# Graduate Certificates

## Agricultural Sciences and Natural Resources

### Advanced Horticulture

To earn the Graduate Certificate in Advanced Horticulture:

1. Apply and get admitted toward this certificate objective. ([http://www.unl.edu/gradstudies/prospective/programs/Cert_AdvancedHorticulture](http://www.unl.edu/gradstudies/prospective/programs/Cert_AdvancedHorticulture))
2. Consult an advisor to develop a plan of study.
3. Complete 12 credit hours from the following course list, with a grade of B or higher in all courses.

Choose from:

- HORT 824 Plant Nutrition and Nutrient Management 3
- HORT 843E Advanced Interiorscaping 3
- HORT 843K Advanced Arboriculture 3
- HORT 844A Environmental Nursery Production Practices 3
- HORT 844E General Viticulture 3
- HORT 888 Entrepreneurship and Enterprise Development 3
- HORT 842E Floral Crops Production and Handling 2
  or HORT 843A Greenhouse Crop Production 3
- HORT 842B Plant Physiology 3
  or HORT 842J Water Issues in Lawn and Landscape

### Floriculture and Nursery Production Management

To earn the Graduate Certificate in Floriculture and Nursery Production Management:

1. Apply and get admitted toward this certificate objective. ([http://www.unl.edu/gradstudies/prospective/programs/Cert_Floriculture](http://www.unl.edu/gradstudies/prospective/programs/Cert_Floriculture))
2. Consult an advisor to develop a plan of study.
3. Complete 12 credit hours as outlined here, with grades of B or higher in all classes. Only 1 course per "or" group below may be applied toward this certificate.

**Core Courses (min 5 cr)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HORT 824</td>
<td>Plant Nutrition and Nutrient Management</td>
<td>3</td>
</tr>
<tr>
<td>or HORT 842</td>
<td>Plant Physiology</td>
<td></td>
</tr>
<tr>
<td>HORT 842E</td>
<td>Floral Crops Production and Handling</td>
<td>2</td>
</tr>
<tr>
<td>or HORT 843A</td>
<td>Greenhouse Crop Production</td>
<td></td>
</tr>
<tr>
<td>or HORT 844A</td>
<td>Environmental Nursery Production Practices</td>
<td></td>
</tr>
</tbody>
</table>

**Electives (min 7 cr)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HORT 843B</td>
<td>Seed Sciences</td>
<td>3</td>
</tr>
<tr>
<td>HORT 843E</td>
<td>Advanced Interiorscaping</td>
<td>3</td>
</tr>
<tr>
<td>HORT 844B</td>
<td>Advanced Physiology</td>
<td>1</td>
</tr>
<tr>
<td>HORT 888</td>
<td>Entrepreneurship and Enterprise Development</td>
<td>3</td>
</tr>
<tr>
<td>ENTO 803</td>
<td>Management of Horticultural Crop Insects</td>
<td>3</td>
</tr>
<tr>
<td>or ENTO 812</td>
<td>Entomology and Pest Management</td>
<td></td>
</tr>
<tr>
<td>or ENTO 813</td>
<td>Biological Control of Pests</td>
<td></td>
</tr>
<tr>
<td>or ENTO 820</td>
<td>Insecticide Toxicology</td>
<td></td>
</tr>
</tbody>
</table>

### Food Safety and Defense

To earn the Graduate Certificate in Food Safety and Defense:

1. Apply and get admitted toward this certificate objective ([http://www.unl.edu/gradstudies/prospective/programs/Cert_FoodSafety](http://www.unl.edu/gradstudies/prospective/programs/Cert_FoodSafety)).
2. Consult an advisor to develop a plan of study.
3. Complete a minimum of 12 credit hours, with 9 credit hours in core courses and a minimum of 3 elective credit hours.

**Core Courses (9 cr)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>FDST 871</td>
<td>A Multidisciplinary Overview of Food Safety and Security (Kansas State Univ)</td>
<td>2</td>
</tr>
<tr>
<td>FDST 805</td>
<td>Food Microbiology (Univ of Nebraska)</td>
<td>3</td>
</tr>
<tr>
<td>FDST 872</td>
<td>Principles of Hazard Analysis and Critical Control Point System (Kansas State Univ)</td>
<td>2</td>
</tr>
<tr>
<td>FDST 873</td>
<td>Food-borne Toxins (Iowa State Univ)</td>
<td>2</td>
</tr>
<tr>
<td>Electives (minimum 3 cr)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FDST 855</td>
<td>Microbiology of Fermented Foods (Univ of Nebraska, 2 cr)</td>
<td>2</td>
</tr>
<tr>
<td>FDST 874</td>
<td>Food Laws, Regulations, and the Regulatory Process (Iowa State Univ, 2 cr)</td>
<td>2</td>
</tr>
<tr>
<td>FDST 875</td>
<td>Rapid Methods in Food Microbiology (Kansas State Univ, 2 cr)</td>
<td>2</td>
</tr>
<tr>
<td>FDST 876</td>
<td>Risk Assessment for Food, Agriculture, and Veterinary Medicine (Iowa State Univ, 3 cr)</td>
<td>3</td>
</tr>
<tr>
<td>FDST 877</td>
<td>Advanced Food Microbiology and Biotechnology (Univ of Missouri-Columbia, 3 cr)</td>
<td>3</td>
</tr>
</tbody>
</table>

### Grassland Management

To earn the Graduate Certificate in Grassland Management:

1. Apply and get admitted toward this certificate objective ([http://www.unl.edu/gradstudies/prospective/programs/Cert_GrasslandManagement](http://www.unl.edu/gradstudies/prospective/programs/Cert_GrasslandManagement)).
2. Consult an advisor to develop a plan of study.
3. Complete 12 credit hours as planned. Coursework may be transferred in on a case-by-case basis with approval of the student’s advisor.

