** *Students must complete the six Core Courses, along with their chosen Specialization courses, prior to being able to register for the Capstone Courses starting with ENM 607A. ; ENM 600; ENM 601; ENM 603; PME 602; ENM 604; TMG 610; and ENM 602; PME 601; PME 603; PME 604; , or SYE 600; SYE 601; SYE 602; SYE 603*	4.50
ENM 607B	Capstone Course II ***Prerequisite:*** *Students must complete the six Core Courses, along with their chosen Specialization courses, prior to being able to register for the Capstone Courses starting with ENM 607A. ; ENM 607A*	4.50
ENM 607C	Capstone Course III	4.50

Prerequisite: *Students must complete the six Core Courses, along with their chosen Specialization courses, prior to being able to register for the Capstone Courses starting with ENM 607A. ; ENM 607B*

Students must choose one Area of Specialization defined below:

Specialization in Project Management

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

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 who 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 engineering.
- 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.

Degree Requirements:

The specialization requires four courses at eighteen quarter units.

Specialization Requirements (4 courses; 18 quarter units)

ENM 602	Risk, Contracts, and Legal Iss	4.50
PME 601	Advanced Project Management ***Prerequisite:*** *ENM 600; ENM 601; ENM 602 and ENM 603*	4.50
PME 603	Product Management ***Prerequisite:*** *ENM 600; ENM 601; ENM 602 and ENM 603*	4.50
PME 604	Project Finance Management ***Prerequisite:*** *ENM 600; ENM 601; ENM 602; ENM 603*	4.50

Students can register for the first Capstone Course only after all 6 of the first Core Courses, along with the completion of their 4 Specialization Courses (Program Management and Systems Engineering) have been completed, along with the appropriate passing grades.

Specialization in Systems Engineering

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

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.

Specialization Requirements (4 courses; 18 quarter units)

SYE 600	Introduction to Systems Design	4.50
SYE 601	Systems Analysis & Design Eval ***Prerequisite:*** *SYE 600*	4.50
SYE 602	Advanced System Design ***Prerequisite:*** *SYE 601*	4.50
SYE 603	System Dynamics ***Prerequisite:*** *SYE 602*	4.50

Students can register for the first Capstone Course only after all 6 of the first Core Courses, along with the completion of their 4 Specialization Courses (Program Management and Systems Engineering) have been completed, along with the appropriate passing grades.

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) Nationally accredited nursing program, 2) 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 RN- 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.

All MSN Candidates :

- Must provide proof of a current, active and unencumbered RN license in the State of employment and/or residence.
- Have a cumulative GPA of at least 3.0 on a 4.0 scale.
- Complete the university graduate admission application.
- Submit the MSN application packet.

Candidates who graduated from a BSN program other than NU must

- Provide one official transcript from each college or university attended by, to the Registrar's office.
- Provide two professional recommendations 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

1. 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.
2. 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.
3. The MSN program is online with a mandatory onsite component. All accepted applicants must attend a 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.
4. 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 admission into the new specialization. The new application will be re-submitted via the Graduate Nursing e-form Application in SOAR by the Admission Counselor.
5. 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.

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/licensuredisclosures/ 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.

Core Requirements (6 courses; 27 quarter units)

NSG 600	Advanced Practice Nursing	4.50
NSG 620	Theory in Advanced Practice	4.50
NSG 623	Biomedical Statistics	4.50
NSG 606	Health Policy & Finance	4.50
NSG 607	EBP for Advanced NSG Practice	4.50
NSG 622	QI & Project Management	4.50

Students must pass all core courses before beginning specialization courses.

Specialization in Family Nurse Practitioner

Academic Program Director: Mary McHugh; mmchugh@nu.edu,Susan Drummond; sdrummond@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 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.

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*	6.00
NSG 641	Advanced Pharmacology I*	4.50
NSG 682	Advanced Pathophysiology*	4.50

*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	4.50
FNP 642	Advanced Pharmacology II	4.50
FNP 683A	Primary Care of Adult and Aged ***Corequisite:*** *FNP 683C*	4.50
FNP 683C	Care of Adult & Aged Practicum ***Corequisite:*** *FNP 683A*	6.00
FNP 684A	Primary Care-Women & Children ***Corequisite:*** *FNP 684C*	4.50
FNP 684C	Women and Children Practicum ***Corequisite:*** *FNP 684A*	6.00
FNP 685A	FNP Residency ***Corequisite:*** *FNP 685C*	4.50
FNP 685C	FNP Residency Practicum ***Corequisite:*** *FNP 685A*	8.00
FNP 689	FNP Capstone	4.50

Specialization in Psychiatric-Mental Health Nurse Practitioner - Lifespan

Academic Program Director: Mary McHugh; mmchugh@nu.edu,Susan Drummond; sdrummond@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 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 psychoparmacologic 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.

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*	4.50
NSG 681	Advanced Physical Assessment*	6.00
NSG 682	Advanced Pathophysiology*	4.50

*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	4.50
MNP 643	Psychopharmacology in MH Care	4.50
MNP 694	MH Care: Adults/Aging Adults ***Corequisite:*** *MNP 694C*	4.50
MNP 694C	Adults/Aging Adults Practicum ***Corequisite:*** *MNP 694*	8.00
MNP 687	MH Care: Children/Adolescents ***Corequisite:*** *MNP 687C*	4.50
MNP 687C	Children/Adoles Practicum ***Corequisite:*** *MNP 687*	6.00
MNP 688A	Introduction to Psychotherapy ***Corequisite:*** *MNP 688C*	4.50
MNP 688C	Intro Psychotherapy Practicum ***Corequisite:*** *MNP 688A*	4.00
MNP 697	PMHNP Capstone	4.50

Individual Based

Master of Science in Clinical Mental Health Counseling

Graduate Certificates

Individual Based

Post-Baccalaureate Certificate in Business - Management of Virtual Organizations

Post-Baccalaureate Certificate in Psychology

Post-Master's Certificate in Business

Post-Master's Certificate in Psychology

Doctoral Degrees

Group Based

Doctor of Psychology (PsyD)

Academic Program Director: Sarah Carroll; scarroll2@nu.edu,Jamie Franco; jfrancozamudio@nu.edu
Clinical Psychology
Clinical Psychology is the largest branch of the field of Psychology, and integrates Science, theory, and Clinical Practice to assess and treat a broad spectrum of mental health and behavioral medicine concerns. Clinical Psychologists work in a variety of settings, including community mental health agencies, hospitals, college counseling centers, corporations, independent or group practices, wellness clinics, health insurance agencies, prisons, universities and other research settings, as well as Veteran Affairs (VA) medical centers.

The demand for mental health professionals, particularly those with doctoral degrees, is expected to increase over the next decade. Factors contributing to this increase in the need for psychologists include the significant number of Veterans experiencing post-traumatic distress, the increasing number of people who are aging, the growing acknowledgment of the role of behavioral medicine techniques in treating chronic disease, and the ever-present demands for dealing with the stress and pressures of everyday life and work.

The Doctor of Psychology (PsyD) in Clinical Psychology at National University is designed for individuals seeking the highest level of training to become hands-on practitioners in the field of Psychology. We have created a program with a diverse faculty, student body, and curriculum. Our mission is to train practitioner-scholars who will provide comprehensive and culturally sensitive services to a variety of communities. Our particular focus on multicultural competency sets us apart from other doctoral programs.

Doctor of Psychology
The Doctor of Psychology (PsyD) degree was first recognized by the American Psychological Association (APA) in 1973. Today, many PsyD programs are offered nationwide. Graduates are prepared for the key roles that contemporary psychologists must fill to competently serve their communities: clinician, evaluator, assessment expert, and critical consumer of psychological research. Practical applications, advanced clinical training, and specialized fieldwork are emphasized throughout the course of the program.

At JFK School of Psychology and Social Sciences, a dedicated faculty of practitioner-scholars offers a student-faculty ratio of approximately 10:1. In the selection of faculty, staff, and students, the PsyD program aims to reflect the diversity of California's community including gender, race, physical ability, sexual orientation, and socio-economic status. The PsyD program incorporates issues of diversity into all courses in the curriculum.

The program operates on a traditional academic quarter system (11 weeks), and all classes are held in person at the JFK SOPSS campus, in Pleasant Hill, CA. The full-time plan of study takes five years to complete: four years of coursework (four quarters per year) including an ethnographic placement in year one, a practicum during years two and three, and support for additional externship during year four, and then, in year five, a doctoral internship. Students are also required to complete a clinical dissertation project. All students must meet the residency requirement of at least 36 units within a 12-month period, typically earned during their first four quarters in the program.

Admissions Requirements
The PsyD program accepts applications from November through mid-August. Applicants are accepted into the program once a year in the Fall quarter.

Degree and Grade Point Average (GPA) Requirement. Applicants must have a minimum GPA of 3.0 from an accredited undergraduate institution or a 3.5 from an accredited graduate institution.

Prerequisites. Four prerequisite courses taken *within the past ten years* at an institution with regional accreditation or other recognized accreditation are required for admission. The courses must be completed before starting the program with a grade of B- or better or a Credit in Credit/No Credit classes.

1. Introductory Psychology or Developmental Psychology/Human Development
2. Theories of Personality or Abnormal Psychology (undergraduate level)/Psychopathology (graduate level)
3. Statistics
4. A Diversity-related course: This course does not have to be a Psychology course. For example, it may be an overview course such as Psychology of Diversity, Cultural Anthropology, or Introduction to Social Justice/ Forensics. It can also be a course on a specific subject, such as immigrants and refugee health, feminism, or diverse populations.

Admission of applicants will be conditional until completion of any unfinished prerequisites before the fall classes begin.

Application Requirements. All application materials for the PsyD program are made through the PSYCAS portal psycas.liaisoncas.com

1. Official transcripts
2. Personal Statement (2-4 pages): The personal statement is one of the most important selection criteria and carries a similar weight to the admission interview. This statement, along with the other required documents, will be reviewed by the Admission Committee as part of the admission process to determine interview eligibility.
3. Resume/Curriculum Vitae
4. Three letters of recommendation: Preference for letters is from academic instructors and clinical supervisors.
5. Sample Academic Paper: Maximum 10 pages, not including references or cover page.

Clinically Relevant Experience: Preference is given to applicants with clinically relevant experience (e.g., working in a suicide prevention center or crisis support services agency, case management, behavioral therapy program).

Advisement
After matriculating into the program, students are assigned a faculty advisor with whom they meet at least once per quarter. These faculty advisors have specialized knowledge in the field and are able to serve as mentors who guide students through their professional development as clinical psychologists. Student performance in coursework and practica is evaluated on an ongoing basis, with formal yearly reviews. Each year must be

completed satisfactorily for students to advance in the program. Failure to meet any requirement for advancement will result in a referral to the Review and Advisement Committee to clarify and remediate the difficulty. In some instances, students may be required to supplement or repeat certain areas of the program or to take a leave from the program. In other instances, students may be asked to leave the program. See the PsyD Student Handbook for Review and Advisement procedures.

Integrated Professional Seminar
The Integrated Professional Seminar (IPS) is a key component of the program. This composite of courses is designed to integrate academic information and ethnographic or practicum experience throughout the program. During each ethnographic or practicum year, small groups of students meet together with a faculty member. Depending on the year, IPS emphasizes different elements of work with diverse populations. These include, for example, examining one's own belief systems, worldview, biases, group process, and clinical case presentations. The IPS provides a supportive setting in which students may collaboratively integrate their applied and academic experiences.

Ethnographic Placement
The first-year ethnographic placement lays the foundation for culture and diversity-sensitive training as well as practice in self-reflection and self-awareness. The ethnographic experience involves immersion in environments that provide unique and diverse cultural experiences for the trainees. This immersion establishes an understanding of diversity and the relationships with power, privilege, and oppression in the practice of psychology.

To this end, the purpose of the ethnographic placement experience is to provide first-year doctoral trainees with experience in an unfamiliar culture/setting. For a minimum of eight hours per week, first-year trainees engage in a cultural immersion experience in a setting specifically selected to expose trainees to a population with whom they have had little or no prior contact.

Ethnographic trainees' fieldwork is integral to their development as clinical psychologists. It is one of the principal means by which trainees establish the foundation necessary to work with the diversity of clients that they will encounter in their subsequent clinical placements as well as their future work as professionals. This ethnographic placement experience and its accompanying Integral Professional Seminar (IPS 1) are designed to focus on diversity.

Beginning Clinical Practicum
The Clinical Practicum is a placement at one of over 60 available sites. The focus of Clinical Practicum is on the supervised integration and application of knowledge gained from the ethnographic placement experience and ongoing doctoral coursework. In Clinical Practicum, trainees work 16–20 hours per week to develop skills in a variety of interventions and treatments including accurate assessment, conceptualization, and formulation of client cases from a multicultural/ diverse perspective.

Advanced Clinical Practicum
The Advanced Practicum is a clinical placement at one of over 60 available sites for 20–24 hours per week. The focus of Advanced Practicum is on the supervised integration and application of knowledge gained from previous practica, and ongoing doctoral coursework. At a more complex level than Beginning Practicum, trainees develop skills in comprehensive assessment, conceptualization, and formulation of client cases from a multicultural/ diverse perspective. However, the focus in Advanced Practicum is extended to include advanced skills in the development of systematic and empirically justifiable plans for intervention with individuals, groups, or communities within the larger context of human diversity and social change.

Externship
Students are supported to seek clinical training over and above the required practica. It is strongly encouraged that all students complete an externship during year four, to increase their readiness for the doctoral internship and competitiveness in the match process. The desired training site must be reviewed and approved by the Training Department prior to the start of externship training.

