

ally include completion or concurrent enrollment in ECO 310 and 311. Offered fall, winter and spring.

**ECO 481. ADVANCED INTERNSHIP IN ECONOMICS 1-4 sh**

This course provides opportunities for students to apply concepts and information gathered in the economics classroom to actual experience in the community. Placements may include businesses, not-for-profit organizations or teaching assistants in lower-division economics classes. Prerequisites: will vary with the topic but will generally include completion or concurrent enrollment in ECO 310 and ECO 311 or permission of instructor. Enrollment limited to economics majors. Offered fall, winter, spring and summer.

**ECO 491. ADVANCED INDEPENDENT STUDY 1-4 sh**

Students pursuing the major or minor in economics may complete individual study in an area of special interest that is not otherwise covered in regular course offerings. Study is to be undertaken under the guidance of a member of the economics faculty. An Independent Study form must be completed prior to registration. Prerequisites: will vary with the topic but will generally include completion or concurrent enrollment in ECO 310 and ECO 311 or permission of instructor. Enrollment limited to economics majors. Offered fall, winter, spring and summer.

**ECO 495. SENIOR THESIS 2-4 sh**

This is the culmination of the economics major and serves as the student's required comprehensive evaluation in the major field of study. For this research project, economics majors work individually with a professor to build on work done in previous courses, culminating in a work of presentation quality. The completed work is to be presented in a public forum such as SURF, national or regional professional society meetings or at a campus-level economics symposium. In addition, all students are to present their work before the collected faculty, students and guests of the economics department. Prerequisites: ECO 310, 311 and eight additional hours of economics numbered 300 or above; senior economics major.

**ECO 499. ADVANCED RESEARCH 1-4 sh**

Students engage in advanced undergraduate research under the direction of an economics department faculty member. Predominately this course will be restricted to economics majors and will be in preparation for their senior thesis. Maximum of eight semester hours total credit. Prerequisites: eligibility as determined by the undergraduate research guidelines of Elon University and approval by the department. Enrollment limited to economics majors.

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## Education

*Chair, Department of Education: Professor Howard*

*Professors: Crawford, Dillashaw*

*Associate Professors: Long, Stasz, Stuart*

*Assistant Professors: Byrd, Drake, Knight-McKenna, Mihans, Rumley, Tomasek*

The mission of Teacher Education at Elon University is to prepare quality teachers who are knowledgeable, responsible and thoughtful professionals. The conceptual framework, "Thoughtful Practice in a Community of Learners," reflects the intention to create a learning environment in which teacher candidates inquire and collaborate to develop the knowledge, skills and dispositions for effective professional practice.

### Knowledge

1. Demonstrate in-depth knowledge of the subject area(s) for which they seek licensure.
2. Use knowledge of students' learning process to inform instruction.

3. Demonstrate understanding of pedagogical knowledge relevant to the subject area(s) for which they seek licensure.
4. Choose appropriately from among multiple instructional strategies to promote optimal student learning.
5. Choose appropriately from among a variety of resources, including technology, to promote active student learning.

### **Inquiry**

6. Seek to understand students' family and community, collaborate with parents and professional colleagues and establish a knowledge building community to inform practice.
7. Inquire, actively and persistently, about student learning through the use of a variety of assessment procedures.
8. Analyze, through reflective practice, the effectiveness of their instruction and make appropriate adaptations to maximize student learning.

### **Professionalism**

9. Establish positive classroom learning environments that support the social and academic growth of students.
10. Hold high expectations for the academic and social growth of all students.
11. Seek opportunities to further personal learning and professional growth.
12. Demonstrate enthusiasm and respect for the profession of teaching.

Elon's education program prepares teachers for careers in the elementary, middle and high school grades. The program emphasizes practical hands-on experience in classrooms as well as educational theory and methods classes on campus. Yearly field experiences in public school classrooms begin the first year and culminate with a full semester of teaching in the teacher candidate's licensure area.

Elon is widely recognized for the success of its Teacher Education program, which is accredited by the National Council for Accreditation of Teacher Education, and is one of only two private institutions in the state selected to offer the prestigious N.C. Teaching Fellows program.

Elon University offers programs leading to N.C. licensure in elementary education, middle grades education, special education (General Curriculum), special subject areas for grades K-12 and in seven areas at the secondary level.

The student who successfully completes any of the Teacher Education programs at Elon University will be eligible for licensure to teach in North Carolina. The state of North Carolina is party to the Interstate Certification Compact which qualifies Elon University graduates also to be licensed in all states party to this Compact. Currently there are 26 states which have entered into this reciprocity agreement. Any student planning to teach in a state not a part of the Interstate Certification Compact should obtain a copy of the licensure requirements for a public school teacher from the state superintendent of education of the state in which the student plans to teach.

Before being admitted into the Teacher Education program, the student must make application to the program and be recommended by the appropriate major department. The basic testing requirement for admission to Teacher Education is the PRAXIS I

(PPST) tests in reading, writing and mathematics with minimum scores as established by the NC State Board of Education.

SAT or ACT scores may be substituted for the PRAXIS I tests as follows:

- Students who score at least 1100 on the SAT (combined verbal and mathematics) or an ACT composite score of 24 are exempt from taking the PRAXIS I examinations.
- If the SAT total is less than 1100 (or less than 24 ACT composite), PRAXIS I exams are required as follows:
  - Students who score at least 550 on the math SAT (24 on math ACT) are exempt from the math PRAXIS I. If the math score is less than 550 SAT (24 ACT), students must take the math PRAXIS I exam.
  - Students who score at least 550 on the verbal SAT (24 on English ACT) are exempt from both the reading and writing PRAXIS I examinations. If the verbal score is less than 550 SAT (24 ACT), students must take both the reading and writing PRAXIS I examinations.