**Available Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGRO 843</td>
<td>Ecology of Invasive Species</td>
<td>3</td>
</tr>
<tr>
<td>AGRO 846</td>
<td>Forage Quality</td>
<td>3</td>
</tr>
<tr>
<td>AGRO 847</td>
<td>Grassland Fire Ecology</td>
<td>3</td>
</tr>
<tr>
<td>AGRO 848</td>
<td>Grassland Monitoring and Assessment</td>
<td>2</td>
</tr>
<tr>
<td>AGRO 849</td>
<td>Watershed Management in Grasslands</td>
<td>3</td>
</tr>
<tr>
<td>AGRO 851</td>
<td>Grassland Plant Identification</td>
<td>2</td>
</tr>
</tbody>
</table>

### Ornamentals, Landscape, and Turf

To earn the Graduate Certificate in Ornamentals, Landscape, and Turf:

1. Apply and get admitted toward this certificate objective ([http://www.unl.edu/gradstudies/prospective/programs/Cert_Landscape](http://www.unl.edu/gradstudies/prospective/programs/Cert_Landscape)).
2. Consult an advisor to develop a plan of study.
3. Complete 12 credit hours as described here, with grades of B or higher in all classes.

Core Courses (minimum 6 cr)
HORT 824 Plant Nutrition and Nutrient Management 3
or HORT 842B Plant Physiology
or HORT 842J Water Issues in Lawn and Landscape
HORT 843K Advanced Arboriculture 3
Electives (minimum 6 cr)
HORT 814 Turfgrass Disease Management 1
HORT 843J Herbicide Action 4
HORT 844B Environmental Stress Physiology 1
HORT 880 Modified Rootzones 1
HORT 888 Entrepreneurship and Enterprise Development 3
HORT 813 Turfgrass and Landscape Weed Management 1
or HORT 843M Weed Science
ENTO 803 Management of Horticultural Crop Insects 3
or ENTO 812 Entomology and Pest Management
or ENTO 813 Biological Control of Pests
or ENTO 820 Insecticide Toxicology
AGRO 896 Independent Study 1-6
or ENTO 896 Independent Study in Entomology
or HORT 842A Plant Pathology

Arts and Sciences
Digital Humanities
To earn the Graduate Certificate in Digital Humanities:

1. Apply and get admitted toward this certificate objective.
   (http://www.unl.edu/gradstudies/prospective/programs/Cert_DigitalHumanities)
2. Consult an advisor to develop a plan of study.
3. Complete 12 credit hours as described here. The certificate program is comprised of interdisciplinary coursework between: Anthropology; Art, Art History & Design; Classics & Religious Studies; English; History; Modern Languages; and University Libraries. Two specific courses are required; the remaining six credit hours may be drawn from courses approved by the Digital Humanities Program Coordinator Adrian S. Wiatnik wisnichki2@unl.edu. For further information about the certificate, see https://www.unl.edu/dhcrt/home.

Required Courses
ENGL 872 / HIST 872 / MODL 872 / ANTH 871 Digital Humanities Practicum 3
ANTE 946 / ENGL 946 / HIST 946 / MODL 946 Interdisciplinary Readings in Digital Humanities 3

Example Electives (6 cr needed)
ANTH 861 / CLAS 861 / GEOG 861 / HIST 861 Geospatial Approaches in Digital Humanities and Social Sciences 3
ANTH 886 Digital Heritage 3
ENGL 877 Advanced Topics in Digital Humanities 3
ENGL 878 Digital Archives and Editions 3
HIST 970 Seminar in Digital History 3

Geographic Information Science
To earn the Graduate Certificate in Geographic Information Science:

1. Apply and get admitted toward this certificate objective.
   (http://www.unl.edu/gradstudies/prospective/programs/Cert_GeographicInformationScience)
2. Consult an advisor to develop a plan of study.
3. Complete 22 credit hours and a comprehensive examination. These must include the following unless a student can demonstrate that he/she has previously taken equivalent courses or has professional experience that would provide equivalent training.

Core Courses
GEOG 812 / NRES 812 Introduction to Geographic Information Systems 4
GEOG 818 / NRES 818 Introduction to Remote Sensing 4
GEOG 827 Introduction to the Global Positioning System (GPS) 2
GEOG 898 Advanced Special Problems 1-24
Electives
GEOG 817 Cartography II: Electronic Atlas Design and Production 3
GEOG 819 / AGRO 819 / GEOL 819 Applications of Remote Sensing in Agriculture and Natural Resources 4
GEOG 820 Digital Image Analysis of Remote Sensing Data 4
GEOG 822 Advanced Techniques in Geographic Information Systems 4
GEOG 844 Geo-demographic and Geographic Information Systems (GIS) 3
GEOG 922 Seminar in Geographic Information Systems (GIS) 3
CIVE 853 GIS in Water Resources 3
CIVE 962 Application of Geographic Information Systems GIS to Transportation 3
CRPL 830 Planning with GIS 3
CRPL 885 Selected Topics in Community and Regional Planning 1-9
CRPL 882 Advanced Spatial Analysis with GIS 3
CRPL 833 GIS in Environmental Design and Planning 3
STAT 831 Spatial Statistics 3

Teaching of Writing
To earn the Graduate Certificate in Teaching of Writing:
1. Apply and get admitted toward this certificate objective. (http://www.unl.edu/gradstudies/prospective/programs/Cert_TeachingOfWriting)
2. Consult an advisor to develop a plan of study.
3. Complete 5 courses as listed below for a total of 15-18 credit hours, which may include up to 6 cr outside the English Department.