Doctoral Internship
Trainees apply for doctoral internships when they are in the fourth year of the full-time curriculum. Trainees need to be registered for the relevant number of internship units for each quarter in which they are accruing internship hours. All academic units must be completed, and the dissertation proposal successfully defended, before going to internship.

PsyD trainees are encouraged to apply for internship programs that are accredited by APA through the APPIC consortia. A full-time internship is completed in four quarters at nine units per quarter for a total of 36 units.

Clinical Readiness Examination
This summative examination, administered in the Summer of Year 1, assesses student competency in skill areas essential to clinical practice. Passing this exam is a requirement to proceed to IPS 2/Beginning Practicum. In order to sit for this exam, students must pass the following first-year courses: IPS 1, Psychopathology I & II, Clinical Interviewing Skills, Human Development, and Law & Ethics. The exam consists of 150 multiple-choice questions.

Clinical Proficiency Examination
In the Spring of Year 3, students present a written clinical case report to two faculty members who orally examine the student on the case. Passing this exam is a requirement for advancement in both the academic and clinical portions of the program.

Satisfactory Progress
Meeting Program expectations in all competency areas in coursework, all requirements of fieldwork/practica, and passing the written comprehensive examination and the clinical proficiency examination are required before students may proceed to the next year of the program or internship. Failure to meet requirements for advancement to the next year may result in a student being required to supplement or repeat certain areas of the program or in termination from the program.

Clinical Dissertation Project
The clinical dissertation project is an intensive study in an area of interest. Projects must reflect the program's emphasis on diverse or underserved populations as well as the PsyD clinical focus. The dissertation should integrate research findings, relevant literature, and original thought, deriving input from the population under study and contributing to the field of applied psychology. Traditional quantitative methodologies may be utilized or students can explore and utilize other research modalities. Projects may take the form of a program evaluation, theoretical exploration, meta-analysis, case study, phenomenological study, ethnography, educational product development for clients or clinicians, content analysis, or grounded-theory analysis. A dissertation proposal must be successfully defended prior to the doctoral internship match, and a successful final dissertation defense is required for the degree to be awarded.

Dissertation Completion
Students must register for PSD 7303, 7304, or 7308 (as directed by the dissertation chair) every quarter following successful completion of PSD 7254 Clinical Dissertation Proposal III, through the quarter in which the final dissertation defense has been passed.

Individual Psychotherapy
All students in the PsyD program are required to complete a minimum of 30 1-hour-long sessions of individual or group psychotherapy over the course of 20 months during the time they are enrolled in the PsyD program. Psychotherapy must be with a licensed therapist. Students do not receive academic credit for psychotherapy. It is recommended that students complete the psychotherapy requirement prior to beginning their internship.

Licensure
Completion of the PsyD program from National University makes students eligible to apply for licensure as a psychologist. The licensure process is regulated by the California Board of Psychology. Requirements currently include a minimum of 3,000 hours of verified supervised professional experience. Licensing statutes and regulations are subject to future legislative and/or administrative revisions. The PsyD students will be kept informed about licensing requirements and any changes that occur. The PsyD program maintains an active relationship with the licensing board.

The California Board of Psychology may be contacted directly at:
1625 North Market Blvd., Suite N-215
Sacramento, CA 95834

Phone: (916) 574-7720
Toll Free: (866) 503-3221
E-mail: bopmail@dca.ca.gov
Website: www.psychology.ca.gov

Knowledge and Competencies
The PsyD program subscribes to a practitioner-scholar model of clinical training. The goals of the PsyD Program

align with the domains of Discipline-Specific Knowledge (DSKs) and Profession-Wide Competencies (PWCs) that are specified by the APA in the Standards of Accreditation.

DSK 1. History & Systems

- Demonstrate knowledge of the origins and development of major ideas in the discipline of psychology.

DSK 2. Foundational Science

- Demonstrate knowledge of affective aspects of behavior, e.g. affect, mood, and emotion.
- Demonstrate knowledge of biological aspects of behavior, e.g. neural, physiological, anatomical, and genetic aspects.
- Demonstrate knowledge of cognitive aspects of behavior, e.g. learning, memory, thought processes, and decision-making.
- Demonstrate knowledge of the norms and theories of human development over the lifespan.
- Demonstrate knowledge of the social and cultural aspects of behavior, e.g. group processes, attributions, discrimination, and attitudes.

DSK 3. Integrative Science

- Demonstrate the ability to integrate at least two of affective, biological, cognitive, social, and/or developmental aspects of behavior.

DSK 4. Research Methods

- Demonstrate knowledge of the strengths, limitations, interpretation, and technical aspects of rigorous case study; correlational, experimental, and other quantitative research designs; measurement techniques; sampling; replication; theory testing; qualitative methods; mixed methods; meta-analysis; and quasi-experimentation.
- Demonstrate knowledge of quantitative modeling and analysis of psychological data, statistical description and inference, univariate and multivariate analysis, null-hypothesis testing and its alternatives, power, and estimation.
- Demonstrate knowledge of the techniques of content analysis, descriptive phenomenology, and qualitative meta-summary.
- Demonstrate knowledge of theory and techniques of psychological measurement, scale and inventory construction, reliability, validity, evaluation of measurement quality, classical and contemporary measurement theory, and standardization.

PWC 1. Research

- Demonstrate the substantially independent ability to formulate clinically and contextually relevant inquiries (e.g., critical literature reviews, dissertation, efficacy studies, clinical case studies, theoretical papers, program evaluation projects, program development projects) that are of sufficient quality and rigor to have the potential to contribute to the scientific, psychological, or professional knowledge base.
- Conduct research or other scholarly activities.
- Disseminate research or other scholarly activity via professional publication and presentation at the local (including the host institution), regional, or national level.
- Demonstrate the ability to evaluate and apply professional literature in the context of specific clinically relevant questions.

PWC 2. Ethical and Legal Standards

- Demonstrate knowledge of, and act in accordance with, each of the following: (1) the current version of the APA Ethical Principles of Psychologists and Code of Conduct; (2) relevant laws, regulations, rules, and policies governing health service psychology at the organizational, state, and federal levels; (3) relevant professional standards and guidelines.
- Recognize ethical dilemmas as they arise, and apply ethical decision-making processes in order to resolve the dilemmas.
- Conduct oneself in an ethical manner in all professional activities.

PWC 3. Individual and Cultural Diversity

- Demonstrate an understanding of how their own personal/cultural history, attitudes, and biases may affect how they understand and interact with people different from themselves.

- Demonstrate respectful appreciation for others' cultures and worldviews.
- Actively attend to the dynamics of power, oppression, and privilege in their professional environments.
- Demonstrate knowledge of the current theoretical and empirical knowledge base as it relates to addressing diversity in all professional activities, including research, training, supervision/consultation, and service.
- Demonstrate the ability to integrate awareness and knowledge of individual and cultural differences in the conduct of professional roles (e.g., research, services, and other professional activities).

PWC 4. Professional Values, Attitudes, and Behaviors

- Behave in ways that reflect the values and attitudes of psychology, including integrity, deportment, professional identity, accountability, lifelong learning, and concern for the welfare of others.
- Actively engage in classroom and/or agency activities.
- Demonstrates cognitive flexibility and capacity to adapt to changing circumstances and information.
- Engage in self-reflection regarding one's personal and professional functioning; engage in activities to maintain and improve performance, well-being, and professional effectiveness.
- Recognize when supervision or consultation is needed, and actively seek same.
- Demonstrate openness and responsiveness to feedback and supervision.
- Respond professionally to challenging situations with a degree of independence that is appropriate to current level of training.

PWC 5. Communication and Interpersonal Skills

- Communicate in an effective, constructive, and culturally/contextually sensitive manner in professional encounters.
- Produce and comprehend written communications that are informative and well-integrated, and that demonstrate a thorough grasp of professional language and concepts.
- Produce and comprehend oral communications that are informative and well-integrated, and that demonstrate a thorough grasp of professional language and concepts.
- Demonstrate the ability to manage difficult communication well.

PWC 6. Assessment

- Demonstrate current knowledge of diagnostic classification systems, functional and dysfunctional behaviors, including consideration of client strengths and psychopathology.
- Demonstrate understanding of and ability to integrate knowledge of functional and dysfunctional behaviors, in context, to the assessment and/or diagnostic process.
- Formulate relevant referral question(s) for psychological testing; select and apply assessment methods that draw from the best available empirical literature, reflect the science of measurement and psychometrics, and are appropriate to the diversity characteristics of the service recipient.
- Collect relevant data using multiple sources and methods that are appropriate to the referral question(s), and administer and score psychological measures competently and correctly.
- Integrate data from multiple sources and interpret assessment results, following current research and professional standards and guidelines, to inform case conceptualization, classification, and recommendations, while guarding against decision-making biases, distinguishing the aspects of assessment that are subjective from those that are objective.
- Communicate orally and in written documents the findings and implications of the assessment in an accurate and effective manner sensitive to a range of audiences.

PWC 7. Intervention

- Establish and maintain effective relationships with the recipients of psychological services.
- Demonstrate the ability to gather and integrate clinically relevant information through clinical interviews and active listening.
- Demonstrate the ability to conceptualize a client’s presenting problem within a clearly articulated theoretical context.
- Develop evidence-based and contextually appropriate intervention plans specific to the service delivery goals.
- Implement interventions informed by the current scientific literature, assessment findings, diversity characteristics, and contextual variables.
- Demonstrate the ability to apply the relevant research literature to clinical decision making.
- Modify and adapt evidence-based approaches effectively when a clear evidence base is lacking.

- Evaluate intervention effectiveness and adapt intervention goals and methods consistent with ongoing evaluation.

PWC 8. Supervision

- Demonstrate knowledge of supervision models and practices.
- Demonstrate the ability to apply knowledge of supervision models and practices in direct or simulated practice with psychology trainees or other health professionals.

PWC 9. Consultation and Interprofessional/Interdisciplinary Skills

- Demonstrate knowledge of and respect for the roles and perspectives of other professions.
- Demonstrate knowledge of consultation models and practices.
- Demonstrate the ability to apply knowledge of consultation models and practices in direct or simulated practice with individuals and their families, other health care professionals, interprofessional groups, or systems related to health and behavior.

Transfer Credit

Students requesting course transfer credit must have attained a grade of "credit" or a letter grade of B or higher from an institution that is regionally accredited or has other recognized accreditation. Courses eligible for transfer credit must have been taken within the last eight years.

When transfer credit is granted for a course completed at another institution, regardless of whether the course earned quarter units or semester units, the maximum number of units transferred will equate to the number of units given for completing the corresponding doctoral course at JFK School of Psychology and Social Sciences.

Transfer credit will only be awarded after the NU transfer credit evaluation process has been successfully completed. Whether the units are transferred as "content only" or "content plus units" will be based on whether the previously earned units are from a conferred degree or not. The number of transferred credits permitted is at the discretion of the program. Transfer credit will not be included as part of the cumulative University GPA.

Students matriculating into the PsyD program may transfer a maximum of 30 quarter units towards the required PsyD courses. Up to 18 of those units can be from a previous Master's program, and all or part of the total units can be from a previous Doctoral program.

Although transfer credits may reduce the cost of the program, it will not reduce the overall length of the program, due to the three years of the PsyD Integrated Professional Seminar (IPS 1, 2 & 3).

Accreditation
The JFK School of Psychology – PsyD Program is accredited by the Commission on Accreditation of the APA.

Questions related to the program's accredited status should be directed to the Commission on Accreditation:

Commission on Accreditation
Office of Program Consultation and Accreditation
American Psychological Association
750 First Street, NE
Washington D.C. 20002-4242
Phone:(202) 336-5797
Email: apaaccred@apa.org
Website: www.apa.org/ed/accreditation

Program Disclosure Information

In the United States, each state makes its own rules regarding the educational requirements for licensure of psychologists. As such, requirements for professional licensure and certification can vary markedly by state. The JFK School of Psychology and Social Sciences at National University Doctoral Program in Clinical Psychology (PsyD) **meets** the educational degree completion requirement for licensure in the state of California as a Licensed Psychologist.

Since many states have unique licensing requirements, the JFK School of Psychology and Social Sciences at National University cannot confirm whether its PsyD program degree meets all the educational, licensure, and

certification requirements in **any state other than California**. Further, these requirements can change frequently and often without notice.

We advise you to contact your state licensing and certification body to ensure the degree will meet requirements for licensure in the state in which you seek to be licensed. For licensing board contact information and approval status, please see the Association of State and Provincial Psychology Boards website. For all students, applicants, or prospective students seeking licensure in any state, please review the chart below outlining the University's determination about the program's curriculum and how it relates to the state educational requirements for licensure or certification in that respective state.

PROGRAM MEETS EDUCATIONAL REQUIRMENTS	PROGRAM DOES NOT MEET EDUCATIONAL REQUIRMENTS	CANNOT BE CONFIRMED IF PROGRAM MEETS EDUCATIONAL REQUIRMENTS
California		All other states, including the District of Columbia and the US protectorates, as defined in 34 CFR §600.2.

The program is accredited by the Commission on Accreditation of the American Psychological Association (APA). Questions related to the accredited status of the program should be directed to the Commission on Accreditation:

Commission on Accreditation
Office of Program Consultation and Accreditation
American Psychological Association
750 First Street, NE
Washington D.C. 20002-4242
Phone:(202) 336-5797
Email: apaaccred@apa.org
Website: www.apa.org/ed/accreditation

As an APA-accredited program, our students are strongly encouraged to complete their internship at an APA-accredited site. Students are required to use the APPIC (Association of Psychology Postdoctoral and Internship Centers) system for application to internships and a minimum of 80% of student applications must be submitted to APA-accredited sites.