In addition, all students must pass a grammar competency test and earn a grade of C- or better in MTH 210 (if required for the major) and PSY 321 to be admitted to the teacher education program.

In all cases, approval for admission to the program is subject to the discretion of the Teacher Education Committee, which bases its decision not only on the above factors, but also on satisfactory command of standard English usage (written and oral) and acceptable dispositions. Students whose dispositions are not acceptable will be interviewed by the department chair and/or a committee of education faculty. Depending on the severity of the problem, a student may be denied admission to the program or admitted with probationary status. In some cases probationary status will require a contract. Students who do not demonstrate acceptable dispositions while in the program may be removed from the program by the Teacher Education Committee. All students who are admitted to the program are required to attend the Teacher Candidate Induction Ceremony.

Application forms for the Teacher Education program are available in the office of the School of Education and must be filed by October 15 or March 15 of the semester immediately prior to the beginning of the student's junior year. A student must be unconditionally admitted to the program before being permitted to take education courses beyond the 200 level. Any exceptions to this policy must be approved by the dean of the School of Education.

To be recommended for teacher licensure, a teacher candidate must meet all academic requirements and have a minimum GPA of 2.5. A teacher candidate must also meet the North Carolina minimum score on the Specialty Area Test (minimum scores for these tests vary with content area) and have a recommendation from the school system in which student teaching was completed. They must also demonstrate mastery of technology competencies as required by the North Carolina State Board of Education.

All students who are education majors or who already hold a bachelor's degree and are seeking only licensure are subject to the decisions and regulations of the N.C. State Board of Education. These decisions and regulations are binding on the student on the date and time specified by the board.

At Elon University, the Teacher Education programs are fully approved by the N.C. State Board of Education. While a student ordinarily may graduate and be licensed

under the catalog requirements in effect at the time the student is admitted to the Teacher Education program, the board may mandate changes in standards of approved teacher education programs, requiring students to modify or add to their original degree programs to be eligible for licensure upon completion of graduation requirements. Students should consult their advisor about current program requirements.

**A major in Elementary Education** consists of the courses necessary to meet the requirements for elementary education (K-6) licensure in the public schools of North Carolina. The following courses are required of all elementary education majors:

#### FOUNDATIONAL COURSES

BIO	101	Topics in General Biology	3 sh
BIO	102	General Biology Lab	1 sh
SCI	121	Science Without Borders	4 sh
POL	111	American Government	4 sh
HST	123	The U.S. and N.C. since 1865	4 sh
* MTH	210	Mathematics for Elementary and Middle Grades Teachers (GS Math requirement or equivalent is a prerequisite)	4 sh
CIS	220	Computers and Teaching	3 sh
* PSY	321	Educational Psychology	4 sh
PEH	362	Healthful Living in the Elementary School	2 sh
FNA	369	Fine Arts in the Public Schools	4 sh
EDU	298	Children's Literature	4 sh
EDU	211	School and Society	4 sh
		Cultural Perspective Concentration (see pages 108-113)	12 sh
		Passing score on Grammar Competency Test	
EDU	323	Literacy Development I: Principles and Practices	3 sh
EDU	324	Literacy Development II: Strategies & Instruction for Struggling Readers	3 sh
EDU	346	Classroom Management	2 sh
EDU	451	Teaching Diverse Learners	4 sh
		<u>Principles of Learning and Teaching (PLT) I</u>	8 sh
EDU	311	Principles of Learning and Teaching (PLT) I <i>Concentration areas:</i> Language Arts and Social Studies Methods and Materials	
		<b>or</b>	
EDU	312	Principles of Learning and Teaching (PLT) I <i>Concentration areas:</i> Mathematics and Science Methods and Materials	
		<b>and</b>	
		<u>Principles of Learning and Teaching (PLT) II</u>	8 sh
EDU	411	Principles of Learning and Teaching (PLT) II <i>Concentration areas:</i> Language Arts and Social Studies Methods and Materials	
		<b>or</b>	
EDU	412	Principles of Learning and Teaching (PLT) II	

*Concentration areas:*

Mathematics and Science Methods and Materials

Students who enroll in EDU 311 will enroll in EDU 412 in the following semester.

Students who enroll in EDU 312 will enroll in EDU 411 in the following semester.

This will ensure that all four content areas are addressed.

EDU	481	Supervised Observation and Student Teaching	10 sh
EDU	482	Critical Issues in Education: Capstone Seminar I	2 sh
EDU	483	Thoughtful Analysis of Practice: Capstone Seminar II	2 sh
<b>TOTAL</b>			<b>95 sh</b>

**Cultural Perspective Concentrations**

Elementary Education majors are encouraged to pursue a minor in one of the following areas:

- African/African-American Studies
- Asian Studies
- Foreign Language
- International Studies
- Italian Studies
- Latin American Studies
- Women's/Gender Studies

When a minor in one of these areas is not possible, Elementary Education majors are required to choose a minimum of 12 credit hours in a concentration with at least four hours at the 300-400 level. Students are strongly encouraged to study abroad for a semester or winter term to meet these requirements. Courses fulfilling the cultural perspective concentration requirement may, as appropriate, also fulfill general studies requirements. Minors in other areas, with a concentration, are also encouraged.