**Required:**
- ENGL 857A Composition and Rhetorical Theory
- ENGL 957 Composition Theory and Practice
- ENGL 957B Nebraska Writing Project

**Electives in English**
- ENGL 857 Composition Theory and Practice
- ENGL 875 Rhetoric
- ENGL 875A Rhetorical Theory. Rhetoric of Women Writers
- ENGL 895 Internship in Teaching English
- ENGL 895A Nebraska Writing Project Internship
- ENGL 880 Writing Center Theory, Practice, and Research
- ENGL 882 Literacy Issues and Community
- ENGL 973 Seminar in Literacy Studies
- ENGL 976 Seminar in Rhetorical Theory
- ENGL 992B Place Conscious Teaching

**Other Electives (maximum 6 cr)**
- TEAC 813 Studies in Teaching English as a Second Language
- TEAC 818 Teaching Writing in K-12 Schools
- TEAC 838 Linguistics in Language and Learning Contexts
- TEAC 840 Culture and Schooling
- TEAC 921 Seminar in Literacy Studies
- TEAC 944A Curriculum as Aesthetic Text
- TEAC 950 Contextual Research in English/Language Arts
- TEAC 952 Language and Learning
- TEAC 953 Seminar on Writing in the Curriculum

---

**Business Administration**

**Business Analytics**

To earn the Graduate Certificate in Business Analytics:

1. Apply and get admitted toward this certificate objective. (http://www.unl.edu/gradstudies/prospective/programs/Cert_BusinessAnalytics)
2. Consult an advisor to develop a plan of study.
3. Complete 12 credit hours as listed below, in this sequence starting with GRBA 851. (Exception: Certificate applicants admitted in 2014 may begin the sequence with ECON 817 and take GRBA 851 in the summer.)

**Required Courses**
- GRBA 851 Business Analytics 3
- ECON 817 Introductory Econometrics 3
- MRKT 850 Data Driven Marketing Strategy 3
- Elective: Take 1 of the following
  - MRKT 845 Advanced Marketing Analytics 3
  - SCMA 837 Risk and Simulation Modeling 3
  - SCMA 851 Predictive Analytics 3
  - SCMA 852 Data Management and Organization 3
  - SCMA 853 Business Data Mining and Descriptive Analytics 3
  - SCMA 854 Advanced Descriptive Analytics 3
  - SCMA 855 Prescriptive Analytics 3

---

**Supply Chain Management Systems**

To earn the Graduate Certificate in Supply Chain Management Systems:

1. Apply and get admitted toward this certificate objective. (http://www.unl.edu/gradstudies/prospective/programs/Cert_SupplyChain)
2. Consult an advisor to develop a plan of study.
3. Complete 12 credit hours: GRBA 815 plus 3 of the other 4 courses listed, with a grade of C or better in each.

**Required**
- GRBA 815 Supply Chain Management Strategies 3
- Elective: Take 3 of the following
  - SCMA 831 Advanced Enterprise Systems 3
  - SCMA 832 Planning and Controlling Supply Chain Systems 3
  - SCMA 834 Advanced Topics in Lean Supply Chain Management 3
  - SCMA 836 Project Management and Implementation 3
  - SCMA 839 Global Supply Chain Management 3
  - SCMA 844 Managing Logistics in the Supply Chain 3
  - SCMA 847 Advanced Supply Chain Technology 3
  - SCMA 853 Business Data Mining and Descriptive Analytics 3

---

**Education and Human Sciences**

**Community College Leadership**

To earn the Graduate Certificate in Community College Leadership:

1. Apply and get admitted toward this certificate objective (http://www.unl.edu/gradstudies/prospective/programs/Cert_CommunityCollegeLeadership).
2. Consult an advisor to develop a plan of study.
3. Complete 15 credit hours as described here.

**Required Courses**
- EDAD 923 The Community/Junior College 3
- EDAD 929 Organizational Development and Change 3
- EDAD 935 Workforce, Economic, and Community Development 3
- EDAD 934 Teaching and Learning in the Community College 3
- EDAD 912B Emerging Issues in Community College Leadership 3
Early Childhood Special Education
To earn the Graduate Certificate in Early Childhood Special Education:

1. Apply and get admitted toward this certificate objective (http://www.unl.edu/gradstudies/prospective/programs/Cert_EarlyChildhoodSpecialEd).
2. Consult an advisor to develop a plan of study.
3. Complete 12 credit hours as listed below, with grades of B= or higher in all courses.

Required Courses
- SPED 860 Issues in Early Childhood Special Education 3
- SPED 861 Infants with Disabilities and Home Visiting 3
- or SPED 862 Preschool Children with Disabilities
- SPED 960 Family and School Collaboration in Special Education 3
- SPED 863 Medically Fragile infants 3
- or SPED 882 Specialized Instruction for Students with Severe and Multiple Disabilities

Early Literacy
To earn the Graduate Certificate in Early Literacy:

1. Apply and get admitted toward this certificate objective (http://www.unl.edu/gradstudies/prospective/programs/Cert_EarlyLiteracy).
2. Consult an advisor to develop a plan of study.
3. Complete 15 credit hours as described below, with an overall minimum GPA of 3.0. Only one course per "or" group may be applied toward the certificate.

Required Courses
- TEAC 802 Contemporary Children's Literature: Principles and Practices 3
- TEAC 854 Literature in Education 3-9
- TEAC 817 Emerging Reading and Language 3
- TEAC 813A Second Language Acquisition 1-3
- or TEAC 811 Reading Processes and Practices

Electives (choose 2)
- CYAF 874 Assessment in Early Childhood 3
- PSYC 889 Child Behavior and Development 3
- TEAC 811 Reading Processes and Practices 1-6
- TEAC 836A Professional Development: Literacy Coaching 3
- TEAC 890 Workshop Seminar (section must be approved by advisory committee) 1-12
- SPED 815 Reading and Writing Disabilities: Elementary Students 2
- or SPED 815A Practicum in Reading and Writing Disabilities: Elementary

Family Financial Planning
To earn the Graduate Certificate in Family Financial Planning:

1. Apply and get admitted toward this certificate objective (http://www.unl.edu/gradstudies/prospective/programs/Cert_FamilyFinancialPlanning).
2. Consult an advisor to develop a plan of study.
3. Complete 18 credit hours as listed here.