It is strongly encouraged that students, applicants, and prospective students determine any additional (i.e., non-educational) requirements for licensure in the state in which they seek to be licensed. Many licensure boards require more than successful degree completion to obtain a license, such as completion of an examination(s), test(s), background check(s), internship/practicum hours, and other requirements determined by the respective state board. It is the responsibility of the student completing the licensure program to check with the respective state licensing board(s) for the most recent information, rules and requirements.

The JFK School of Psychology and Social Sciences at National University PsyD program continues to be regionally accredited (by WSCUC), which means that eligible students may apply for federal loans, work-study funds, and other available benefits. Questions about WSCUC accreditation can be addressed at:

985 Atlantic Avenue, Suite 100
Alameda, CA 94501
Phone: 510-748-9001

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

- Research. Develop expertise in the integration of science and Health Service Psychology practice.
- Ethics. Manage ethical issues in accordance with APA Ethical Principles, applicable laws, and relevant Health Service Psychology standards and guidelines.

- Individual and Cultural Diversity. Integrate awareness and knowledge of individual and cultural diversity in the conduct of Health Service Psychology roles.
- Professional Attitudes, Values, and Behavior. Cultivate professional values, attitudes and behaviors that are consistent with Health Service Psychology standards.
- Communication. Support effective interpersonal communication through written and oral Health Service Psychology language and concepts.
- Assessment. Develop competence in conducting evidence-based and contextually appropriate assessment consistent with the scope of Health Service Psychology.
- Intervention. Implement evidence-based and contextually appropriate interventions consistent with the scope of Health Service Psychology.
- Supervision. Incorporate Health Service Psychology supervision models and practices in professional situations.
- Consultation and Interdisciplinary Skills. Incorporate Health Service Psychology consultation models and practices in interaction with clients and other stakeholders.
- Discipline-specific Knowledge. Integrate understanding of the history, foundational science, and research principles that underlie the field of Health Service Psychology.

Degree Requirements:

To receive the PsyD degree, the student must meet the following requirements:

- The Clinical Readiness Examination and the Clinical Proficiency Examination must be passed.
- Thirty sessions of personal psychotherapy must be completed.
- All training logs and supervisors' evaluations must be submitted to the Training Office.
- The dissertation must be successfully defended and published to ProQuest.
- After admission to the PsyD program, all academic requirements must be completed in residence, except where transfer credit units have been awarded.
- A full-time load of 36 units must be carried for a minimum of one year, preferably in year one.
- A minimum grade of B- is required in each course applied to meeting degree requirements.
- An overall grade-point average of at least 3.0 must be achieved in all work for the PsyD program; All program requirements must be completed within eight calendar years of matriculation.
- Candidates for doctoral degrees are required to apply for graduation in or before the quarter in which they expect to complete all degree requirements.

Total Degree Requirement (180 quarter units)

Core Requirements Year One (14 courses; 46 quarter units)		**Units:** 46.00
PSD 7009	Group Clinical Skills	2.00
PSD 7011	Clinical Interviewing Skills	4.00
PSD 7015	Psychopathology I	3.00
PSD 7016	Psychopathology II ***Prerequisite:*** *PSD 7015 with a minimum grade of B-. This is the lowest passing grade for JFK-SOP PsyD courses.*	3.00
PSD 7036	IPS 1 Multicult. Foundations	5.00
PSD 7037	IPS 1 Multicult. Integration	5.00
PSD 7038	IPS 1 Multicult. Tx Approaches	5.00
PSD 7050	The Developing Psychologist	1.00
PSD 7114	Psychometrics:Psych Assessment	2.00
PSD 7122	Psychodynamic Theory & Applic	3.00
PSD 7123	Cognitive Behavioral Theory	3.00
PSD 7124	Family Systems Theory & Applic	3.00
PSD 7141	Ethical & Legal Issues Psych	3.00
PSD 7227	Human Development	4.00

Core Requirements Year Two (12 courses; 42 quarter units)		**Units:** 42.00
PSD 7107	Biological Bases of Behavior	3.00
PSD 7108	Cognitive & Affective Bases	3.00
PSD 7115	Assessment I: Intellect/Cognit ***Prerequisite:*** *PSD 7114 with a minimum grade of B-. This is the lowest passing grade for JFK-SOP PsyD courses.*	4.00
PSD 7116	Assessment II: Personality I ***Prerequisite:*** *PSD 7115 with a minimum grade of B-. This is the lowest passing grade for JFK-SOP PsyD courses.*	4.00
PSD 7117	Assessment III: Personality II	4.00
PSD 7131	Psych & Treatment Subst Abuse	3.00
PSD 7136	IPS 2 Applied Diagnosis	4.00
PSD 7137	IPS 2 Case Formulation	4.00
PSD 7138	IPS 2 Informed Tx Planning	4.00
PSD 7151	Research Methods & Stats I	3.00
PSD 7250	Research Methods & Stats II ***Prerequisite:*** *PSD 7151 with a minimum grade of B-. This is the lowest passing grade for JFK-SOP PsyD courses.*	3.00
PSD 7251	Qualitative Rsch: Critical Rev	3.00
Core Requirements Year Three (11 courses; 29 quarter units)		**Units:** 29.00
PSD 7104	Social & Cultural Bases Behavr	3.00
PSD 7110	Integrated Foundationl Science ***Prerequisite:*** *PSD 7104 with a minimum grade of B-. ; PSD 7107 with a minimum grade of B-. ; PSD 7108 with a minimum grade of B-. ; PSD 7227 with a minimum grade of B-. ; PSD 7160 with a minimum grade of B-. B- is the lowest passing grade for JFK-SOP PsyD courses.*	2.00
PSD 7160	Psychopharmacology ***Prerequisite:*** *PSD 7107 with a minimum grade of B-. This is the lowest passing grade for JFK-SOP PsyD courses.*	3.00
PSD 7180	Psychology of Trauma	3.00
PSD 7236	IPS 3 Int Case Concept/Tx Plan	4.00
PSD 7237	IPS 3 Clinical Communication	4.00
PSD 7238	IPS 3 Prof Dev/Lifelong Learn	4.00
PSD 7252	Clinical Dissertation Prop I ***Prerequisite:*** *PSD 7251 with a minimum grade of B-. This is the lowest passing grade for JFK-SOP PsyD courses.*	2.00
PSD 7253	Clinical Dissertation Prop II ***Recommended: Prior completion of:*** *PSD 7252*	2.00
PSD 7254	Clinical Dissertation Prop III ***Recommended: Prior completion of:*** *PSD 7253; Online training module for IRB / human participants should be completed prior to the beginning of this course.*	1.00
PSD 7601	Psych Career Skills Building ***Prerequisite:*** *PSD 7273 with a minimum grade of CR. This is the lowest passing grade for JFK-SOP PsyD courses.*	1.00
Core Requirements Year Four (3 courses; 9 quarter units)		**Units:** 9.00
PSD 7003	History & Systems of Psych	3.00
PSD 7215	Foundations Prof Consultation	3.00
PSD 7230	Fundamentals Clinical Supervsn	3.00
Core Requirements Year Five (4-8 courses; 36 quarter units)		**Units:** 36.00

Students must repeat any combination of the following two courses for a total of at least 36 quarter units.

PSD 7400	Full-Time Internship ***Recommended: Prior completion of:*** *Completion of all other coursework and permission of Training Director.*	9.00
PSD 7401	Part-Time Internship ***Recommended: Prior completion of:*** *Completion of all other coursework and permission of Training Director.*	4.50

Electives (18 quarter units)

Students select a minimum of 18 total quarter units comprised of any combination of elective courses. Some courses are repeatable but have a maximum number of quarter units that can count toward the 18 elective quarter units / 180 total quarter units needed for graduation.

General Electives (all are repeatable)		
PSD 7303	Dissertation Completion ***Recommended: Prior completion of:*** *PSD 7254*	0.00
PSD 7308	Diss Study - Supplemental ***Recommended: Prior completion of:*** *PSD 7254*	5.00
PSD 7309A	Topics in Doctoral Psychology	1.00
PSD 7309B	Topics in Doctoral Psychology	2.00
PSD 7309C	Topics in Doctoral Psychology	3.00
PSD 7330	Externship-Concurrent w/IPS ***Recommended: Prior completion of:*** *all year one coursework; a minimum of 6 months clinical experience. Training office approval required.*	0.00
PSD 7331	Externship ***Prerequisite:*** *PSD 7138 with a minimum grade of CR. This is the lowest passing grade for JFK-SOP PsyD courses.*	1.00
PSD 7332	Externship - Assessment ***Prerequisite:*** *PSD 7720 with a minimum grade of B-. Course must be passed, and minimum passing grade is B-*	2.00
PSD 7335	Externship - Supplemental ***Prerequisite:*** *PSD 7331 with a minimum grade of CR. Students must have successfully completed the PSD 7331 course four times in order to enroll in this class.*	1.00
PSD 7336	Externship - Assessment Suppl ***Prerequisite:*** *PSD 7332 with a minimum grade of CR. Students must have successfully completed the PSD 7332 course two times in order to enroll in this class.*	2.00
PSD 7402	Internship - Supplemental ***Prerequisite:*** *PSD 7400 with a minimum grade of CR. Students must have successfully completed the PSD 7400 course four times in order to enroll in this class.*	9.00
PSD 7529	Externship - Integrated Health	1.00
PSD 7539	Externship-Forensic/Correction	1.00
PSD 7550	Clinical Topics in Sport Psych	3.00
PSD 7559	Externship - Sport	1.00
PSD 7602	Summer Field Placement ***Recommended Preparation:*** *Take when instructed by Training Office.*	0.00
General Electives (not repeatable)		

PSD 7170A	Functional Neuroanatomy ***Prerequisite:*** *PSD 7107 with a minimum grade of B-. This is the lowest passing grade for JFK-SOP PsyD courses.*	2.00
PSD 7170B	Neuropathology ***Prerequisite:*** *PSD 7170A with a minimum grade of B-. This is the lowest passing grade for JFK-SOP PsyD courses.*	3.00
PSD 7170C	Neuropsychological Principles ***Prerequisite:*** *PSD 7170B with a minimum grade of B-. This is the lowest passing grade for JFK-SOP PsyD courses.*	3.00
PSD 7171	Neuropsychological Rehab ***Recommended: Prior completion of:*** *PSD7107 (Biological Bases), and PSD7170A-B-C (foundational neuropsychology courses) are strongly recommended.*	1.00
PSD 7173	Overview of Pediatric Assessmt ***Recommended: Prior completion of:*** *PSD7107 (Biological Bases), and PSD7170A-B-C (foundational neuropsychology courses) are strongly recommended.*	1.00
PSD 7174	Neuropsychology of Aging	1.00
PSD 7178	Multicultural Issues in Assess ***Prerequisite:*** *PSD 7116 with a minimum grade of B-. This is the lowest passing grade for JFK-SOP PsyD courses.*	1.00
PSD 7304	Pre-Internship Diss Study ***Recommended: Prior completion of:*** *PSD 7254*	4.00
PSD 7521	Fndmntls Integrated Healthcare	1.00
PSD 7522	Health Psychology	2.00
PSD 7523	Motivational Interviewing	1.00
PSD 7524	Behav Health in Primary Care	1.00
PSD 7525	Neurobiology of Trauma	2.00
PSD 7526	Communication in Healthcare	1.00
PSD 7527	Bariatric Psychology	1.00
PSD 7530	Corr Psych/Cultural Awareness	2.00
PSD 7531	Forensic Psych/Multicultural	2.00
PSD 7533	Forensic/Correctional Assess. ***Prerequisite:*** *PSD 7116 with a minimum grade of B-. This is the lowest passing grade for JFK-SOP PsyD courses.*	3.00
PSD 7535	Exprt Tstmny/Advncd Rprt Wrtng	2.00
PSD 7561	Vicarious Trauma & Self-Care	1.00
PSD 7562	Trauma Assessment & Tx	2.00
PSD 7563	Socio-Cult Issues of Trauma	2.00
PSD 7564	Trauma Tx and Intervention	2.00
PSD 7710	Tx of Trauma via Psychodrama	1.00
PSD 7711	Art Therapy & Trauma	1.00
PSD 7712	Somatic Tx of Trauma	1.00
PSD 7713	Systemic & Historical Trauma	2.00
PSD 7720	Assessment Integration ***Prerequisite:*** *PSD 7115 with a minimum grade of B-. This is the lowest passing grade for JFK-SOP PsyD courses.; PSD 7116 with a minimum grade of B-. This is the lowest passing grade for JFK-SOP PsyD courses.*	2.00
Courses Required for Licensure		
PSD 7701	Spousal/IPV Abuse Prev Assess	2.00
PSD 7702	Child Abuse Assessmt/Reporting	1.00

PSD 7703	Aging and Long-Term Care	1.00
PSD 7704	Suicide Prevention and Assess	1.00
PSD 7705	Human Sexuality	1.00

Concentration in Correctional and Forensic Psychology

Academic Program Director: Sharon Christensen; schristensen@nu.edu

Forensic and Correctional Psychologists are one of the fastest growing areas of employment in the field of psychology. The Correctional/Forensic Concentration is designed to provide students with foundational discipline-specific knowledge and focused clinical training for those interested in a career as a correctional or forensic psychologist. The concentration includes a forensic externship to provide hands-on experience conducting assessments within the correctional setting. Concentration courses also expand students understanding and application of forensic psychology in the areas of sex offender evaluation and treatment, child custody evaluations and mediation, police psychology, offenders with mental disorders, and evidence-based, trauma-informed best practices. All courses are rooted in exploring the multicultural, contextual variables within the correctional and forensic setting. The concentration is designed to develop culturally responsive clinicians to serve correctional/forensic populations. This concentration prepares students to compete for highly sought out practicum positions and facilitate student entrance into APA accredited internships and postdoctoral fellowships in clinical forensic and correctional settings, as well as careers post-graduation to meet the ever-growing demand and need within our community.