*Following are the approved cultural perspective concentrations:*

- Education for Social Justice
- International Studies
- Italian Studies
- Semester Abroad
- Society and Environment
- Women's/Gender Studies

***Education for Social Justice***

Students choosing the Education for Social Justice Concentration are encouraged to expand the concentration to complete a minor in one of the following areas:

- African/African-American Studies
- Non-Violence Studies
- International Studies Concentration

***International Studies***

Students choosing the International Studies Concentration should begin their course of study with HST/INT 221 (4 sh) World in the Twentieth Century.

Choose one of the following options:

- Foreign Language Study (8 sh of one modern foreign language)

**Regional Concentration**

Africa  
 Asia  
 Europe  
 Latin America

Students are encouraged to expand the *International Studies Concentration* to complete a minor in one of the following areas:

African/African-American Studies  
 Asian Studies  
 Foreign Language  
 International Studies  
 Italian Studies  
 Latin American Studies  
 \*Global Studies is not an option.

Students choosing the Italian Studies concentration are encouraged to expand the concentration and complete a minor in Italian Studies.

**Semester Abroad**

A semester abroad may substitute for the concentration requirements. Check with your advisor for appropriate semester abroad options.

**Society and Environment**

This concentration is designed for teacher candidates who would like to pursue a more scientific approach to issues of diversity. This concentration is an exceptionally good fit with the elementary science curriculum.

**Women's/Gender Studies**

Students choosing the Women's/Gender Studies concentration are encouraged to expand the concentration to complete a minor in Women's/Gender Studies.

The courses listed under each concentration provide *examples* of possibilities. Courses in the minor and additional courses may be approved by the department chair in education in consultation with the appropriate department chair or program director. These courses may also count toward general studies requirements.

**Education for Social Justice**

ENG 255 Topics in Literature (as thematically appropriate)  
 ENG 238 African-American Literature before 1945  
 ENG 239 African-American Literature since 1945  
 ENG 337 Asian Literature of Social Change  
 ENG 359 African-American Novels  
 ENG 370 Simple Living  
 ENG 372 Literature of Non-Violence  
 ENG/GST 373 America and Vietnam  
 MUS 343 African-American Composers (cross-listed with GST 343)  
 PHL 352 Eastern Philosophy

PHL 348	Environmental Ethics
PHL/GST 330	Economic Justice
HST 133	Civil Rights Movement
HST 363	African-American History, 1850-Present
HST 388	History of the Caribbean
REL 341	Christian Ethics
REL 345	Theology of Human Liberation
REL 348	Environmental Ethics
REL 353	Buddhism
REL 377	Feminist Ethics
REL 279	Topics in Eastern Religion
GEO 310	Development and the Environment in Latin America, Africa, Asia
GEO 320	Geography of Africa
GEO 331	Study Abroad: Analyzing Your Experience
GEO 342	Gender and Environment in South America
POL 141	International Relations
POL 324	Civil Liberties
POL 342	U.S. Foreign Polic
POL 345	International Terrorism
POL 367	Politics of Africa
POL 368	Latin American Politics
POL 374	Judicial Administration
POL 377	Politics of Victimization
POL 441	Peace, War and Conflict Resolution
PSY 325	Psychology of American Protest Music
PSY 327	Psychology of Non-Violence
PSY 357	Criminal Behavior
SOC 241	Social Issues and Problems
SOC 245	Non-Violence of the Brave: From Ghandhi to King
SOC 341	Ethnic and Race Relations
SOC 343	Social and Cultural Change

**International Studies**

HST/INT 221 (4) World in the Twentieth Century

This course is required in this concentration.

*Regional Concentration: Africa*

ART 341	African Art (4)
ENG 255	Topics in Literature (as thematically appropriate)
ENG 338	African Experiences in Literature
FRE 362	Francophone Cultures Outside France
HST 313	Modern Africa
HST 314	History of Southern Africa
GEO 320	Geography of Africa
POL/INT 141	International Relations
POL 367	Politics of Africa
JCM 346	African Film
AAA 361	Seminars in African/African American Studies
AAA 491	Independent Study

*Regional Concentration: Asian*

ENG	255	Topics in Literature (as thematically appropriate)
ENG	337	Asian Literature of Social Change
PHL	352	Eastern Philosophy
PHL	353	Zen and the Culture of Japan
HST	320	China, Japan and the Pacific Century
REL	353	Buddhism
REL	356	Hinduism
POL/INT	141	International Relations
POL	363	Politics of Asia
POL	365	Politics of Eurasia
ENS	310	Environmental Issues of Southeast Asia

*Regional Concentration: Europe*

ENG	222	British Literature II
ENG	325	Romanticism
ENG	326	Realism and the Later 19th Century
ENG	356	The Novel: British Women Writers
PHL	433	Marx, Darwin and Freud
FRE	332	Introduction to French Literature II
FRE	361	French Civilization
SPN	333	Spanish Civilization
SPN	351	Studies in Peninsular Literature
SPN	353	Survey in Peninsular Literature
HST	316	The History of Imperial Russia to 1917
HST	317	Russia & the Soviet Union since 1917
HST	324	England Within the British Empire
HST	326	History of Ireland
HST	327	History of Scotland
HST	335	Growth of Modern Europe
HST	336	Europe, 1914-1945
HST	337	Europe, 1945 to present
HST	338	Germany, Democracy & Hitler 1914-1945
HST	339	A History of the Holocaust
POL/INT	141	International Relations
POL	364	Politics of Europe
POL	365	Politics of Eurasia
POL	428	Comparative Public Policy