Required Courses
- CYAF 821 Insurance Planning for Families 3
- CYAF 823 Estate Planning for Families 3
- CYAF 828 Retirement Planning, Employee Benefits and the Family 3
- CYAF 836 Financial Planning Case Studies 3
- CYAF 840 Personal Income Taxation 3
- CYAF 883 Investing for the Family's Future 3

Financial & Housing Counseling
To earn the Graduate Certificate in Financial & Housing Counseling:

1. Apply and get admitted toward this certificate objective (http://www.unl.edu/gradstudies/prospective/programs/Cert_FinHousingCounseling).
2. Consult an advisor to develop a plan of study.
3. Complete 18 credit hours as listed below.

Required Courses
- CYAF 825 Reading in the Content Area 3
- CYAF 822 Financial Counseling 3
- CYAF 824 Fundamentals of Financial Planning 3
- CYAF 841 Housing/Real Estate 3
- Electives: Choose 2 courses (6 cr)
  - CYAF 821 Insurance Planning for Families 3
  - CYAF 823 Estate Planning for Families 3
  - CYAF 826 Military Personal Financial Readiness 3
  - CYAF 828 Retirement Planning, Employee Benefits and the Family 3
  - CYAF 840 Personal Income Taxation 3
  - CYAF 883 Investing for the Family's Future 3
  - CYAF 897B Practicum in Family Financial Planning 3-6

K-3 Mathematics Specialist
To earn the Graduate Certificate in K-3 Mathematics Specialist:

1. Apply and get admitted toward this certificate objective (http://www.unl.edu/gradstudies/prospective/programs/Cert_MathSpecialist).
2. Consult an advisor to develop a plan of study.
3. Complete 18 credit hours as described: the prerequisite course, then the 5 required courses.

Prerequisite
- MATH 800P Number and Operation for K-3 Mathematics Specialists 3

Required Courses
- MATH 801P Geometry, Measurement, and Algebraic Thinking for K-3 Mathematics Specialists 3
- MATH 802P Number, Geometry and Algebraic Thinking II for K-3 Math Specialists 3
- TEAC 808A Improvement of Instruction in School Mathematics Primary: K-3 3
To earn the Graduate Certificate in Medical Family Therapy:

1. Apply and get admitted toward this certificate objective (http://www.unl.edu/gradstudies/prospective/programs/Cert_MedicalFamilyTherapy).
2. Consult an advisor to develop a plan of study. There are two approaches to completing this certificate:
   - **Approach A**: Those who hold a qualifying degree will be able to complete the certificate program within one year by taking the four core courses and practicum. For information on qualifying degrees and prerequisites, contact the department.
   - **Approach B**: Those who do not hold a qualifying degree may complete the certificate as a standalone non-degree objective or as part of the Child, Youth and Family Studies master’s degree with a specialization in Marriage and Family Therapy. Requirements:
     - The core courses and practicum (as for option A)
     - The seven "other required courses" listed below
     - Nine credit hours in individual development and family relations. Courses offered through UNL, UNMC, UNO, and other institutions will be considered on an individual basis. Courses from the UNL Marriage and Family Therapy Program which fulfill this include: CYAF 872, 881, 882, 883, 888, 980, 984.
3. Complete 15 (option A) or 45 (option B) credit hours as described here.

### Core Courses and Practicum

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>TEAC 808J</td>
<td>Improvement of Instruction in School Mathematics Special Topics</td>
<td>3</td>
</tr>
<tr>
<td>TEAC 907</td>
<td>Seminar in Elementary School Mathematics</td>
<td>3</td>
</tr>
</tbody>
</table>

### Other Required Courses

- CYAF 951 Theoretical Foundations of Marriage and Family Therapy: 3 cr
- FMED 741: Theory and Practice of Medical Family Therapy (UNMC): 3 cr
- FMED 742: Families, Health, and Illness (UNMC): 3 cr
- FMED 743: Applied Medical Family Therapy (UNMC): 3 cr
- FMED 744: Clinical Practicum (UNMC): 3 cr

Choose one additional course from the Statistics, Measurement, or Qualitative Methods sections.

### Mixed Methods Research

To earn the Graduate Certificate in Mixed Methods Research:

1. Submit an Application for Admission to the graduate certificate program through the Office of Graduate Studies.
2. Submit the following additional materials:
   a. GRE scores
   b. A personal statement addressing the reason for pursuing the certificate
   c. A CV or resume
   d. Three letters of recommendation (for applicants not currently pursuing a graduate degree at UNL) or one letter of recommendation from the applicant's current academic advisor (for applicants currently pursuing another graduate degree at UNL)
   e. A completed Course of Studies form (https://www.unl.edu/gradstudies/docs/Mixed_Methods_Research_Certificate-Course_of_Studies.pdf) that lists the proposed courses to completed the certificate. Participants must complete five measurement and modeling courses with at least one course from the Measurement section and at least two courses from the Modeling section. See EDPS QQPM courses for details about when courses are offered. With approval, students may transfer in three credit hours towards the Electives requirement; credit hours must be from an accredited institution. If there are questions, please consult an advisor in the EDPS QQPM program.
3. Upon admission, complete 15 credit hours as described here, with a grade of B or better in each course.