For more information regarding this Doctor of Clinical Psychology Concentration, please contact the Academic Program Director for the concentration.

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

- Demonstrate the ability to apply current knowledge of diagnostic classification systems to client difficulties. Plan and implement formal assessment of referred clients, considering their diagnostic situation and intersecting cultural identities. Integrate data from multiple sources and communicate findings in a clear and accurate way.

Concentration Requirements (4 courses, 9 quarter units)

In order to obtain permission to enroll in the concentration, candidates must contact the Academic Program Director prior to enrolling.

PSD 7530	Corr Psych/Cultural Awareness	2.00
PSD 7531	Forensic Psych/Multicultural	2.00
PSD 7533	Forensic/Correctional Assess. ***Prerequisite:*** *PSD 7116 with a minimum grade of B-. This is the lowest passing grade for JFK-SOP PsyD courses.*	3.00
PSD 7535	Exprt Tstmny/Advncd Rprt Wrtng	2.00

Concentration in Integrated Healthcare

Academic Program Director: Pilar Corcoran - Lozano; pilar.corcoran-lozano@natuniv.edu

The Integrated Healthcare Concentration provides students who are interested in pursuing a career in integrated healthcare, integrated behavioral health, or integrated primary care, an opportunity to receive additional training in the classroom and in a clinical setting utilizing an integrated healthcare approach to managing acute and chronic illnesses. Students have the opportunity to train in a team setting with medical, nursing, and social work

professionals. The training in this concentration is in compliance with the Interprofessional Practice and Education (IPE) guidelines of Division 38 of the APA, as well as the AHRQ Academy for Integrating Behavioral Health and Primary Care. The concentration is also designed to facilitate student entrance into APA accredited internships with rotations in integrated healthcare and primary care settings. For the specific requirements to enroll in this concentration, please contact the Academic Program Director for the concentration.

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

- Establish effective therapeutic relationships, gather and integrate clinically relevant information, conceptualize cases, develop treatment plans, implement evidence-based and contextually appropriate interventions, and evaluate intervention effectiveness.

Concentration Requirements (5 courses: 7 units)

In order to obtain permission to enroll in the concentration, candidates must contact the Academic Program Director prior to enrolling.

PSD 7521	Fndmntls Integrated Healthcare	1.00
PSD 7522	Health Psychology	2.00
PSD 7523	Motivational Interviewing	1.00
PSD 7524	Behav Health in Primary Care	1.00
PSD 7525	Neurobiology of Trauma	2.00

Students may enroll in additional elective courses if desired.

Optional Electives

PSD 7526	Communication in Healthcare	1.00
PSD 7527	Bariatric Psychology	1.00

Concentration in Neuropsychology

Academic Program Director: Peter Van Oot; pvanoot@nu.edu

This concentration provides students who are interested in pursuing a career in Clinical Neuropsychology an opportunity to receive additional training in the classroom and in a clinical setting in neuropsychological assessment and neurorehabilitation, as well as opportunities to work closely with practicing neuropsychologists in the area. The concentration is in compliance with the Houston Conference Resolutions which define the educational standards and training required for practice in professional clinical neuropsychology. The concentration is also designed to facilitate student entrance into APA accredited internships with rotations in clinical neuropsychology and integrated healthcare settings. For the specific requirements for applying to this concentration, please contact the Academic Program Director for the concentration.

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

- Demonstrate the ability to apply current knowledge of diagnostic classification systems to client difficulties. Plan and implement formal assessment of referred clients, considering their diagnostic situation and intersecting cultural identities. Integrate data from multiple sources and communicate findings in a clear and accurate way.

Concentration Requirements (7 courses; 12 quarter units)

In order to obtain permission to enroll in the concentration, candidates must contact the Academic Program Director prior to enrolling.

PSD 7170A	Functional Neuroanatomy ***Prerequisite:*** *PSD 7107 with a minimum grade of B-. This is the lowest passing grade for JFK-SOP PsyD courses.*	2.00
PSD 7170B	Neuropathology ***Prerequisite:*** *PSD 7170A with a minimum grade of B-. This is the lowest passing grade for JFK-SOP PsyD courses.*	3.00
PSD 7170C	Neuropsychological Principles ***Prerequisite:*** *PSD 7170B with a minimum grade of B-. This is the lowest passing grade for JFK-SOP PsyD courses.*	3.00
PSD 7171	Neuropsychological Rehab ***Recommended: Prior completion of:*** *PSD7107 (Biological Bases), and PSD7170A-B-C (foundational neuropsychology courses) are strongly recommended.*	1.00
PSD 7173	Overview of Pediatric Assessmt ***Recommended: Prior completion of:*** *PSD7107 (Biological Bases), and PSD7170A-B-C (foundational neuropsychology courses) are strongly recommended.*	1.00
PSD 7174	Neuropsychology of Aging	1.00
PSD 7178	Multicultural Issues in Assess ***Prerequisite:*** *PSD 7116 with a minimum grade of B-. This is the lowest passing grade for JFK-SOP PsyD courses.*	1.00

Concentration in Trauma Psychology

Academic Program Director: Matthew Mock; mmock@nu.edu

The Trauma Concentration provides education and training for students who are interested in working with individuals and communities impacted by trauma. Coursework in this concentration offers didactic and experiential training in the utilization of trauma-informed approaches to assess and treat clients. Students have an opportunity to learn about multiple aspects of trauma, including adverse childhood experiences (ACE), historical and intergenerational trauma, crisis trauma, racial trauma, vicarious trauma, and more. Classroom learning has applications to subsequent clinical settings.

The training in this concentration references the New Haven Competencies for Trauma Psychology (2014) and policies described in "Guidelines on Trauma Competencies for Education and Training" approved by the APA Council of Representatives, 2015.

This concentration trains students in mental health assessment, diagnosis, and intervention for individuals, including adults who have experienced traumas. The experiences of traumas and their impact on psychological functioning will be studied. Upon completion of this concentration, students will be prepared to work in a wide range of settings, including community-based clinics, hospitals and VA settings, health centers, colleges and universities, and other clinical practice settings.

The concentration is also designed to facilitate student entrance into APA - accredited internships serving those impacted by trauma. For the specific requirements to enroll in this concentration, please contact the Academic Program Director for the concentration.

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

- Implement evidence-based and contextually appropriate interventions consistent with the scope of Health Service Psychology.

Concentration Requirements (5 courses; 9 quarter units)

PSD 7525	Neurobiology of Trauma	2.00
PSD 7561	Vicarious Trauma & Self-Care	1.00
PSD 7562	Trauma Assessment & Tx	2.00
PSD 7563	Socio-Cult Issues of Trauma	2.00
PSD 7564	Trauma Tx and Intervention	2.00

Students may complete additional optional units if desired.

Optional Electives

PSD 7710	Tx of Trauma via Psychodrama	1.00
PSD 7711	Art Therapy & Trauma	1.00
PSD 7712	Somatic Tx of Trauma	1.00
PSD 7713	Systemic & Historical Trauma	2.00

Individual Based

Doctor of Business Administration

Doctor of Criminal Justice

Doctor of Education in Educational and Organizational Leadership

Doctor of Philosophy in Business Administration

Doctor of Philosophy in Computer Science

Doctor of Philosophy in Cybersecurity

Doctor of Philosophy in Data Science

Doctor of Philosophy in Education

Doctor of Philosophy in Educational and Organizational Leadership

Doctor of Philosophy in Human Resource Management

Doctor of Philosophy in Instructional Design

Doctor of Philosophy in Marriage and Family Therapy

Doctor of Philosophy in Organizational Leadership

Doctor of Philosophy in Psychology

Doctor of Philosophy in Technology Management

Doctor of Public Administration

Juris Doctor

Courses

Group Based

BAN 300 Intro to Business Analytics (4.50)
Prerequisite: *MNS 205 and MTH 210*
Duration: 4
Comprehensive approach to understanding Data Issues, Analytics, and Business Strategies. Topics include: types of data sets, different analytical methods, legal and ethical issues involving data and analytics, and tools for descriptive business analytics.

BAN 400 Business Data Visualization (4.50)
Prerequisite: *BAN 300*
Duration: 4
An overview of data visualization, key design principles and techniques for visualizing data, and the fundamentals of communication that are required for effective data presentation using Excel and Tableau. Including how to collect and process data; create interactive visualizations; critique visualizations; and present data effectively. Other topics may include ethical uses of information displays, storytelling, infographics, immersive visualizations, and information dashboard design.

BAN 405 Regression and Forecasting (4.50)
Prerequisite: *BAN 300*
Duration: 4
Basic principles and implementation techniques of statistical inference, analysis of variance, simple and multiple regression analysis, time-series analysis of trends, cyclical and seasonal components, and forecasting. Emphasizes an understanding of how these tools can support Business Analytics. Develop a high level of proficiency in Microsoft Excel.

BAN 410 Data Mining for Bus Analytics (4.50)
Prerequisite: *BAN 300; BAN 405*
Duration: 4
Methods of data mining and how to apply them to business problems. Topics may include: association, classification, clustering, logistic regression, decision trees, neural networks, support vector machines, and market/basket analysis. Data preparation, visualization, and feature selection are also addressed, as are boosting and random forests.

BAN 415 Mgmt Models and Simulations (4.50)
Prerequisite: *BAN 300; MNS 407*
Duration: 4
Modeling tools and techniques for complex and dynamic business environments. Topics may include: linear, discrete, and nonlinear optimization, multicriteria decision making, decision analysis under uncertainty, and simulation.

BIO 100A Survey of Bioscience Lab (1.50)
Prerequisite: *BIO 100 for non-science majors (GE), or BIO 163 for science majors*
Duration: 4
Study of the unifying principles of life with emphasis on the following topics: molecular biology of the cell and cellular processes, including energy metabolism, membrane transport, and cell division; classical and population genetics; the mechanism of evolution and the evolutionary basis of species classification. Emphasis on the scientific method as applied in laboratory sciences, using demonstrations, experiments, and/or field trips. It may include inquiry-based research activities.

BIO 163 General Biology 3 (4.50)
Prerequisite: *BIO 161; BIO 162*
Duration: 4
Morphology and physiology of multicellular organisms, particularly plants and animals. Concepts include plant structure and physiology and comparative animal morphology and physiology. Intended for science majors.

BIO 169A General Biology Lab (1.50)
Prerequisite: *BIO 161; BIO 162; BIO 163*
Duration: 4
Laboratory course in general biology intended for science majors. Topics include the application of the scientific method, examination of cellular processes (eg. respiration, photosynthesis, mitosis, meiosis), Mendelian genetics, operation of basic laboratory equipment, taxonomic classification, and investigations of structure and function of prokaryotes, protists, fungi, plants, and animals.

BIO 191A Online Hum Anat and Phys I Lab (1.50)
Corequisite: *BIO 201;* ***Recommended: Prior completion of:*** *BIO 100; BIO 100A; CHE 101; CHE 101A*
Duration: 8
This course uses virtual labs and online resources to explore human anatomy and physiology. This first lab course in the series covers body plan, microscopes, cells, tissues, skin, bone, muscle, the nervous system, and special senses. Students should verify that this course will transfer to their desired program.

BIO 193A Online Microbiology Lab (1.50)
Corequisite: *BIO 203;* ***Recommended: Prior completion of:*** *BIO 191A; BIO 201; CHE 101; CHE 101A*
Duration: 8
This course uses virtual labs and online resources to instruct students about biosafety procedures, as well as methods for the isolation, quantification, and identification of microorganisms. Students will become familiar with light microscopy, along with the preparation and analysis of stained slides. Students should verify that this course will transfer to their desired program.

BIO 201 Human Anatomy and Physiol I (4.50)
Corequisite: *BIO 191A, or BIO 201A;* ***Recommended: Prior completion of:*** *BIO 100; BIO 100A; CHE 101; CHE 101A*
Duration: 8
Areas of study include biological chemistry, cells, tissues, organ systems (integumentary, skeletal, muscular and nervous), and their functional relation to each other. Topics also include the aging process and diseases in these systems, as well as the development and repair of the organs and tissues in these systems. BIO201 should be taken with the co-requisite section of either BIO191A or BIO 201A with the same instructor (and classmates).

BIO 201A Human Anatomy and Physiol Lab (1.50)
Corequisite: *BIO 201;* ***Recommended: Prior completion of:*** *BIO 100; BIO 100A; CHE 101; CHE 101A or equivalent courses.*
Duration: 8
This laboratory course examines organ systems (skeletal, muscular and nervous). Students conduct cat/fetal pig dissections to identify and learn how skeletal muscles are organized according to body region. Sheep brain is used as a model to study human brain.

BIO 203 Introductory Microbiology (4.50)
Corequisite: *BIO 193A; BIO 203A Students should take both lecture and lab courses concurrently and with the same instructor to ensure a consistent learning experience. Students who are retaking one of the two courses or present special circumstances should petition for exception to this requisite.;* ***Recommended: Prior completion of:*** *BIO 100 and BIO 100A; CHE 101 and CHE 101A or equivalent courses; BIO 201 and BIO 201A; BIO 202 and BIO 202A*
Duration: 8
Biology of pathogenic and nonpathogenic microbes, including bacteria, fungi, protozoans, and viruses. The epidemiology of disease-causing agents is studied, along with the fundamentals of the human immune response. Students should take both lecture and lab courses concurrently and with the same instructor to ensure a consistent learning experience. Students who are retaking one of the two courses or present special circumstances should petition for exception to this requisite.