*Regional Concentration: Italian Studies*

ART	343	Renaissance Art History
ART	312	Greek and Roman Art
ENG	321	Classical Literature
ENG	322	Medieval Literature
FNA	265	Fine Arts in Italy (Study Abroad)
GST	214	Contemporary Italy
GST	274	Italy Heritage
HST	131	Special Topics related to Italy
HST	381	History of Ancient Rome
ITL	121	Elementary Italian I



ITL	122	Elementary Italian II
ITL	221	Intermediate Italian I
ITL	222	Intermediate Italian II
ITL	300	Studies in Italy / semester abroad program (when approved by Minor coordinator)
ITL	321	Italian Conversation
ITL	373	History of Italian Cinema (Special Topic)
JCM	371	Special Topic/Italian Film
MUS	471	The Opera (special topics)
PHL	337	Dante's Journey
REL	335	Christianity: Ancient and Medieval

*Regional Concentration: Latin America*

ENG	255	Topics in Literature (as thematically appropriate)
ENG	335	Latin American Literature and Culture
SPN	334	Latin American Civilization
SPN	352	Survey of Latin American Literature
SPN	354	Studies in Latin American Literature
HST	341	Modern Central American History
HST	350	History of Brazil
HST	351	History of Mexico
HST	353	Colonial Latin America
HST	354	Modern Latin America
GEO	342	Gender and Environment in South America
ENS	365	Natural History, Ecology of Latin America
POL/INT	141	International Relations
POL	368	Latin American Politics
SOC	364	Inequality and Development in Latin America

**Society and Environment**

ENG	339	American Environmental Writers
PHL/REL	348	Environmental Ethics
ECO	335	Economics of Environmental Issues (prereq. ECO 201)
GEO	310	Development and the Environment in Latin America, Africa and Asia
POL	224	Environmental Policy and Law
POL	344	International Environmental Policy
BIO	112, 114	Introduction to Population Biology and Lab
BIO	215	Diversity of Life
ENS	111, 113	Introduction to Environmental Science and Lab
PHY	110	Energy and the Environment
BIO	335 IS	Field Biology in Belize
BIO	379 IS	Field Biology in the Galapagos
ENS	310	Environmental Issues of Southeast Asia
ENS	365	Natural History, Ecology of Latin America
ENS	372	Environmental Visions – Alternative Futures
BIO	344	Evolution
ENS/GEO	350	Introduction to Geographic Information Systems

**Women's/Gender Studies**

ENG	255	Topics in Literature (as thematically appropriate)
ENG	333-WG	Women in Literature: Feminist Approaches
ENG	356-WG	The Novel: British Women Writers
ENG	361-WG	Gender Issues in Cinema
PHL	345-WG	Feminist Philosophy
HST	364-WG	History of Women in the U.S.
REL	347-WG	Women and Religion
ECO	270-WG	Economics of Gender
GEO	342	Gender and Environment in South America
POL	241-WG	International Relations
PSY	215-WG	Psychology of Personal Relationships
PSY	315-WG	Psychology of Sex and Gender
SOC	311-WG	The Family
SOC	345-WG	Sociocultural Perspectives on Gender
GST	270-WG	Women, Men and Society
GST	257-WG	Women, Culture and Development
GST	369-WG	Men and Masculinity
GST	269	Women and Leadership
WGS	300	Current Controversies in Feminism
WGS	461-469	Special Topics in Women's Studies/Gender Studies
WGS	481	Internship in Women's Studies/Gender Studies
WGS	491	Independent Study

**The Special Education (General Curriculum)** is a dual licensure program in which teacher candidates complete the requirements for licensure in Special Education (General Curriculum) and one of the following areas: Elementary Education, Middle Grades Education, English Education, Mathematics Education, Social Studies/History Education, or Science Education (biology concentration).

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All **Special Education (General Curriculum)** students must take the following core courses:

**CORE COURSES**

EDU	211	School and Society	4 sh
EDU	342	Foundations of Special Education	3 sh
EDU	345	Planning and Managing the Learning Environment in Special Education	4 sh
EDU	435	Assessment Methods and Interpretation in Special Education	4 sh
EDU	444	Language, Literacy and Mathematics in Special Education	4 sh
EDU	445	Teaching/Learning Strategies for Students in Special Education	4 sh
<b>TOTAL</b>			<b>23 sh</b>

**Special Education and Elementary Education**

<b>CORE COURSES</b>			<b>23 sh</b>
FNA	369	Fine Arts in the Public Schools	4 sh

PEH	362	Healthful Living in the Elementary School	2 sh
HST	123	The U.S. and N.C. since 1865	4 sh
POL	111	American Government	4 sh
BIO	101	Topics in General Biology	3 sh
BIO	102	General Biology Lab	1 sh
SCI	121	Science without Borders	4 sh
PSY	321	Educational Psychology	4 sh
MTH	210	Mathematics for Elementary and Middle Grades Teachers (GS Math requirement is a prerequisite)	4 sh
CIS	220	Computers and Teaching	3 sh
Cultural Concentration Courses ( <i>see pages 108-113</i> )			12 sh
EDU	323	Literary Development I: Principles and Practices	3 sh
EDU	298	Children's Literature	4 sh
<u>Principles of Learning and Teaching (PLT) I</u>			8 sh
EDU	311	Principles of Learning and Teaching (PLT) I <i>Concentration areas:</i> Language Arts and Social Studies Methods and Materials	
<b>or</b>			
EDU	312	Principles of Learning and Teaching (PLT) I <i>Concentration areas:</i> Mathematics and Science Methods and Materials	
<b>and</b>			
<u>Principles of Learning and Teaching (PLT) II</u>			8 sh
EDU	411	Principles of Learning and Teaching (PLT) II <i>Concentration areas:</i> Language Arts and Social Studies Methods and Materials	
<b>or</b>			
EDU	412	Principles of Learning and Teaching (PLT) II <i>Concentration areas:</i> Mathematics and Science Methods and Materials	
EDU	481	Student Teaching – Winter Term	4 sh
EDU	481	Student Teaching – Spring Semester	10 sh
EDU	482	Critical Issues in Education: Capstone Seminar I	2 sh
EDU	483	Thoughtful Analysis of Practice: Capstone Seminar II	2 sh
<b>TOTAL</b>			<b>109 sh</b>