### Core Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDPS 859</td>
<td>Statistical Methods</td>
<td>3</td>
</tr>
<tr>
<td>EDPS 860</td>
<td>Applications of Selected Advanced Statistics</td>
<td>3</td>
</tr>
<tr>
<td>EDPS 941</td>
<td>Intermediate Statistics: Experimental Methods</td>
<td>3</td>
</tr>
<tr>
<td>EDPS 942</td>
<td>Intermediate Statistics: Correlational Methods</td>
<td>3</td>
</tr>
<tr>
<td>EDPS 971</td>
<td>Structural Equation Modeling</td>
<td>3</td>
</tr>
<tr>
<td>EDPS 972</td>
<td>Multivariate Analysis</td>
<td>3</td>
</tr>
<tr>
<td>EDPS 870</td>
<td>Introduction to Educational and Psychological Measurement</td>
<td>3</td>
</tr>
<tr>
<td>EDPS 970</td>
<td>Theory and Methods of Educational Measurement</td>
<td>3</td>
</tr>
<tr>
<td>EDPS 900K</td>
<td>Qualitative Approaches to Educational Research</td>
<td>3</td>
</tr>
<tr>
<td>EDPS 935</td>
<td>Seminar in Qualitative Research</td>
<td>3</td>
</tr>
<tr>
<td>EDPS 930A</td>
<td>Ethnographic Methods</td>
<td>3</td>
</tr>
<tr>
<td>EDPS 930D</td>
<td>Discourse Analysis Across School, Home and Community Settings</td>
<td>3</td>
</tr>
</tbody>
</table>

### Qualitative Methods

Choose one additional course from the Statistics, Measurement, or Qualitative Methods sections.
EDPS 859, EDPS 860, EDPS 870, EDPS 900K, EDPS 935, and EDPS 936 may be completed online.

**Nutrition, Non-coding RNAs, and Extracellular Vesicles (N2V)**

To earn the Graduate Certificate in Nutrition, Non-coding RNAs, and Extracellular Vesicles (N2V):

1. Apply and get admitted toward this certificate objective.
2. Consult an advisor to develop a plan of study.
3. [Course and credit hour requirements coming soon...]

**Social Justice and Diversity Education**

To earn the Graduate Certificate in Social Justice and Diversity Education:

1. Apply and get admitted toward this certificate objective.
2. Consult an advisor to develop a plan of study.
3. Complete 15 credit hours as described here: two required courses and three elective approved by the Certificate Program Advisor.

Choose 2 (6 credits) from the following courses options:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>TEAC 861</td>
<td>Education for a Pluralistic Society: Foundation and Issues</td>
<td>3</td>
</tr>
<tr>
<td>TEAC 862</td>
<td>Seminar in Democratic Education</td>
<td>3</td>
</tr>
<tr>
<td>TEAC 944</td>
<td>Seminar in Curriculum Studies</td>
<td>1-3</td>
</tr>
</tbody>
</table>

Choose 3 (9 credits) from the following Course options:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>TEAC 813J</td>
<td>Intercultural Communication</td>
<td>3</td>
</tr>
<tr>
<td>TEAC 833B</td>
<td>Comparative Education: Special Topics/Travel Study</td>
<td>3-9</td>
</tr>
<tr>
<td>TEAC 838</td>
<td>Linguistics in Language and Learning Contexts</td>
<td>3</td>
</tr>
<tr>
<td>TEAC 840</td>
<td>Culture and Schooling</td>
<td>3</td>
</tr>
<tr>
<td>TEAC 840M</td>
<td>Language and Power</td>
<td>3</td>
</tr>
<tr>
<td>TEAC 887</td>
<td>Effecting High School Improvement</td>
<td>3</td>
</tr>
<tr>
<td>TEAC 921D</td>
<td>Seminar in Literacy Studies: Language, Culture, and Education</td>
<td>1-9</td>
</tr>
<tr>
<td>TEAC 936</td>
<td>Seminar in College Teaching</td>
<td>1-3</td>
</tr>
<tr>
<td>TEAC 930M</td>
<td>Introduction to Multimodal Textual Analysis</td>
<td>3</td>
</tr>
<tr>
<td>TEAC 811</td>
<td>Reading Processes and Practices</td>
<td>1-6</td>
</tr>
<tr>
<td>TEAC 908J</td>
<td>Critical Conversations in U.S. Teacher Preparation Policy and Practice: Teacher Education To What E</td>
<td>3</td>
</tr>
<tr>
<td>TEAC 815</td>
<td>Studies in Dual Language Education</td>
<td>3</td>
</tr>
</tbody>
</table>

**Quilt Studies**

To earn the Graduate Certificate in Quilt Studies:

1. Apply and get admitted toward this certificate objective (http://www.unl.edu/gradstudies/prospective/programs/Cert_QuiltStudies).
2. Consult an advisor to develop a plan of study.
3. Complete 12 credit hours as described here: three required courses and one elective approved by the Certificate Program Advisor.

Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>TMFD 818</td>
<td>Quilts, History, Culture</td>
<td>3</td>
</tr>
<tr>
<td>TMFD 905A</td>
<td>Advanced Problems: Textiles</td>
<td>1-6</td>
</tr>
<tr>
<td>TMFD 905D</td>
<td>Advanced Problems: Design</td>
<td>1-6</td>
</tr>
</tbody>
</table>

Elective (3 cr): Examples of regularly taught courses that may be applied:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>TMFD 997</td>
<td>Internship</td>
<td>1-9</td>
</tr>
<tr>
<td>TMFD 978</td>
<td>Seminar in Textile History (Various topics offered as 1-week summer seminars. E.g., Colonial Revival Quilts, Quilts of the Depression Era, A Century of Quilts in Women's Lives, 18th and 19th Century Dyeing and Printing Techniques, Quilts of India and Pakistan, Repair and Stabilization of Quilts.)</td>
<td>1-3</td>
</tr>
<tr>
<td>TMFD 890</td>
<td>Workshop/Seminar (Craft, Culture, and Fashion)</td>
<td>1-3</td>
</tr>
</tbody>
</table>

**Reading Intervention**

To earn the Graduate Certificate in Reading Intervention:

1. Apply and get admitted toward this certificate objective (http://www.unl.edu/gradstudies/prospective/programs/Cert_ReadingIntervention).
2. Consult an advisor to develop a plan of study.
3. Complete 13-15 credit hours as described here: two core courses, one required workshop, and two other TEAC/SPED courses.

Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>TEAC 811B</td>
<td>Special Topics in Reading (Response to Intervention)</td>
<td>1-6</td>
</tr>
<tr>
<td>TEAC 893</td>
<td>Workshop Seminar (Response to Intervention)</td>
<td>1-12</td>
</tr>
</tbody>
</table>

Elective: Choose two courses (6-8 cr)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>TEAC 811</td>
<td>Reading Processes and Practices (other than Response to Intervention)</td>
<td>1-6</td>
</tr>
<tr>
<td>TEAC 806</td>
<td>Reading and Writing Disabilities: Adolescents</td>
<td>2</td>
</tr>
<tr>
<td>TEAC 806A</td>
<td>Reading Center Practicum II</td>
<td>2</td>
</tr>
<tr>
<td>TEAC 836A</td>
<td>Professional Development: Literacy Coaching</td>
<td>3</td>
</tr>
<tr>
<td>TEAC 838</td>
<td>Linguistics in Language and Learning Contexts</td>
<td>3</td>
</tr>
<tr>
<td>TEAC 886</td>
<td>Assessment, Evaluation, and Instruction of At-Risk Readers (specific section must be approved for inclusion by the advisory committee)</td>
<td>1-3</td>
</tr>
<tr>
<td>TEAC 886B</td>
<td>Internship in Literacy Assessment and Instruction</td>
<td>1-3</td>
</tr>
<tr>
<td>TEAC 890</td>
<td>Workshop Seminar</td>
<td>1-12</td>
</tr>
</tbody>
</table>

**Sensory Disabilities**

To earn the Graduate Certificate in Sensory Disabilities:

1. Apply and get admitted toward this certificate objective (http://www.unl.edu/gradstudies/prospective/programs/Cert_SensoryDisabilities).
2. Consult an advisor to develop a plan of study.
3. Complete 12 credit hours as described here.

Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPED 846</td>
<td>Visual Impairments: Characteristics</td>
<td>3</td>
</tr>
</tbody>
</table>
Teaching English to Speakers of Other Languages

To earn the Graduate Certificate in Teaching English to Speakers of Other Languages:

1. Apply and get admitted toward this certificate objective (http://www.unl.edu/gradstudies/prospective/programs/Cert_TeachingEnglish).
2. Consult an advisor to develop a plan of study.
3. Complete 12 credit hours as described here: 4 courses at 3 credit hours each, maintaining a 3.25 GPA for these courses and earning a grade of B or better in each course. Up to 6 credit hours of relevant previous coursework may be applied.

**Required Courses**

- **TEAC 813A** Second Language Acquisition 3
- **TEAC 813K** Linguistics for Language Teachers 3
- **TEAC 813P** Teaching English as an International Language 3
- **or TEAC 813B** ESL: Teaching and Curriculum
- **TEAC 813D** World Languages Assessment 1-3
- **TEAC 813E** Special Topics in TESOL 1-6
- **TEAC 813J** Intercultural Communication 3
- **TEAC 813M** Teaching Multilingual Learners in Content Areas
- **TEAC 833A** Comparative Education Survey 3
- **TEAC 833B** Comparative Education: Special Topics/Travel Study 3-9
- **TEAC 897E** Student Teaching Internship: English as a Second Language 1-10
- **TEAC 838** Linguistics in Language and Learning Contexts 3
- **TEAC 921D** Seminar in Literacy Studies: Language, Culture, and Education 1-9

**Elective: Take at least 1 of these courses**

- **TEAC 921C** Planning in the German Language Classroom (formerly 922S) 3
- **TEAC 922X** Technology-Enhanced German Language Instruction (formerly 922W) 3
- **TEAC 922Z** Teaching for Intercultural Communicative Competence in the Foreign Language Classroom 3

World Language Teaching: German

To earn the Graduate Certificate in World Language Teaching: German:

1. Apply and get admitted toward this certificate objective (http://www.unl.edu/gradstudies/prospective/programs/Cert_TeachingGerman).
2. Consult an advisor to develop a plan of study.
3. Complete 15 credit hours as described below.

Choose any 5 of these:

- **TEAC 922** Seminar in the Learning and Teaching of Foreign Languages 3
- **TEAC 922C** The Interpretive Mode: Reading and Listening in the German Language Classroom (formerly 922B) 3
- **TEAC 922G** Interpersonal and Presentational Writing in the German Language Classroom (formerly 922F) 3
- **TEAC 922P** Assessment in the German Language Classroom (formerly 922O) 3
- **TEAC 922T** Planning in the German Language Classroom (formerly 922S) 3
- **TEAC 922X** Technology-Enhanced German Language Instruction (formerly 922W) 3
- **TEAC 922Z** Teaching for Intercultural Communicative Competence in the Foreign Language Classroom 3

World Language Teaching: Spanish

To earn the Graduate Certificate in World Language Teaching: Spanish:

1. Apply and get admitted toward this certificate objective (http://www.unl.edu/gradstudies/prospective/programs/Cert_TeachingSpanish).
2. Consult an advisor to develop a plan of study.
3. Complete 15 credit hours as described below.