BIO 203A Introductory Microbiology Lab (1.50)
Corequisite: *BIO 203;* ***Recommended: Prior completion of:*** *BIO 100; BIO 100A; CHE 101; CHE 101A; BIO 201 and BIO 201A; BIO 202 and BIO 202A*
Duration: 8
Introduces students to procedures for handling microbes, methods of identification of microorganisms (microscopic and by diagnostic media), preparation of stained slides and wet mounts, aseptic techniques, isolation of a single colony, preparation of a pure culture, as well as inoculation and interpretation of select diagnostic tests. This two-month course is a combination of lecture and laboratory activities. Students should take both lecture and lab courses concurrently and with the same instructor to ensure a consistent learning experience. Students who are retaking one of the two courses or present special circumstances should petition for exception to this requisite.

BIO 302 Biodiversity (4.50)
Prerequisite: *BIO 100 and BIO 100A or equivalent*
Duration: 4
Survey of the scope and importance of biodiversity. Examines concepts of biodiversity, with emphasis on the importance of biodiversity to ecosystem functioning and human society. Threats to biodiversity are considered, as well as conservation and preservation solutions.

BIO 305 Genetics (4.50)
Prerequisite: *BIO 100 and CHE 101, or BIO 162 and CHE 142*
Duration: 4
Principles of genetics and heredity. Topics include linkage and pedigree analysis, DNA replication and repair, gene expression and regulation, inheritance of traits, genetic engineering, relationship of genetics to human health, and application of genetics to understanding the evolution of species.

BIO 310 Evolution (4.50)
Prerequisite: *BIO 161; BIO 162; BIO 163; and BIO 169A*
Duration: 4
Evolutionary biology. Topics include the history of life, the fossil record, causes of microevolution (including natural selection and mutation), macroevolutionary processes (including speciation and extinction), evolutionary genetics and developmental biology ("evo-devo"), phylogeny construction, and taxonomy.

BIO 330 Ecology (4.50)
Prerequisite: *BIO 161; BIO 162; BIO 163; BIO 169A; CHE 141; CHE 142; CHE 143; CHE 149A*
Duration: 4
A study of the relationship of plants and animals to their environment and to one another. Emphasizes populations, the population-community interface and community structure and interactions within the ecosystem.

BIO 406 Cellular Biology (4.50)
Prerequisite: *BIO 161; BIO 162; BIO 163; BIO 169A; CHE 141; CHE 142; CHE 143; CHE 149A;* ***Corequisite:*** *BIO 406A*
Duration: 8
Introduction to cellular biology, including fundamentals of cell structure and function, inter- and intracellular communication through signaling and signal transduction, cell growth and energy generation through aerobic respiration and photosynthesis. Examination of cellular events and analysis of specific case studies in cell biology.

BIO 406A Cellular Biology Lab (1.50)
Corequisite: *BIO 406;* ***Prerequisite:*** *BIO 161; BIO 162; BIO 163; BIO 169A; CHE 141; CHE 142; CHE 143; CHE 149A*
Duration: 8
Hands-on laboratory course, taken concurrently with cell biology lecture. This lab emphasizes concepts and techniques essential in cellular biology, including bacterial and eukaryotic cell culturing, gene editing tools, quantitative PCR, ELISA, and nucleic acid and protein analyses.

BIO 407 Molecular Biology (4.50)
Prerequisite: *BIO 161; BIO 162; BIO 163; BIO 169A; CHE 141; CHE 142; CHE 143; CHE 149A; BIO 305;*
Corequisite: *BIO 407A*
Duration: 8
An introduction to molecular biology focusing on gene structure, organization, regulation and expression. Topics in genetic engineering and genome evolution are covered, as well as DNA replication, recombination, transcription and post-transcriptional mechanisms in both eukaryotic and prokaryotic cells.

BIO 407A Molecular Biology Lab (1.50)
Corequisite: *BIO 407;* ***Prerequisite:*** *BIO 161; BIO 162; BIO 163; BIO 169A; CHE 141; CHE 142; CHE 143; CHE 149A; BIO 305*
Duration: 8
Hands-on laboratory course that emphasizes techniques essential to molecular biology including DNA extraction, purification and quantification; polymerase chain reactions; and restriction enzyme digestion.

BIO 414 Invertebrate Zoology (4.50)
Prerequisite: *BIO 161; BIO 162; BIO 163; BIO 169A; CHE 141; CHE 142; CHE 143; CHE 149A;* ***Corequisite:*** *BIO 414A*
Duration: 4
Comparative study of invertebrates: taxonomy, structure, physiology, reproduction, evolution, and behavior.

BIO 414A Invertebrate Zoology Lab (1.50)
Corequisite: *BIO 414*
Duration: 4
Hands-on laboratory complement of invertebrate zoology, involving specimen investigations, demonstrations, and experiments. Contact hours (45.0) are based on a 3:1 ratio; i.e., 3 lab hours = 1 lecture hour equivalent.

BIO 416 Vertebrate Zoology (4.50)
Corequisite: *BIO 416A;* ***Prerequisite:*** *BIO 161; BIO 162; BIO 163; BIO 169A; CHE 141; CHE 142; CHE 143; CHE 149A*
Duration: 4
Study of the life of Vertebrates integrating the anatomy, physiology, ecology, evolution and behavioral adaptations that enable them to survive effectively in their natural environment.

BIO 416A Vertebrate Zoology Laboratory (1.50)
Corequisite: *BIO 416*
Duration: 4
Hands-on laboratory complement of vertebrate zoology, involving specimen investigations, anatomical examination, and live observations when feasible.

BIO 420 Animal Behavior (4.50)
Prerequisite: *BIO 100A; BIO 161; BIO 162; BIO 163*
Duration: 4
Study of animal behavior, integrating genetic, physiological, ecological, and evolutionary perspectives.

BIO 440 Botany (4.50)
Prerequisite: *BIO 161; BIO 162; BIO 163; BIO 169A; CHE 141; CHE 142; CHE 143; CHE 149A*
Duration: 4
Plant biology, including structure, function, evolution, taxonomy, and diversity of major groups of plants.

BIO 450 Natural History of California (4.50)
Prerequisite: *BIO 100 and BIO 100A, or BIO 161; BIO 162; BIO 163 and BIO 169A*
Duration: 4
Study of the flora, fauna, and biomes of California. This course includes field trips, with sites selected for each academic center within the University.

BIO 460 Marine Biology (4.50)
Prerequisite: *BIO 161 with a minimum grade of C. Student must have taken General Biology or equivalent ; BIO 162 with a minimum grade of C. Student must have taken General Biology or equivalent ; BIO 163 with a minimum grade of C. Student must have taken General Biology or equivalent*
Duration: 4
Global approach to the science of marine biology. Study of life in the marine environment and the structure and function of various marine ecosystems such as coral reefs, mangroves, and estuaries. Analysis and evaluation of the human impact on ocean ecology.

BIO 470 Bioinformatics (4.50)
Corequisite: *BIO 470A;* ***Prerequisite:*** *BIO 161 with a minimum grade of C-. Student must have passed the class with a C- or better; BIO 162 with a minimum grade of C-. Student must have passed the class with a C- or better; BIO 163 with a minimum grade of C-. Student must have passed the class with a C- or better*
Duration: 8
Analysis of biotechnology-related information using software tools to store, manipulate, and extract information from protein and nucleic acid sequence data. Topics include genome annotation, gene and protein prediction, sequence alignment, and analysis of aligned sequences in the description of patterns of protein or species relationships and gene expression.

BIO 485 Contemporary Topics in Biology (4.50)
Prerequisite: *BIO 305, or BIO 310, or BIO 330*
Duration: 4
Examination of current topics in biology. Emphasis on evaluation, discussion, and analysis of peer-reviewed literature.

BIS 405 Interdisciplinary Sciences (4.50)
Prerequisite: *BIS 301;* ***Recommended: Prior completion of:*** *MTH 204, or MTH 215*
Duration: 4
This elective is open to non-science majors. This trans-disciplinary course is a comprehensive team science approach to learning the basic concepts of genetic anthropology, human evolution, migration and cultural diversity, genetics and human variation, and epidemiology of disease. It will make use of computer technology. Students will participate in virtual learning environments and be introduced to interdisciplinary case studies. Teams of students will engage in investigative data search and analysis. Patterns of human migration will be examined within the context of cultural diversity, language, and the impact of environment on disease.

BIS 499 Interdisciplinary Studies Proj (4.50)
Prerequisite: *BIS 301; BIS 400 and Any other FIVE program courses*
Duration: 8
Eight-week, 4.5 quarter unit capstone course that focuses on portfolio and research methodologies. Designed to provide students with an opportunity to integrate lessons learned from interdisciplinary portfolio-building and understand the craft of interdisciplinary research. Main course content areas include: 1) Portfolio packaging and interdisciplinary analysis on a topic as a model for students, 2) Internet research, 3) Developing an interdisciplinary research project, 4) Paper editing, 5) Constructing a sound argument, and 6) Clarifying elements across disciplinary boundaries. Grading is H, S or U only. Course is eligible for In Progress (IP) grade. Designed to be taken toward the end of the BALA program.

BUS 485A Capstone Strat Bus Policy I (4.50)
Prerequisite: *MNS 205; MTH 210; MTH 215, or MTH 220 and ECO 203; ACC 201; ACC 202; LAW 204; BIM 400; MGT 309; MGT 400; FIN 310; MNS 407; MKT 302A; IBU 430; MGT 451*
Duration: 4
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.

CEE 300 Advanced Engineering Math (4.50)
Prerequisite: *CSC 209 and CSC 310*
Duration: 4
This course introduces the mathematical fundamentals and numerical methods for engineering practice. Emphasis is placed on mathematical modeling using differential equations and associated numerical methods for solutions. The topics include complex numbers, differential equations, systems of linear differential equations, Laplace transform and their applications in engineering. MATLAB is introduced as a tool for solving mathematical problems that require numerical solutions.

CEE 310 Circuit Analysis (4.50)
Prerequisite: *CEE 300;* ***Corequisite:*** *CEE 310L*
Duration: 8
An overview of basic circuit design and analysis. Introductory topics include: Ohm's law, Kirchhoff's Laws, the mesh-current method, and Thévenin and Norton Equivalent circuits. Students will apply these topics to RL, RC, and RLC circuit analysis. Advanced topics include the understanding and application of operational amplifiers.

CEE 310L Circuit Analysis Lab (1.50)
Corequisite: *CEE 310*
Duration: 8
Centers on experiments covering the theoretical material in CEE310. Students will design, implement and analyze basic circuits. Experiments include: Ohm's law; Kirchhoff's laws; series and parallel resistors; voltage and current dividers; delta-wye configurations; mesh-current and node-voltage analysis; superposition and Thevenin equivalents; inverting and non-inverting amplifier circuits; series RC and RL circuits.

CEE 324 Linear Systems and Signals (4.50)
Prerequisite: *CEE 310;* ***Corequisite:*** *CEE 324L*
Duration: 8
Introduction to fundamental concepts, analysis and applications of continuous-time and discrete-time signals and linear systems. Course contents include time-domain and frequency-domain characterization of signals and systems, Fourier Series and Fourier Transform, basic sampling and filtering concepts, the Laplace Transform, and the Z Transform etc. The course will be supplemented with MATLAB based exercises.

CEE 324L Linear Systems and Signals Lab (1.50)
Corequisite: *CEE 324*
Duration: 8
This lab course provides a collection of hands-on experiments for supporting the lectures of CEE 324. The experiments are designed to enable students to understand the theory behind signals and systems as well as validate the theory with real-world examples. The lab will cover time-domain and frequency-domain characterization of signals and systems, transforms, filtering and sampling.

CEE 340 Embedded Systems (4.50)
Prerequisite: *CSC 252 and CEE 420 and CSC 340;* ***Corequisite:*** *CEE 340L*
Duration: 8
This course introduces embedded systems design concepts. Students will explore designing embedded systems to solve real world problems using appropriate hardware and programming languages C and C++. Topics covered include Digital Input and Output; Analog Output; Analog Input; Serial Communications; Liquid Crystal Displays; Interrupts, Timers and Tasks; Memory, Data Management, and connected networked device design basics to create everyday solutions. This course is a corequisite with the CEE340L lab, in which students will participate in laboratory exercises using an ARM-based controller system board and peripherals.

CEE 340L Embedded Systems Lab (1.50)
Corequisite: *CEE 340*
Duration: 8
This is a practical hands-on course that enables the creation of real-world embedded solutions. Students will apply what they have learned in CEE340 to systematically design, implement, test, and deploy solutions to real-world problems. The course provides a number of laboratory exercises using ARM based microcontroller and peripherals enabling students to eventually build more complex solutions interfacing with various devices, programming I/O ports and interrupts, and working with sensors and actuators.

CEE 420 Microelectronics (4.50)
Prerequisite: *CEE 310;* ***Corequisite:*** *CEE 420L*
Duration: 8
Describes the fundamentals of semiconductor devices and microelectronic circuits. Students will explore the terminal characteristics of p-n junction and Zener diodes, diode circuits, and transistors and transistor circuits. Specifically, discussion includes principles of MOSFET and BJT operations, biasing technology, and their application in transistor circuit analysis.

CEE 420L Microelectronics Lab (1.50)
Corequisite: *CEE 420*
Duration: 8
This lab course is designed to supplement the material of CEE420, to assist students in obtaining a better understanding of the operation of microelectronic circuits. Laboratory activities include the design, construction, computer simulation, and analysis of transistor circuits, multi-stage amplifiers, operational amplifiers, current drivers and other semiconductor circuits.

CEE 430 Digital Signal Processing (4.50)
Prerequisite: *CEE 324*
Duration: 4
Describes all the necessary tools and techniques required to understand and design digital signal processing systems. Topics include: transformations of discrete time signals, the fast Fourier transform, and the z-transform. Advanced topics include: A/D and D/A converters and digital signal filtering.