**Special Education and Middle Grades Education**

CIS	220	Computers and Teaching	3 sh
PSY	321	Educational Psychology	4 sh
CORE COURSES			23 sh

*Middle Grades Concentration – choose one*

**Communication Skills Concentration**

ENG 205	Grammar	4 sh
ENG 224	American Literature II	4 sh
ENG 250	Interpretations of Literature	4 sh
ENG 319	Writing Center Workshop	4 sh
ENG 399	Young Adult Literature	4 sh
EDU 421	Materials and Methods of Teaching Middle Grades and Secondary English	4 sh
One course from the following:		4 sh
ENG 238	African-American Literature before 1945	
ENG 239	African-American Literature since 1945	
ENG 359	African-American Novels	

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*concentration total* 28 sh

**OR Social Studies Concentration**

ECO 201	Principles of Economics	4 sh
GEO 131	The World's Regions	4 sh
HST 112	Europe and the Mediterranean World since 1660	4 sh
HST 123	U.S. & N.C. Since 1865	4 sh
HST 221	The World in the Twentieth Century	4 sh
POL 111	American Government	4 sh
EDU 425	Materials and Methods of Teaching Middle Grades and Secondary Social Studies	4 sh

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*concentration total* 28 sh

**OR Mathematics Concentration**

MTH 112	General Statistics	4 sh
MTH 115	Trigonometry	4 sh
MTH 121	Calculus and Analytic Geometry I	4 sh
MTH 221	Calculus and Analytic Geometry II	4 sh
MTH 210	Mathematics for Elementary and Middle Grades Teachers	4 sh
MTH 206	Discrete Structures	4 sh
EDU 422	Materials and Methods of Teaching Middle Grades and Secondary Mathematics	4 sh

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*concentration total* 28 sh

**OR Science Concentration**

BIO 101	Topics in General Biology	3 sh
BIO 102	General Biology Lab	1 sh
SCI 121	Science without Borders	4 sh
CHM 111	General Chemistry I	3 sh
CHM 113	General Chemistry Lab	1 sh
PHY 110	Energy and the Environment	4 sh
PHY 102	Introduction to Astronomy	4 sh
PHY 103	Introduction to Geology	4 sh
EDU 424	Materials and Methods of Teaching Middle Grades and Secondary Science	4 sh

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*concentration total* 28 sh

EDU	441	Foundations of Middle Level Teaching	3 sh
EDU	442	Effective Middle Level Teaching	4 sh
EDU	481	Student Teaching	10 sh
EDU	482	Critical Issues in Education: Capstone Seminar I	2 sh
EDU	483	Thoughtful Analysis of Practice: Capstone Seminar II	2 sh
<b>TOTAL</b>			<b>79 sh</b>

**Special Education and English Education**

CIS	220	Computers and Teaching	3 sh
PSY	321	Educational Psychology	4 sh
<b>CORE COURSES</b>			<b>23 sh</b>
ENG	221	British Literature I	4 sh or
ENG	222	British Literature II	4 sh
ENG	219	Writing	4 sh
ENG	205	Grammar	4 sh
Eight hours 300-level literature			8 sh
ENG	206	Introduction to TESOL	4 sh
ENG 223, 224, 238, or 239 (American Literature)			4 sh
ENG 331, 335, 337, or 338 (World Literatures)			4 sh
ENG	319	Writing Center Workshop	4 sh
ENG	342	Shakespeare	4 sh
ENG	495	Senior Seminar: Literature	4 sh
EDU	421	Materials and Methods of Teaching Middle Grades and Secondary English	4 sh
EDU	480	Student Teaching Seminar	2 sh
EDU	481	Student Teaching	10 sh
<b>TOTAL</b>			<b>90 sh</b>

**Special Education and Mathematics Education**

<b>CORE COURSES</b>			<b>23 sh</b>
CSC	130	Computational Programming	4 sh
MTH	121	Calculus and Analytic Geometry I	4 sh
MTH	221	Calculus and Analytic Geometry II	4 sh
MTH	231	Mathematical Reasoning	4 sh
MTH	311	Linear Algebra	4 sh
MTH	312	Abstract Algebra	4 sh
MTH	321	Calculus and Analytic Geometry III	4 sh
MTH	331	Modern Geometry	4 sh
MTH	341	Probability Theory and Statistics	4 sh
MTH	425	Analysis	4 sh
MTH	361	Seminar I	2 sh
MTH	461	Seminar II	2 sh

PHY	113	Physics w/Calculus	4 sh
PSY	321	Educational Psychology	4 sh
EDU	422	Materials and Methods of Teaching Middle Grades and Secondary Math	4 sh
EDU	480	Student Teaching Seminar	2 sh
EDU	481	Student Teaching	10 sh
<b>TOTAL</b>			<b>91 sh</b>