Choose any 5 of these:

- **TEAC 922** Seminar in the Learning and Teaching of Foreign Languages 3
- **TEAC 922B** The Interpretive Mode: Reading and Listening in the Spanish Language Classroom 3
- **TEAC 922F** Interpersonal and Presentational Writing in the Spanish Language Classroom 3
- **TEAC 922O** Assessment in the Spanish Language Classroom 3

Transdisciplinary Childhood Obesity Prevention

To earn the Graduate Certificate in Transdisciplinary Childhood Obesity Prevention:

1. Apply and get admitted toward this certificate objective (http://www.unl.edu/gradstudies/prospective/programs/Cert_ChildhoodObesity).
2. Consult an advisor to develop a plan of study.
3. Complete 14 credit hours as described here, with a grade of B- or better in each course. Participants must also complete a PhD or MS. With permission, substitutions of equivalent courses may be accepted.

**Required Courses**

- **NUTR 986** Graduate Seminar 1-2
- **NUTR 911** Practicum: Experiential Learning Experiences in Childhood Obesity Prevention
- **NUTR 805** Research Methods 3
- **EDPS 800** Foundations of Educational Research 3
- **NUTR 805** Research Methods 3
- **EDPS 800** Foundations of Educational Research 3
- **CYAF 865** Research Design and Methods 3

NUTR 986 Graduate Seminar

NUTR 911 Practicum: Experiential Learning Experiences in Childhood Obesity Prevention

Graduate-level statistics course

Elective: Choose one

EDPS 800 Foundations of Educational Research 3
NUTR 911 Practicum: Experiential Learning Experiences in Childhood Obesity Prevention 3
NUTR 805 Research Methods 3
CYAF 865 Research Design and Methods 3

- **NUTR 810** Transdisciplinary Obesity Prevention 3
- **NUTR 910** Research Planning and Grant Writing for Childhood Obesity 3
Youth Development

To earn the Graduate Certificate in Youth Development:

1. Apply and get admitted toward this certificate objective (http://www.unl.edu/gradstudies/prospective/programs/Cert_YouthDevelopment).
2. Consult an advisor to develop a plan of study and choose a focus: Youth Development Specialist or Youth Program Management and Evaluation.
3. Complete 13 credit hours as described here: a one-hour foundations course plus 12 hours listed below. Some courses listed here require admission to a Child, Youth and Family Studies graduate degree program or permission.

May be applied to either focus

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CYAF 878</td>
<td>Youth Policy (Michigan State Univ)</td>
<td>3</td>
</tr>
<tr>
<td>CYAF 880</td>
<td>Contemporary Youth Issues (Various topics; UNL, Kansas State Univ, Texas Tech Univ, or North Dakota State Univ)</td>
<td>3</td>
</tr>
</tbody>
</table>

Required for the Youth Development Specialist focus

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CYAF 861</td>
<td>Foundations of Youth Development (at home univ)</td>
<td>1</td>
</tr>
<tr>
<td>CYAF 864</td>
<td>Community Youth Development (Michigan State Univ)</td>
<td>3</td>
</tr>
<tr>
<td>CYAF 868</td>
<td>Adolescents and Their Families (UNL or Kansas State Univ)</td>
<td>3</td>
</tr>
<tr>
<td>CYAF 872</td>
<td>Youth Development (UNL or North Dakota State Univ)</td>
<td>3</td>
</tr>
<tr>
<td>CYAF 875</td>
<td>Youth in Cultural Contexts (Michigan State Univ)</td>
<td>3</td>
</tr>
</tbody>
</table>

Required for the Youth Program Management and Evaluation focus

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CYAF 861</td>
<td>Foundations of Youth Development (at home univ)</td>
<td>1</td>
</tr>
<tr>
<td>CYAF 873</td>
<td>Program Design, Evaluation and Implementation (UNL)</td>
<td>3</td>
</tr>
<tr>
<td>CYAF 863</td>
<td>Youth Professionals as Consumers of Research (UNL)</td>
<td>3</td>
</tr>
<tr>
<td>CYAF 869</td>
<td>Administration and Program Management (UNL or Kansas State Univ)</td>
<td>3</td>
</tr>
</tbody>
</table>

Engineering

Construction Engineering & Management

To earn the Graduate Certificate in Construction Engineering & Management:

1. Apply and get admitted toward this certificate objective.
2. Consult an advisor to develop a plan of study.
3. Complete 15 credit hours as described below.

Required

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMGT 805</td>
<td>Teamwork for Organizational Commitment and Collaboration</td>
<td>3</td>
</tr>
<tr>
<td>EMGT 905</td>
<td>Strategic Management and Planning</td>
<td>3</td>
</tr>
</tbody>
</table>