CEE 440 VLSI Design (4.50)
Prerequisite: *CEE 420*
Duration: 4
VLSI design introduces students to fabrication and layout techniques necessary to design large scale systems. Specific topics include: CMOS logic, MOSFET theory, layout design rules including all the factors required for an effective circuit design. Advanced topics include: capacitance requirements, clocking, and power consumption, circuit simulation and performance estimation.

CEN 320 Surveying, Metrics and GIS (4.50)
Prerequisite: *EGR 219*
Duration: 4
Land and topographic surveying with global position systems and geographic information systems (GIS). Fundamentals of distance, leveling angles, theodolites, transverse surveys and computations. Hands-on with ArcView GIS to understand the basic GIS concepts and applications in land planning.

CEN 323 Structural Analysis (4.50)
Prerequisite: *EGR 220 and EGR 225*
Duration: 4
Introduction to analysis of wood, steel and concrete structures. Basic structural loads, forces and moments in beams, columns and trussed systems. Internal reactions and method of sections. Stress, sheer and deformation in beams and columns. Basic design fundamentals.

CEN 325 Soil Mechanics and Foundation (4.50)
Prerequisite: *CEN 323*
Duration: 4
An introduction to soil mechanics and foundation engineering. The course teaches the students how to solve certain fundamental problems related to consolidation, shear strength, and design of shallow and deep foundations; and familiarizes students with relevant terms and soil tests so that they can work effectively with geotechnical engineering specialists. The course features soil basics, including their derivation,identification and classification. The principles of water flow in soils, settlement and heave, and shear strength of soils will be discussed. Consolidation problems, factors of safety for foundations, and foundation settlement prediction will also be covered.

CEN 410 Constr Materials and Methods (4.50)
Prerequisite: *MTH 215*
Duration: 4
An overview of the basic materials and methods utilized in construction projects. Wood, steel, masonry, glass, and concrete and other material are introduced along with their associated construction systems in foundations, framing, cladding, windows, doors, finishes and roofing.

CEN 413 Plans and Specifications (4.50)
Prerequisite: *EGR 219*
Duration: 4
Drawing and interpretation of plans, sections, details, symbols, notes and details in architectural, construction and shop drawings. Coordination and reference between drawings. Specification creation incorporating material properties, construction techniques and legal factors. Industry standards from AIA and CSI are presented.

CEN 416 Mech and Electrical Systems (4.50)
Prerequisite: *MTH 215*
Duration: 4
The impact of M/E systems on the design and construction process including energy considerations. Fundamentals of HVAC, plumbing, fire protection, electrical distribution, lighting, information systems, and vibrations in the building system.

CEN 419 Est., Scheduling and Control (4.50)
Prerequisite: *CEN 410*
Duration: 4
An introduction to the fundamentals of construction management, estimating, scheduling and control. Quantity takeoff estimations for material, time, equipment and overhead are presented. Activity durations, scheduling and project updating for control are covered.

CEN 420 Est., Scheduling & Control II (4.50)
Prerequisite: *CEN 419*
Duration: 4
An advanced course built on the fundamentals of construction management, estimating, scheduling and control introduced in CEN 419. Topics concerning quantity takeoff estimations for material, time, equipment, overhead, critical path, and precedence networks for activity durations, scheduling, and project updating for control are presented.

CHE 101 Introductory Chemistry (4.50)
Recommended Preparation: *MTH 204*
Duration: 4
An introductory chemistry course where students will learn fundamental concepts of General Chemistry. Main topics include atoms, elements and the periodic table, chemical bonding, molecular structure, acids, bases, chemical reactions, and chemical equilibrium. The course provides a strong foundation in chemistry, allowing students to apply the chemical processes that occur in nature and our bodies to a broad understanding of how chemistry plays a central role in everyday life.

CHE 101A Introductory Chemistry Lab (1.50)
Prerequisite: *CHE 101, or CHE 141 for Science Majors.*
Duration: 4
In this course, students will complement their knowledge of chemistry by applying the chemical principles discussed in the lectures to hands-on experiments. Topics covered in this course include the use of separation techniques based on physical and chemical properties, chemical reactions and stoichiometry, titrations, properties of solutions, chemical equilibrium, spectrophotometry, and calorimetry. Upon successful completion of this laboratory course, students should be able to use the concepts and calculations learned to explain facts and observations in their everyday lives.

CHE 141 General Chemistry 1 (4.50)
Prerequisite: *MTH 204; MTH 215*
Duration: 4
General Education Chemistry course, first in a series of three. Content equivalent to one semester of General Chemistry I, including foundations of chemistry, electronic structure, periodic properties, composition of substances and solutions, reaction stoichiometry, gases laws, and thermochemistry.

CHE 142 General Chemistry 2 (4.50)
Prerequisite: *CHE 141*
Duration: 4
CHE 142 is a General Education course equivalent to the second semester of General Chemistry, covering bonding, solutions, chemical kinetics, chemical equilibrium, and acids/bases. Concepts learned in General Chemistry I, CHE 141, are required to succeed in this course.

CHE 150 Introductory Organic Chemistry (4.50)
Prerequisite: *CHE 101 and CHE 101A, or CHE 141 and CHE 142 and CHE 143 and CHE 149A; Prerequisites for this course are NOT required for BSCLS students.*
Duration: 4
Introduces the basics of organic chemistry. Covers the structures, properties, and reactions of common organic compounds and functional groups. Students will explore the significance of organic chemistry in various scientific disciplines, particularly in biological, health, and environmental sciences.

CHE 150A Introductory Organic Chem Lab (1.50)
Prerequisite: *CHE 150 with a minimum grade of C-. A student must have passed the lecture to take the lab.*
Duration: 4
Designed to introduce students to the practical aspects of organic chemistry, this course covers basic techniques for handling, analyzing, and identifying organic compounds. Chemistry lab safety methods are discussed in detail. Students learn how to synthesize simple, small organic molecules and carry out a variety of organic chemistry lab procedures.

CHE 350 Organic Chemistry I (4.50)
Prerequisite: *CHE 142*
Duration: 4
Introduces students to the chemistry of carbon compounds and their properties, structures, and reactions. It emphasizes the study of the properties and reactions of aliphatic, halides, alcohols, esters, thiols and sulfides, and aromatic compounds, which, in conjunction with selected experiments, gives an understanding of the mechanisms of organic reactions.

CHE 351 Organic Chemistry II (4.50)
Prerequisite: *CHE 350*
Duration: 4
Study of the properties and reactions of aromatic compounds, aldehydes, ketones, carboxylic acids, amines, and amides. In addition, students are introduced to the use of modern spectroscopic techniques to analyze and predict structures of organic molecules.

CHE 360 Biochemistry I (4.50)
Prerequisite: *CHE 350; CHE 351*
Duration: 4
Study of the structures and functions of important classes of biological molecules: proteins, carbohydrates, nucleic acids, and lipids. A strong and current background in chemistry is required to successfully complete this course.

CHE 361 Biochemistry II (4.50)
Prerequisite: *CHE 360*
Duration: 4
A continuation of CHE 360. This course concentrates on the principles of cellular regulatory processes and synthesis of biological molecules.

COM 615 Applied Research Methods (4.50)
Duration: 4
Presents fundamentals of research underlying communication campaigns and programs. Covers qualitative and quantitative methodologies, secondary research, internal market intelligence, and data analysis. Offers practical experience with techniques to identify and reach audiences and the publics and to track the results of campaigns. Teaches research strategies to develop communications that fulfill organizational goals.

COM 660 Capstone Project (4.50)
Duration: 4
Explores advanced applications of strategic communication by creating a professional e-portfolio or a real-world project. This capstone course enables students to master integrating research, analysis, strategic planning, and ethical considerations to produce impactful communication solutions. The course prepares students for strategic roles across various organizational contexts, emphasizing practical outcomes and professional development. Grading is by H, S, or U only.

CSC 208 Calculus for Comp. Science I (4.50)
Prerequisite: *MTH 215*
Duration: 4
(Cross-listed and equivalent to MTH220) Focus on differential and integral calculus with applications. Topics include limits and continuity, derivatives, standard rules of differentiation including chain rule, exponential and logarithmic forms, curve sketching, definition of anti-derivatives; integration rules including substitution and by parts, coverage of Fundamental Theorem of Calculus and a brief exposure to numeric integration. Students may not receive credit for both CSC 208 and MTH 220.

CSC 209 Calculus for Comp. Science II (4.50)
Prerequisite: *CSC 208*
Duration: 4
Continuation of Calculus I with emphasis on understanding of concepts and developing problem solving techniques and strategies. Topics include integration of trigonometric functions, functions of several variables, convergence of series and sequences. Applications in the areas of series approximation, continuous probability distributions, random variables, and modeling are discussed and examined.

CSC 220 Applied Probability & Stats. (4.50)
Prerequisite: *CSC 208, or MTH 221; EGR 220*
Duration: 4
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 (4.50)
Prerequisite: *MTH 215*
Duration: 4
This course introduces modern programming design techniques using C++. A study of fundamental control structures in C++ as well as syntax and semantics 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++ (4.50)
Prerequisite: *CSC 242*
Duration: 4
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 (4.50)
Prerequisite: *MTH 215*
Duration: 4
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 (4.50)
Prerequisite: *CSC 262*
Duration: 4
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 (4.50)
Prerequisite: *CSC 252, or CSC 272*
Duration: 4
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 310 Linear Algebra and Matrix Comp (4.50)
Prerequisite: *CSC 252, or CSC 272*
Duration: 4
The course includes the study of vectors in the plane and space, systems of linear equations, matrices, determinants, vectors, vector spaces, linear transformations, inner products, eigenvalues and eigenvectors. The course will approach the study of linear algebra through computer-based exercises. Technology will be an integral part of this course. Students will also develop experience applying abstract concepts to concrete problems drawn from engineering and computer science.

CSC 331 Discrete Structures and Logic (4.50)
Prerequisite: *CSC 252, or CSC 272*
Duration: 4
(Cross-listed and equivalent to MTH 325) A theoretical foundation for computer science. Introduction to topics such as sets, propositional logic, Boolean algebra, counting techniques, recursive equations and solution techniques, graph algorithms with application to trees. Introduction to mathematical proofs. Students may not receive credit for both CSC 331 and MTH 325.

CSC 335 Data Structures and Algorithms (4.50)
Prerequisite: *CSC 300; CSC 331*
Duration: 4
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 340 Digital Logic Design (4.50)
Prerequisite: *CSC 331;* ***Corequisite:*** *CSC 340L*
Duration: 4
Foundation in design and analysis of the operation of digital gates. Design and implementation of combinational and sequential logic circuits. Concepts of Boolean algebra, Karnaugh maps, flip-flops, registers, and counters along with various logic families and comparison of their behavior and characteristics.

CSC 340L Digital Logic Design Lab (1.50)
Prerequisite: *CSC 331;* ***Corequisite:*** *CSC 340*
Duration: 4
A study of basic digital logic circuit design and implementation. Circuit schematic development and computer modeling and simulation of digital systems. Experiments explore designs with combinational and sequential logic. Students work through design activities, which include testing, troubleshooting and documentation.

CSC 342 Computer Architecture (4.50)
Prerequisite: *CSC 340 and CSC 340L*
Duration: 4
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 436 Comp. Communication Networks (4.50)
Prerequisite: *CSC 331*
Duration: 4
An in-depth study of fundamental concepts in the design and implementation of computer communication networks. Coverage of core problems such as framing, error recovery, multiple-access, flow control, congestion control, routing and end-to-end reliability. Topics include basics of switched communication networks, packet switch architecture, TCP/IP networking, routing algorithms, Quality-of-Service networks. Network tools are applied in quantitative modeling and analysis of networks.

CSC 600 Advanced Programming (4.50)
Prerequisite: *CSC 242 and CSC 252 and CSC 262; Students with a baccalaureate degree in Computer Science (CS), Computer Engineering (CE), Software Engineering (SE), or Information Systems (IS) do not need these prerequisites.*
Duration: 4
Review of structured, object oriented, event driven programming and java graphics. Coverage of java generic classes and lambda streams. Application development with multi-threading and database connectivity features.

DEN 308 Computer Aided Engineering I (4.50)
Prerequisite: *EGR 219*
Duration: 4
Introduction to simulation modeling and analysis, model development, intermediate and detailed modeling, modeling issues and techniques.

DEN 423 Human Factors in Engineering (4.50)
Prerequisite: *MTH 215*
Duration: 4
Consideration of human characteristics in the requirements for design of the systems, products and devices. Human-centered design with focus on human abilities, limitations and interface.

DEN 426 Reliability Engineering (4.50)
Prerequisite: *MTH 215*
Duration: 4
An introduction to reliability engineering with emphasis on practical applications and the mathematical concepts. Cover mechanical, electronic and software failure mechanisms, design and testing.

DEN 429 Product Design Optimization (4.50)
Prerequisite: *MTH 215*
Duration: 4
This course focuses on analytical and empirical tools that allow designers and manufacturing engineers to predict the manufacturing and assembly cost estimates for optimized design.

DEN 432 Concurrent Design Engineering (4.50)
Prerequisite: *MTH 210, or CSC 220*
Duration: 4
An introduction to the concepts, methodologies and practices of the concurrent engineering design environment for effective and efficient integration of products, systems and manufacturing processes.

DEN 435 Design & Analysis of Experimen (4.50)
Prerequisite: *CSC 220; DEN 417*
Duration: 4
Introduction to the concepts of making the design and analysis of engineering experiments more effective and efficient. Coverage includes advanced techniques to analyze experimental results, Taguchi's robust design strategy, combination designs, and Qualitek-4 software for automatic experiment design and analysis.

EGR 219 Intro to Graphics and Auto CAD (4.50)
Prerequisite: *MTH 215*
Duration: 4
Introduction to the latest version of Auto CAD software for two- and three-dimensional modeling, engineering graphics and technical drawings.