**Special Education and History Education**

CIS	220	Computers and Teaching	3 sh
PSY	321	Educational Psychology	4 sh
CORE COURSES			23 sh
HST	111	Europe and the Mediterranean World to 1660	4 sh
HST	112	Europe and the Mediterranean World since 1660	4 sh
HST	121	United States History through 1865	4 sh
HST	123	U.S. & N.C. Since 1865	4 sh
HST	301	Research Methods	4 sh
One history seminar course			4 sh
Twelve hours HST electives at the 300-400 level chosen from each of the following areas:			12 sh
1) US Minority History (African-Americans, Native Americans and Women in the U.S.)			
2) Europe			
3) Developing World (Africa, Latin America and Asia)			
GEO	131	The World's Regions	4 sh
POL	111	American Government	4 sh
ECO	201	Principles of Economics	4 sh
EDU	425	Materials and Methods of Teaching Middle Grades and Secondary History	4 sh
EDU	480	Student Teaching Seminar	2 sh
EDU	481	Student Teaching	10 sh
<b>TOTAL</b>			<b>94 sh</b>

**Special Education and Science Education**

CIS	220	Computers and Teaching	3 sh
PSY	321	Educational Psychology	4 sh
CORE COURSES			23 sh
BIO	111	Introductory Cell Biology	3 sh
BIO	112	Introductory Population Biology	3 sh
BIO	113	Cell Biology Lab	1 sh
BIO	114	Population Biology Lab	1 sh
BIO	221	Zoology	4 sh
BIO	222	Botany	4 sh

BIO	322	Molecular/Cellular Biology	4 sh
CHM	111	General Chemistry I	3 sh
CHM	112	General Chemistry II	3 sh
CHM	113	General Chemistry I Lab	1 sh
CHM	114	General Chemistry II Lab	1 sh
CHM	211	Organic Chemistry I	3 sh
CHM	213	Organic Chemistry I Lab	1 sh
Select one course from:			4 sh
BIO	312	Comparative Vertebrate Anatomy	
BIO	321	Microbiology	
BIO	325	Human Histology	
BIO	342	Plant Physiology	
BIO	452	General Ecology	
Select one course from:			4 sh
CHM 212/214		Organic Chemistry II & Lab	
CHM 205		Inorganic Chemistry	
PHY	102	Astronomy	4 sh
PHY	103	Geology	4 sh
EDU	424	Materials and Methods of Teaching Middle Grades and Secondary English	4 sh
EDU	480	Student Teaching Seminar	2 sh
EDU	481	Student Teaching	10 sh
<b>TOTAL</b>			<b>94 sh</b>

**A major in Middle Grades Education** consists of the courses necessary to meet the requirements for middle grades (6-9) licensure in the public schools of North Carolina. The following Core Courses are required of all middle grades majors:

CIS	220	Computers and Teaching	3 sh
PSY	321	Educational Psychology	4 sh*
EDU	211	School and Society	4 sh
EDU	324	Literacy Development II: Strategies & Instruction for Struggling Readers	3 sh
EDU	346	Classroom Management	2 sh
EDU	441	Foundations of Middle Level Education	3 sh
EDU	442	Effective Middle Level Teaching	4 sh
EDU	451	Teaching Diverse Learners	4 sh
EDU	481	Supervised Observation and Student Teaching	10 sh
EDU	482	Critical Issues in Education: Capstone Seminar I	2 sh
EDU	483	Thoughtful Analysis of Practice: Capstone Seminar II	2 sh
One subject area concentration			28 sh
<b>TOTAL</b>			<b>69 sh</b>

C- or better for admission to the program.

Passing score on Grammar Competency test

**In addition to the Core Courses**, a student majoring in middle grades education must select one subject area concentration from the following:

*Communication Skills Concentration*

ENG 205	Grammar	4 sh
ENG 224	American Literature II	4 sh
ENG 250	Interpretations of Literature	4 sh
ENG 319	Writing Center Workshop	4 sh
ENG 399	Young Adult Literature	4 sh
EDU 421	Materials and Methods of Teaching Middle Grades and Secondary English	4 sh
One course from the following:		4 sh
ENG 238	African-American Literature before 1945	
ENG 239	African-American Literature since 1945	
ENG 359	African-American Novels	

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*concentration total* 28 sh

*Social Studies Concentration*

ECO 201	Principles of Economics	4 sh
GEO 131	The World's Regions	4 sh
HST 112	Europe and the Mediterranean World since 1660	4 sh
HST 123	U.S. & N.C. Since 1865	4 sh
HST 221	The World in the Twentieth Century	4 sh
POL 111	American Government	4 sh
EDU 425	Materials and Methods of Teaching Middle Grades and Secondary Social Studies	4 sh

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*concentration total* 28 sh

*Mathematics Concentration*

MTH 112	General Statistics	4 sh
MTH 115	Trigonometry	4 sh
MTH 121	Calculus and Analytic Geometry I	4 sh
MTH 221	Calculus and Analytic Geometry II	4 sh
MTH 210	Mathematics for Elementary and Middle Grades Teachers	4 sh
MTH 206	Discrete Structures	4 sh
EDU 422	Materials and Methods of Teaching Middle Grades and Secondary Mathematics	4 sh