Electives

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CNST 811</td>
<td>Project Administration</td>
<td>3</td>
</tr>
<tr>
<td>CNST 815</td>
<td>Mechanical/Electrical Project Management</td>
<td>3</td>
</tr>
<tr>
<td>CNST 820</td>
<td>Professional Practice and Ethics</td>
<td>3</td>
</tr>
<tr>
<td>CNST 826</td>
<td>Occupational Health and Safety for Construction</td>
<td>3</td>
</tr>
<tr>
<td>CNST 834</td>
<td>The Design/Build Project Delivery System</td>
<td>3</td>
</tr>
<tr>
<td>CNST 835</td>
<td>Design/Build: Methods and Application</td>
<td>3</td>
</tr>
<tr>
<td>CNST 836</td>
<td>Intent and Application of International Building Code</td>
<td>3</td>
</tr>
<tr>
<td>CNST 850</td>
<td>Sustainable Construction</td>
<td>3</td>
</tr>
<tr>
<td>CNST 858</td>
<td>Construction Information Management Systems</td>
<td>3</td>
</tr>
<tr>
<td>CNST 860</td>
<td>Construction Visualization and Simulation</td>
<td>3</td>
</tr>
<tr>
<td>CNST 879</td>
<td>Construction Management and Construction Systems</td>
<td>3</td>
</tr>
<tr>
<td>CNST 880</td>
<td>Productivity and Human Factors in Construction</td>
<td>3</td>
</tr>
<tr>
<td>CNST 882</td>
<td>Heavy and/or Civil Construction</td>
<td>3</td>
</tr>
<tr>
<td>CNST 883</td>
<td>Management of Limited Scope Permitting</td>
<td>3</td>
</tr>
<tr>
<td>CNST 885</td>
<td>Construction Planning, Scheduling, and Controls</td>
<td>3</td>
</tr>
<tr>
<td>CNST 886</td>
<td>Construction Management Systems</td>
<td>3</td>
</tr>
<tr>
<td>CNST 887</td>
<td>Construction Leadership and Strategic Planning</td>
<td>3</td>
</tr>
<tr>
<td>CNST 890</td>
<td>Masters Project</td>
<td>3</td>
</tr>
<tr>
<td>CNST 844</td>
<td>Construction Site Safety Management</td>
<td>3</td>
</tr>
<tr>
<td>CNST 898 / CONE 898</td>
<td>Special Topics in Construction Management **</td>
<td>1-6</td>
</tr>
<tr>
<td>CONE 816</td>
<td>Wood and / or Contemporary Materials Design</td>
<td>3</td>
</tr>
<tr>
<td>CONE 821</td>
<td>Construction Risk Assessment and Management</td>
<td>3</td>
</tr>
<tr>
<td>CONE 859</td>
<td>BIM I: Introduction to Building Information Modeling (BIM)</td>
<td>3</td>
</tr>
<tr>
<td>CONE 866</td>
<td>Heavy and/or Civil Estimating</td>
<td>3</td>
</tr>
<tr>
<td>CONE 883</td>
<td>Support of Excavation</td>
<td>3</td>
</tr>
<tr>
<td>CONE 981</td>
<td>Precast Concrete Construction</td>
<td>3</td>
</tr>
</tbody>
</table>

**Indicates a course that may count as a graduate credit “only” course. The student must work with their advisor, the graduate committee chair, and the course instructor to determine the status of the section taken. A written contract is required.

Engineering Management

To earn the Graduate Certificate in Engineering Management:
1. Apply and get admitted toward this certificate objective.
2. Consult an advisor to develop a plan of study.
3. Complete 15 credit hours as described below.

Required Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMGT 805</td>
<td>Teamwork for Organizational Commitment and Collaboration</td>
<td>3</td>
</tr>
<tr>
<td>EMGT 905</td>
<td>Strategic Management and Planning</td>
<td>3</td>
</tr>
</tbody>
</table>

Elective Courses (6 cr needed)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMGT 806</td>
<td>Decision and Risk Analysis</td>
<td>3</td>
</tr>
<tr>
<td>EMGT 807</td>
<td>Project Management</td>
<td>3</td>
</tr>
<tr>
<td>EMGT 808</td>
<td>Engineering Leadership</td>
<td>3</td>
</tr>
<tr>
<td>EMGT 811</td>
<td>Legal Considerations for Engineering Managers</td>
<td>3</td>
</tr>
<tr>
<td>EMGT 819</td>
<td>Applied Management Science for Engineering Managers</td>
<td>3</td>
</tr>
<tr>
<td>EMGT 820</td>
<td>Quantitative Analysis for Engineering Management Decisions</td>
<td>3</td>
</tr>
<tr>
<td>EMGT 891</td>
<td>Special Topics in Engineering Management</td>
<td>1-3</td>
</tr>
<tr>
<td>EMGT 901</td>
<td>Total Quality Management Using Six Sigma Techniques</td>
<td>3</td>
</tr>
</tbody>
</table>

**Fine and Performing Arts**

**Music Entrepreneurship**

To earn the Graduate Certificate in Music Entrepreneurship:

1. Apply and get admitted toward this certificate objective.
2. Consult an advisor to develop a plan of study.
3. Complete 12 credit hours as described here. These courses are offered each fall and spring term, with the business courses (ENTR) also offered in summer. Although these are not part of the regular Master of Music program, they may be used as electives in some master's or doctoral programs in Music.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUSC 898</td>
<td>Special Topics in Music</td>
<td>3</td>
</tr>
<tr>
<td>ENTR 821</td>
<td>Initiating and Managing Entrepreneurial Growth</td>
<td>3</td>
</tr>
<tr>
<td>ENTR 822</td>
<td>Managing Rapid Growth and Change in Organizations</td>
<td>3</td>
</tr>
<tr>
<td>MUSC 894</td>
<td>Music Internship</td>
<td>3</td>
</tr>
</tbody>
</table>

**Journalism and Mass Communications**

**Public Relations and Social Media**

To earn the Graduate Certificate in Public Relations and Social Media:

1. Apply and get admitted toward this certificate objective (http://www.unl.edu/gradstudies/prospective/programs/Cert_PublicRelations).
2. Consult an advisor to develop a plan of study.
3. Complete 12 credit hours as described here, with grades of B or higher in all classes.

Required courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADPR 830</td>
<td>Strategic Communications: Advertising Issues and Strategies</td>
<td>3</td>
</tr>
<tr>
<td>ADPR 834</td>
<td>Digital Insight &amp; Analytics</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADPR 850</td>
<td>Public Relations Management and Case Studies</td>
<td>3</td>
</tr>
<tr>
<td>ADPR 866</td>
<td>Social Media Theory and Practice</td>
<td>3</td>
</tr>
</tbody>
</table>