EGR 220 Engineering Mathematics (4.50)
Prerequisite: *MTH 215*
Duration: 4
An examination of the major mathematical tools for engineers and scientists.

EGR 230 Electrical Circuits & Systems (4.50)
Prerequisite: *MTH 215*
Duration: 4
A study of fundamentals of direct and alternating current, basic circuit theory, three-phase circuits, transformers, electrical generators, and motors.

EGR 310 Engineering Economics (4.50)
Prerequisite: *MTH 215*
Duration: 4
Economic Analysis for decision making with emphasis on rate of return, net present value, benefit-cost and multi-objective evaluation methods. Cost estimation and alternative analysis.

EGR 316 Legal&Ethicl Const/Engr Issues (4.50)
Duration: 4
Course focuses on basic principles and new developments in the legal aspects of architectural, engineering and construction processes. Coverage includes contractor licensing, professional design services, liability, intellectual property, and competitive bidding.

EGR 320 Scientific Problem Solving (4.50)
Prerequisite: *CSC 208, or EGR 220*
Duration: 4
The scientific approach to problem solving through analysis and design are presented using modern computer science and engineering examples. Critical thinking and communication skills will be used to interpret and present results from real-world case studies where computers were used to solve scientific problems.

EGR 320L Scientific Problem Solving-LAB (1.50)
Prerequisite: *EGR 320 with a minimum grade of C. The laboratory experiments in EGR 320L build on the content covered in EGR 320 (mechanical, electrical, and thermodynamics problem solving concepts).*
Duration: 1 month
Using hands-on computer tools, the scientific approach to problem solving through analysis and design is applied in this laboratory course. Results from these hands-on activities will be interpreted and presented both on an individual basis and in a team environment. Critical thinking and communication skills will be used to interpret and present results of scientific investigations.

ENG 620A Variable Topic Literary Period (4.50)
Duration: 4
Advanced, historically oriented study of a literary period, such as English Medieval, Romantic, or Victorian literature, or a movement, such as the Beat Generation. A variable topic is chosen by the instructor. This course can be used for graduate-level literary theme course transfer credit with the approval of academic program directors.

ENG 620C Metafiction (4.50)
Duration: 4
Examination of the literary phenomenon known as metafiction. The student is exposed to novels, short stories, and films that illuminate this type of fiction either directly or by contrast. These works are studied from two perspectives: (1) narrative and meta-narrative form and (2) content.

ENG 620D Contemporary Science Fiction (4.50)
Duration: 4
Focuses on several representative works of 21st-century literary science fiction. In addition to analyzing how contemporary concerns (such as AI and climate change) are represented in this literature, students research the real-world implications of these concerns.

ENG 620E Dark English Romanticism (4.50)
Duration: 4
The study of English Romanticism from the late 18th and early 19th centuries, including its historical development, terminology, and contemporary critical views.

ENG 620F American Gothic (4.50)
Duration: 4
Study of American Gothic tales and novels from the 18th century to the 21st century, including historical development, ideology, terminology, and contemporary critical perspectives in the field.

ENG 620G Medieval Literature (4.50)
Duration: 4
Study of the medieval literature of England, 1050-1500, including historical development, ideology, terminology, and contemporary critical views in the field.

ENG 620H American Romanticism (4.50)
Duration: 4
Study of American literature from the Romantic period, including historical development, ideology, terminology, and contemporary critical views in the field.

ENG 620I 18th Century English Novel (4.50)
Duration: 4
Study of the 18th-century English novels by Daniel Defoe, Samuel Richardson, Henry Fielding, and Laurence Sterne, including historical development, ideology, terminology, and contemporary critical views in the field.

ENG 620J Sensation Novel (4.50)
Duration: 4
Study of the sensation novels by Charles Dickens, Wilkie Collins, and Mary Elizabeth Braddon, including their historical development, ideology, terminology, and contemporary critical views in the field.

ENG 620K Greatest Generation (4.50)
Duration: 4
Study of American writers from the Greatest Generation (1930-1960), including historical development, ideology, terminology, and contemporary critical views in the field.

ENG 620L Harlem Renaissance (4.50)
Duration: 4
Study of the literature of the Harlem Renaissance as part of this pivotal era in which writers, musicians, and artists of the African Diaspora produced literary, visual, and philosophical works exploring the complexities of Black identity and culture. It explores historical development, ideology, terminology, and contemporary critical views.

ENG 668A Variable Topic Film Genre Stud (4.50)
Duration: 4
An intensive study of the conventions, artists, and styles associated with specific genres, as well as the historical circumstances in which each genre appeared. A variable topic chosen by the instructor. This course can be used for graduate-level film genre transfer credit with the approval of academic program directors.

ENG 668C Science Fiction Film (4.50)
Duration: 4
Examines significant representative examples of the genre of science fiction cinema, analyzing them as texts that present different perspectives on themes relating to the human condition.

ENG 668D Horror Film (4.50)
Duration: 4
Focuses on the history, iconography, and mythology of horror films. Students will analyze the major horror sub-genres subject matter, themes, and visual style, from psychological horror to postmodern horror films.

ENG 668E The Musical (4.50)
Duration: 4
Focuses on the critical analysis of the Hollywood musical through the lens of genre theory, emphasizing how the conventions of the cinematic musical are constructed through narrative and cinematic techniques.

ENG 668F Animation (4.50)
Duration: 4
History and aesthetics of animation as a cinematic medium are studied through the analysis of short films and feature-length films. Particular attention is given to the historical development of the medium and how its formal properties enabled different forms of expression to evolve over time.

ENG 680A Variable Topic Literary Theme (4.50)
Duration: 4
Study of a literary motif or theme over time and/or across cultures. A variable topic chosen by the instructor. This course can be used for graduate-level literary theme transfer credit with the approval of academic program directors.

ENG 680C Literary Noir/Noir Mediascape (4.50)
Duration: 4
Study of noir themes, visuals, character types, and plots in classic crime novels and across various media, paying attention to the unique affordances and constraints of each medium.

ENG 680D Detective Fiction (4.50)
Duration: 4
Historical overview of mystery and detective fiction focuses on the genre's key thematic preoccupation with how logic and chaos are represented and the implications of the different forms that these themes take in representative novels and short stories.

ENG 680E Vampires (4.50)
Duration: 4
A study of vampires in both literature and film focuses on the context of their historical period, using critical concepts and applying notions of critical thinking to understand the works studied.

ENG 680F Gothic Literature (4.50)
Duration: 4
Study of the rise of Gothic literature during the eighteenth and nineteenth centuries. It examines the origins of the genre, focusing on the concepts of the supernatural, terror, horror, and religion to critique societal norms and values.

ENG 680G The Female Gothic (4.50)
Duration: 4
A study of the Female Gothic in short stories and novels examines the dark and mysterious aspects of the Gothic genre as they relate to gender, focusing on the concepts of the supernatural, religion, terror, horror, and the domestic space as a means to critique societal norms and values.

ENG 680H Gothic Prisons (4.50)
Duration: 4
Study of Gothic prisons focusing on concepts of the supernatural, sex, terror, horror, and religious space as a means to critique societal norms and values.

ENG 680I Modern Gothic (4.50)
Duration: 4
Study of modern iterations of the Gothic genre, focusing on the concepts of the supernatural, horror, and nostalgia as a means to critique societal norms and values.

ENG 680J Home in British Literature (4.50)
Duration: 4
Study of the home in British literature focuses on the concept of the home not only as a contested domestic space but also as the location where hope and fear intersect with society as a whole.

ENG 680K Home in American Literature (4.50)
Duration: 4
Study of the home in American literature focuses on the concept of the home as a contested domestic space and as the location where hope and fear intersect with society as a whole.

ENG 680L Modernism (4.50)
Duration: 4
Focuses on early 20th-century literary texts that are representative of modernist form and content. Emphasizes close-reading methods for analyzing literary texts as well as an historical approach to understanding the origins and development of this intertwined art and literary movement.

ENG 690A Variable Topic Major Author (4.50)
Duration: 4
A critical study of the work of a single author. The variable topic is chosen by the instructor. It can be used for graduate-level literary theme course transfer credit with the approval of academic program directors.

ENG 690C Jane Austen (4.50)
Duration: 4
A critical study of Jane Austen's novels focuses on the interplay between her biography, cultural influences, and the literary context.

ENG 690D The Brontë Sisters (4.50)
Duration: 4
A critical study of the Brontë sisters' fiction examines their novels and short stories, focusing on the interplay between the sisters' biographies, cultural influences, and the literary context.

ENG 690E Edgar Allan Poe (4.50)
Duration: 4
A critical study of Poe's fiction focuses on the interplay between biography, cultural influences, and the literary context.

ENG 690F William Shakespeare (4.50)
Duration: 4
A critical study of the works of William Shakespeare, with special emphasis given to biography, culture, and literary context.

ENG 690G T. S. Eliot (4.50)
Duration: 4
A critical study of the works of T. S. Eliot, with special emphasis on biography, culture, and literary context.

ENG 690H Walt Whitman (4.50)
Duration: 4
A critical study of the works of Walt Whitman, with special emphasis on biography, culture, and literary context.

ENG 690I Geoffrey Chaucer (4.50)
Duration: 4
A critical study of the works of Geoffrey Chaucer, with special emphasis on biography, culture, and literary context.

ENG 690J John Steinbeck (4.50)
Duration: 4
A critical study of the works of John Steinbeck, with special emphasis on biography, culture, and literary context.

ENG 690K Ann Radcliffe (4.50)
Duration: 4
A critical study of the works of Ann Radcliffe, with special emphasis given to her biography, culture, literary context, and impact on the Gothic tradition and Romantic literature.

ENG 690L James Baldwin (4.50)
Duration: 4
A critical study of the works of James Baldwin, with special emphasis given to biography, culture, and literary context.

ENG 690M Virginia Woolf (4.50)
Duration: 4
A critical study of the works of Virginia Woolf, with special emphasis on biography, culture, and literary context.

ENM 605 Advanced Engineering Economics (4.50)
Duration: 4
Advanced Engineering Economics focuses on two major areas, namely, engineering economic financial analysis for projects, and evaluate the impact of continually changing technology on businesses. Engineering financial analysis will focus on pure financial aspects covering the present and future value of money, NPV, ROI, IRR, and their application to project costs. The second part will focus on different business models employed by the various industry segments to gain insight into the interplay between business models and the engineering economy due to advancing technology. Finally, the course will analyze the impact of global competitive pressures at national and international levels on technology choices.

ETH 100 Intr to Social Justice Studies (4.50)
Duration: 4
This introductory course presents a survey of theoretical, conceptual, and practical approaches to the study of social justice, as well as the study of socio-political systems from a justice-centric framework. Students will be challenged to interpret issues of social inequality, equity, oppression, and resistance at the interpersonal, local, national, and international levels.

HUB 441 Research Design and Analysis (4.50)
Prerequisite: *ENG 102; MTH 210; PSYC 100*
Duration: 4
Examines various research approaches used to understand human behavior and experience. The knowledge obtained in this course includes psychological research concepts and methods, as well as ethical principles guiding research; proficiencies developed include matching research design to research questions, elementary analysis of quantitative and qualitative data, and critical evaluation of published research findings.

ITI 691 Inspired Teaching Inquiry (4.50)
Prerequisite: *ITL 600; ITL 604; ITL 606*
Duration: 4
This course explores the intersection of instructional design, student psychology, and technology integration in K-12 education. Participants will learn to conduct in-depth instructional analyses to identify areas of improvement in lesson delivery and evaluate psycho-social behavioral profiles to better understand the modern K-12 learner using the Lewis Cultural Triangle framework. Additionally, the course examines the impact of mobile technology and social media on student learning processes and equips participants with the skills to design and produce a basic Omnidoc, focusing on human factors, design philosophy, and strategies for effective remote learning.

ITI 693 Inspired Student Learning (4.50)
Prerequisite: *ITI 691*
Duration: 4
This course empowers participants to integrate innovative narrative-based learning design techniques into their teaching practices. Using insights and skills from ITI691, students plan to use narrative-based Omnidoc designs to address content gaps. Through hands-on training, participants will develop the ability to create customized media content using various video acquisition devices. These skills will be applied to crafting compelling instructional materials and assessment tools. Students will also learn to program PowerPoint software as an interactive, non-linear content delivery tool, enabling flexible access to learning content. The course culminates in the production of a foundational skeletal PowerPoint project, The Signature project, which has students producing the structural foundation for their final ubiquitous learning student learning content.

ITI 695 Inspired Learning Technology (4.50)
Prerequisite: *ITI 693*
Duration: 4
This course culminates by combining the "PCA" identification, research, design, and omni doc content construction process. The course empowers educators to create visually impactful, interactive learning experiences using Omnidocs. Students will explore the principles of visual engagement and apply them to Omnidoc design, leveraging generative AI tools to produce high-quality multimedia content, including photos, audio, and video. By the end of the course, students will produce a polished, professionally designed, interactive Omnidoc in PPT or PDF format ready for ubiquitous learning (uLearning) applications. The finished document will be accompanied by a presentation that explains Omnidoc's advanced design characteristics and defends how those characteristics would address the gaps in content or learning established earlier in the course series.

LAW 427 Demystifying AI: Law (4.50)
Duration: 4
This four-module course explores the transformative impact of artificial intelligence (AI) on the legal profession. Students will begin by examining the critical differences between human reasoning and AI responsiveness, fostering a deeper understanding of AI's capabilities and limitations. The course then explores the fundamentals of AI systems, including generative and analytical models, and their practical applications across various domains. Emphasis is placed on mastering prompt engineering, enabling students to develop effective strategies for interacting with AI tools and optimizing outputs. In the final module, the course focuses on AI's integration into legal practice, delving into its applications in legal research, predictive analytics, intellectual property issues, and ethical considerations, including copyright, plagiarism, and liability. By the end of the course, students will be equipped with the technical skills, critical thinking abilities, and ethical awareness needed to navigate the opportunities and challenges presented by AI in the legal field.