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*concentration total* 28 sh

*Science Concentration*

BIO 101	Topics in General Biology	3 sh
BIO 102	General Biology Lab	1 sh
SCI 121	Science without Borders	4 sh
CHM 111	General Chemistry I	3 sh
CHM 113	General Chemistry Lab	1 sh
PHY 110	Energy and the Environment	4 sh
PHY 102	Introduction to Astronomy	4 sh
PHY 103	Introduction to Geology	4 sh



EDU 424	Materials and Methods of Teaching Middle Grades and Secondary Science	4 sh
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<i>concentration total</i>		<i>28 sh</i>

**The student planning to teach at the high school level** completes a major in a discipline and the necessary **Professional Studies** courses for teacher licensure at the secondary level (grades 9-12). Secondary education licensure is available in biology, chemistry, comprehensive science, English, history, mathematics, physics and social studies. Specific requirements for each program are listed with the appropriate department in this catalog. In general, the following Professional Studies courses must be satisfactorily completed:

EDU 211	School and Society	4 sh
EDU 322	Reading in the Content Areas	2 sh
EDU 350	Classroom Management for Secondary Teachers	2 sh
Choose an appropriate methods course:		4 sh
EDU 421	Materials and Methods of Teaching Middle Grades and Secondary English	
EDU 422	Materials and Methods of Teaching Middle Grades and Secondary Mathematics	
EDU 424	Materials and Methods of Teaching Middle Grades and Secondary Science	
EDU 425	Materials and Methods of Teaching Middle Grades and Secondary Social Studies	
EDU 450	Meeting Special Learning Needs of Children	4 sh
EDU 480	Student Teaching Seminar	2 sh
EDU 481	Supervised Observation and Student Teaching	10 sh
CIS 220	Computers and Teaching (Not required for Mathematics Education majors)	3 sh
PSY 321	Educational Psychology	4 sh
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<b>TOTAL</b>		<b>35 sh</b>

**Programs leading to licensure in Special Subject Areas (K-12) level** are available in French, music education, physical education and health, and Spanish. Specific requirements for these programs are listed with the appropriate department in this catalog. In general, the following Professional Studies courses must be satisfactorily completed:

EDU 211	School and Society	4 sh
EDU 322	Reading in the Content Areas	2 sh
EDU 350	Classroom Management for Secondary Teachers	2 sh
One of the following courses:		4 sh
EDU 423	Materials and Methods of Teaching Physical Education	
EDU 427	Materials and Methods of Teaching Health and Safety	
EDU 428	Materials and Methods of Teaching Foreign Languages	
MUS 461	Music Education in the Public Schools	
EDU 450	Meeting Special Learning Needs of Children (Not required for Physical Education majors)	4 sh
EDU 480	Student Teaching Seminar	2 sh
EDU 481	Supervised Observation and Student Teaching	10 sh
CIS 220	Computers and Teaching	3 sh

PSY	321	Educational Psychology	4 sh
<b>TOTAL</b>			<b>35 sh</b>

- EDU 211. SCHOOL AND SOCIETY** **4 sh**
- This course is designed to introduce students to the cultural, social, historical, legal and philosophical foundations of education. Students examine critical issues that impact education in the 21st century. An integrated field experience enables students to analyze a variety of perspectives on the purposes of education and instructional practices related to classroom management, learning environment and meeting the needs of learners who are diverse in culture, language and ability. Students will develop skills in critical thinking, leadership, observing, interviewing, reading, writing and oral communications. Offered fall, winter and spring.
- EDU 298. CHILDREN'S LITERATURE** **4 sh**
- This course is a survey of children's literature, historical and contemporary. Students will read deeply and critically works from the United States and around the world as they develop an awareness of children's books and authors. Students will revisit and revise common stereotypes and misconceptions concerning children's literature to gain a clearer understanding of how effective literature speaks to children, reflects their experience and provides insight into themselves, people and the world. Students will gain an understanding of how children's literature can bring greater sensitivity and an alternative perspective to any course of study. Prerequisite: EDU 211 or by permission of instructor. Offered fall, winter and spring.
- EDU 311. PRINCIPLES OF LEARNING AND TEACHING I: LANGUAGE ARTS AND SOCIAL STUDIES METHODS AND MATERIALS** **8 sh**
- Students learn how to investigate, evaluate and select content, methods and materials used in organizing and teaching language arts and social studies in elementary school. They develop appropriate curricula and examine personal beliefs and dispositions. They design and implement differentiated lessons based on state standards and develop technology-enhanced, project-based learning units. They gain a sound pedagogical knowledge base, an understanding of the importance of inquiry and professionalism and have opportunities to participate in a community of learners. A concurrent practicum offers opportunities to apply concepts and skills. Prerequisites: EDU 211, PSY 321, CIS 220. Corequisites: EDU 323 and 346. Admission to Teacher Education Program. To be taken no earlier than Junior year. Offered fall and spring.
- EDU 312. PRINCIPLES OF LEARNING AND TEACHING I: MATHEMATICS AND SCIENCE METHODS AND MATERIALS** **8 sh**
- Students learn how to investigate, evaluate and select content, methods and materials used in organizing and teaching mathematics and science in the elementary school. They develop appropriate curricula and examine personal beliefs and dispositions. They design and implement differentiated lessons based on state standards and develop technology-enhanced, project-based learning units. They gain a sound pedagogical knowledge base, an understanding of the importance of inquiry and professionalism and have opportunities to participate in a community of learners. A concurrent practicum offers opportunities to apply concepts and skills. Prerequisites: EDU 211, MTH 210, PSY 321, CIS 220. Corequisites: EDU 323 and 346. Admission to Teacher Education Program. To be taken no earlier than Junior year. Offered fall and spring.
- EDU 322. READING IN THE CONTENT AREAS** **2 sh**
- The focus of this course is on reading strategies to guide middle school and high school instruction. Prospective teachers apply readability formulas to content area readings and design activities to promote vocabulary development, comprehension, study skills and writing. Prerequisites: EDU 211, PSY 321. Offered fall and spring.