MNS 205 Intro to Quantitative Methods (4.50)
Duration: 4
Key mathematical and statistical concepts useful for understanding business problems and making informed decisions with the right tools are introduced. Concepts relate to numbers, formulas, linear equation models and descriptive statistics. Applications focus on personal decisions and decisions within businesses in the areas of finance, discounts, pricing, interest rates, loans, insurance, investment, payroll and taxes. Microsoft Excel is the software used in this class.

MTH 204 Mathematics Non-STEM Majors (4.50)
Prerequisite: *MTH 12A and MTH 12B or equivalent, or Accuplacer test placement into College Level Math*
Duration: 4
Designed to provide non-STEM majors with a comprehensive review of fundamental mathematics principles essential for academic success and real-world applications. Students explore key algebra, statistics, and probability concepts, building a strong foundation in problem-solving and analytical thinking. Emphasizing real-life applications, course also demonstrates how mathematical reasoning is used in decision-making across various fields, including social sciences, business, and the arts.

MTH 220 Calculus I (4.50)
Prerequisite: *MTH 215, or Accuplacer test placement*
Duration: 4
(Cross listed and equivalent to CSC208) An introduction to limits and continuity. It examines differentiation and integration concepts with applications to related rates, curve sketching, engineering optimization problems, and business applications. Students may not receive credit for both MTH220 and CSC208.

MTH 311 Topics from Geometry (4.50)
Prerequisite: *MTH 215, or Accuplacer test placement*
Duration: 4
A survey of the main concepts of Euclidean geometry with an emphasis on the axiomatic approach, constructions, logic of proof, and some ideas from non-Euclidean geometry including historical aspects. A study of axioms of Euclidean Geometry, inference rules, some fundamental theorems of Euclidean Geometry, and rigorous proofs will be offered.

MTH 317 Mathematical Modeling (4.50)
Prerequisite: *MTH 210; MTH 215*
Duration: 4
An introductory to mathematical modeling, utilizing a variety of diverse applications from physical, biological, business, social, and computer sciences. Discuss the limitations, as well as the capabilities, of mathematics as applied to understanding of our world. Teaches problem identification, models of solutions and model implementation. Graphing calculator is required.

MTH 325 Discrete Mathematics (4.50)
Prerequisite: *MTH 215*
Duration: 4
(Cross listed and equivalent to CSC331) This course studies combinatory and graph theory as the theoretical foundation for today's advanced technology. It analyzes algorithms, logic, circuits, number bases, and proofs. Ample applications (graphs, counting problems, Turing Machines, codes) examine the ideas of Euler, Boole, Floyd, Warshall, Dijkstra, Church and Turing, Shannon, Bernoulli. Graphing calculator is required. Students may not receive credit for both MTH325 and CSC331.

MTH 410 Technology in Math Education (4.50)
Prerequisite: *MTH 215, or MTH 301*
Duration: 4
Computer Technology in the Mathematics Classroom An overview of the computer-based technology in the mathematics classroom. Evaluates graphing calculators, and computer software such as Maple, Scientific Workplace, Geometer's Sketchpad, MiniTab, SPSS, and others to determine their value in illuminating concepts in the curriculum.

MTH 411 Number Theory (4.50)
Prerequisite: *MTH 215; MTH 416*
Duration: 4
A thorough examination of the fundamental principles of number systems. Topics explored include divisibility, Euclidean rings, irreducible polynomials, arithmetic functions, congruencies, the distribution of primes, and the Fundamental Theorem of Arithmetic. Active student engagement is prioritized through conjecture formulation, hypothesis testing, counterexample construction, logical argumentation, and proof development.

MTH 412 History of Mathematics (4.50)
Prerequisite: *MTH 215, or MTH 301*
Duration: 4
Examines currents in the development of mathematics and throughout ancient Egypt, Babylon, China, and the Middle East. Studies math's influence on society through the major events of Europe, contemporary developments, and some projections into the future, including the women and men who played key roles in the evolution of mathematics.

MTH 416 Algebraic Structures (4.50)
Prerequisite: *MTH 325; MTH 435*
Duration: 4
A look at groups, rings and fields, as well as applications of these structures. Discusses equivalence relations, Lagrange's Theorem, homomorphisms, isomorphisms, Cayley's Theorem and quaternions. Graphing calculator may be required.

MTH 417 Foundations of Geometry (4.50)
Prerequisite: *MTH 215, or MTH 311*
Duration: 4
A discussion of fundamental ideas and processes common to Euclidean and Non-Euclidean Geometries: projective, affine and metric geometry. Examines the interplay between inductive and deductive reasoning and formal and informal proof. Addresses uses in science (transformations, scaling), art (Escher-type tessellations, projections), architecture (three-dimensional figures) and computer science (fractals, computer-aided design).

MTH 433 Differential Equations (4.50)
Prerequisite: *MTH 323 and MTH 435*
Duration: 4
A study of ordinary differential equations with emphasis on linear equations and systems of linear equations. An analysis of the existence and uniqueness of solutions of ordinary differential equations with initial conditions, so called Cauchy problem. Examines linear differential equations of first, second and higher orders, and linear systems of ordinary differential equations. Stresses application to engineering problems.

MTH 435 Linear Algebra (4.50)
Prerequisite: *MTH 325*
Duration: 4
An examination of systems of linear equations and matrices, elementary vector-space concepts and geometric interpretations. Discusses finite dimensional vector spaces, linear functions and their matrix representations, determinants, similarity of matrices, inner product, rank, eigenvalues and eigenvectors, canonical form and Gram-Schmidt process. Computer software will demonstrate computational techniques with larger matrices. Graphing calculator or appropriate software may be required.

MTH 450A Mathematics Project Course (4.50)
Prerequisite: *Students must complete the major for a BS in Mathematics and complete an interview with the mathematics lead faculty before taking a project course. ; MTH 210; MTH 215, or MTH 220; MTH 221; MTH 322; MTH 323; MTH 311; MTH 325; MTH 435; MTH 433; MTH 411; MTH 416; MTH 417; MTH 330; MTH 432; MTH 412; ANA 200; ANA 230 and Completion of the following three courses within one concentration from either list:; ANA 310; ANA 320; ANA 330, or MTH 410; MTH 460; MTH 461*
Duration: 4
This is a project course rather than an independent study. Students apply previously acquired skills and knowledge from diverse mathematics disciplines to the development of research projects pertaining to real-world and scientific problems they select. Grading is S or U only.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

MUS 100 Music History & Appreciation (4.50)
Duration: 4
An examination of the history of Western music, starting in the Middle Ages and ending in contemporary times. Traces the development of a range of musical styles, including baroque, classical, opera, jazz, blues, experimental composition, music for theater and film, and "popular" song. Introduces students to fundamental elements, building blocks, and vocabulary, and provides historical and cultural context that deepens students' appreciation of the music they encounter today.

MUS 200 Music Composition (4.50)
Recommended Preparation: *MUS 100, or MUS 326, or MUS 327*
Duration: 4
An introduction to composing and notating original music that covers the elements of music theory--melody, harmony, rhythm and form--in the context of a computer-based notation program. Students complete an original composition of modest scope as a culminating project.

MUS 300 Film Music (4.50)
Recommended Preparation: *MUS 100;* ***Prerequisite:*** *ENG 102*
Duration: 4
An introduction to the history and methods of music in film from the silent era to the present. A roughly chronological approach sketches the main technological innovations and explores theories of how music contributes to the meaning of moving images and narrative scenes. Elements of music are reviewed and applied to representative film scores by American and international composers.

PHS 104 Introductory Physics (4.50)
Prerequisite: *MTH 204, or MTH 215*
Duration: 4
Non-calculus based general physics course for earth and life science majors. Study of force, laws of motion, heat, fluid mechanics, electricity, magnetism, light (optics) and modern physics.

PHS 104A Introductory Physics Lab (1.50)
Prerequisite: *PHS 104, or PHS 171 for Science Majors.*
Duration: 4
A non-calculus based general physics lab course for earth and life science majors. Laboratory experiments and exercises will include data analysis and evaluation of measurements. Topics include, but are not limited to, the following: force, gravity, laws of motion, fluid mechanics, electricity, and light (optics). For the *Online Lab Courses ONLY*, students are expected to order their lab kits at least two weeks prior to the start of term.

PHS 171 General Physics 1 (4.50)
Prerequisite: *MTH 215*
Duration: 4
Non-calculus-based general physics course. Intended for Science majors. Study one-dimensional and two-dimensional kinematics, dynamics, statics, work, energy, linear momentum, circular motion, and gravitation.

PHS 172 General Physics 2 (4.50)
Prerequisite: *PHS 171*
Duration: 4
Non-calculus based general physics course for Science majors. Study of temperature, kinetic theory, gas laws, heat, oscillatory motion and waves, and electricity.

PHS 173 General Physics 3 (4.50)
Corequisite: *PHS 179A;* ***Prerequisite:*** *PHS 171; PHS 172*
Duration: 4
Non-calculus-based general physics course intended for science majors. Extended study of magnetism, electromagnetic induction and waves, optics, relativity, quantum physics, nuclear reactions, and elementary particles.

PHS 179A General Physics Lab (1.50)
Prerequisite: *PHS 171 and PHS 172 and* ***Corequisite:*** *PHS 173*
Duration: 4
General physics lab course for science majors. Includes a lab practicum in major concepts of general physics: one- and two-dimensional kinematics, work and energy, electric current, oscillations, and geometric optics.

PHS 231 Calculus-based Physics 1 (4.50)
Prerequisite: *PHS 104 and MTH 220, or CSC 208 and MTH 221, or CSC 209*
Duration: 4
Calculus-based physics course. Intended for science majors and engineering students. Study of one, two and three-dimensional kinematics including integral calculus, graphical analysis, numerical integration and vector kinematic, dynamics, uniform and non-uniform circular motion, gravitation, and Newton's synthesis, work and energy with vector algebra principles, linear momentum, rotational motion, statics including elasticity and fracture.

PHS 232 Calculus-based Physics 2 (4.50)
Prerequisite: *PHS 104 and PHS 231; MTH 220, or CSC 208; MTH 221, or CSC 209*
Duration: 4
Calculus-based physics course. Intended for science majors and engineering students. Study of different types of oscillations and wave motion, electrostatics with electric field calculations for continuous charge distribution, Gauss's law, electric potential due to any charge distribution, electric energy storage with applications, electric currents and resistance, magnetism and magnetic field, electromagnetic induction and transmission of power, DC and AC circuits, Maxwell's equations and electromagnetic waves

PSY 99 Comprehensive Exit Exam (0.00)
Prerequisite: *PSY 685*
Duration: 0
Comprehensive oral examination covering materials in all phases of the program to be taken in the student's last course.

PSY 680S Supplemental Practicum (1.50)
Prerequisite: *PSY 680E*
Duration: 8
Practicum course for students who have not completed their required hours of experience at the conclusion of PSY 680B. This course is repeatable for credit until the student has completed their hours. Grading is S, U or Incomplete (I).

PSYC 480A Senior Project Course 1 (4.50)
Prerequisite: *CHD 440; HUB 441; MTH 210; PSYC 100; PSYC 426; PSYC 427; PSYC 428; PSYC 429; PSYC 430; PSYC 432; PSYC 433; PSYC 441*
Duration: 4
The Senior Project represents the culmination of the baccalaureate degree program, encompassing a 25-to-30-page research project on a significant topic. In the first section of the Senior Project, students articulate the project focus and initiate research on its history, identify current challenges, compile a list of key terms, assess limitations in published research, and determine relevant theories and theorists. They also review APA citation and referencing style and explore strategies for evaluating research accuracy. Students collaborate in groups, offering editorial and research suggestions to one another, with group discussions serving as a crucial element of the course. This project spans two consecutive courses, PSYC 480A and PSYC 480B.

PSYC 480B Senior Project Course 2 (4.50)
Prerequisite: *PSYC 480A*
Duration: 4
Part B of PSYC 480 begins with creating the Senior Project outline, which requires significant development in APA formatting as students determine heading levels for the structure of their completed project. Students will apply the feedback received in Part A to continue the project, adhering to the APA formatting style throughout. They will complete the Review of Literature, followed by the Discussion, Conclusions, and Recommendations sections. This project spans two consecutive courses, PSYC 480A and PSYC 480B.

SUS 602 Enterprise Excellence (4.50)
Prerequisite: *CSC 220 or permission from lead faculty.*
Duration: 4
Overview of statistical tools needed to measure business improvement related to sustainability. Step-by-step guide to develop and institute metrics for sustainability improvement will be provided. Enterprise excellence including process improvement analysis and management systems for business, industry, academic, government and military organizations will be covered.

Individual Based

DIS 9100A - Components of the Dissertation
DIS 9100B - Comp of the Dissertation Cont
DIS 9100C - Comp of the Dissertation Cont
DIS 9100D - Comp of the Dissertation Cont
DIS 9200A - Completing the DIS Proposal
DIS 9200B - Completing the DIS Prpsl Cont.
DIS 9200C - Completing the DIS Prpsl Cont.
DIS 9200D - Completing the DIS Prpsl Cont.
DIS 9300A - Data Collection & Analysis
DIS 9300B - Data Coll & Analysis. Cont
DIS 9300C - Data Coll & Analysis. Cont
DIS 9300D - Data Coll & Analysis. Cont
DIS 9400A - The DIS Manuscript & Defense
DIS 9400B - The DIS MS & Defense Cont
DIS 9400C - The DIS MS & Defense Cont
DIS 9400D - The DIS MS & Defense Cont