- EDU 323. LITERACY DEVELOPMENT I: PRINCIPLES AND PRACTICES** 3 sh
- This course involves the study of the fundamental processes by which a child learns to read both linear and non-linear communication. Attention is given to readiness factors, vocabulary development, word attack, comprehension skills, assessment, writing and reading, interest in reading, the interrelatedness of all areas of the language arts to the reading process, and the integration of technology into the development of literacy. A variety of methodologies and instructional strategies focusing on providing balanced reading instruction to meet diverse student strengths and needs include language experience, phonics, reading for meaning, literature circles, reading workshop, basal book, electronic book discussions, technology projects and monitoring reading progress. Prerequisites: EDU 211, PSY 321. Admission to the Teacher Education Program. Corequisites: EDU 311 or 312. Offered fall and spring.
- EDU 324. LITERACY DEVELOPMENT II: STRATEGIES & INSTRUCTION FOR STRUGGLING READERS** 3 sh
- The focus of this course is on planning and modifying elementary classroom instruction to address the needs of children who, for a variety of reasons, experience difficulty in acquiring basic literacy skills. Emphasis is placed on using assessment of children's strengths and weaknesses to guide instructional decision making. Students practice administering a variety of diagnostic tools, interpreting the data, and using the information to design and, when warranted, modify instruction. They acquire skills necessary to design explicit, systematic instruction in phonemic awareness, decoding, spelling, reading fluency, vocabulary, reading comprehension and writing. Prerequisites: EDU 211, PSY 321 (for all students), and EDU 323 or EDU 441 (Middle Grades only). Admission to the Teacher Education Program. Corequisite: EDU 411 or 412. Offered fall and spring.
- EDU 342. FOUNDATIONS OF SPECIAL EDUCATION** 3 sh
- This course addresses the evolution of the field of special education, its philosophical and theoretical foundations, legal underpinnings, and current trends and controversies. Emphasis is on acquiring a broad knowledge base regarding the characteristics of students with exceptional learning needs and the process and procedures for providing special education. Consideration is given to how issues of human diversity impact families, cultures and schools and how these issues affect delivery of special education services. Admission to the Teacher Education Program. Offered fall.
- EDU 345. PLANNING AND MANAGING THE LEARNING ENVIRONMENT FOR STUDENTS WITH EXCEPTIONAL LEARNING NEEDS** 4 sh
- This course provides teacher candidates with the competencies and skills to use positive behavioral supports to establish a classroom environment that promotes the academic and social development of students with exceptional learning needs. Candidates will learn to use strategies such as social skills training, functional behavioral assessment, cognitive problem solving and self-regulation of behavior. The needs of families and how to involve families in educational programming for their children are considered. Admission to the Teacher Education Program. Offered spring.
- EDU 346. CLASSROOM MANAGEMENT** 2 sh
- This course uses an inquiry approach to assist elementary and middle grades teacher candidates as they analyze, create and nurture a positive and effective learning community to promote enduring social and academic growth. Prerequisite: EDU 211. Corequisites: EDU 311, 312, 411, 412, 441 or 442. Admission to the Teacher Education Program.
- EDU 350. CLASSROOM MANAGEMENT FOR SECONDARY TEACHERS** 2 sh
- The role of the teacher with regard to managing student behavior will be explored from the cognitive, ecological and behaviorist perspectives. Teacher candidates will be taught to take a proactive stance toward behavior management, thereby decreasing problem behaviors in the classroom. Included in this course are strategies for establishing a classroom in which students feel safe to take academic risks, as well as strategies for effec-

tively addressing problem behaviors and strategies for conflict resolution. Prerequisite: Admission to the Teacher Education Program. Co-requisite: taken concurrently with methods course.

**EDU 401 and EDU 402. PEDOGOGY FOR LATERAL ENTRY I and II**

**3 sh each**

Education 401-402 is a yearlong course in which students become familiarized with basic pedagogical principles. Field-based projects give students an opportunity to apply concepts and skills learned in the course, including instructional planning, assessment and classroom management. The focus is on investigating, evaluating and selecting content, methods and materials for elementary age students. Students will develop a sound pedagogical knowledge base, an understanding of the importance of inquiry and professionalism and have an opportunity to participate in a community of learners. They will develop appropriate curricula and examine personal beliefs and dispositions. They will design and implement differentiated lessons based on state standards and develop technology-enhanced, integrated learning units. Topics include instructional philosophies, trends and issues in educations, characteristics of students, classroom management, problem-based learning, peer assisted learning, differentiating instruction, working with English language learners and students from different cultures, working as partners with peers and with parents.

**EDU 411. PRINCIPLES OF LEARNING AND TEACHING II: LANGUAGE ARTS AND SOCIAL STUDIES METHODS AND MATERIALS**

**8 sh**

Students learn how to investigate, evaluate and select content, methods and materials used in organizing and teaching language arts and social studies in the elementary school. They develop appropriate curricula and examine personal beliefs and dispositions. Building on knowledge acquired in PLT I, students design and implement integrated technology-enhanced, problem-based learning units, incorporating the elements of Universal Design (UD). National standards provide the context. They gain a more in-depth pedagogical knowledge base, a deeper understanding of the importance of inquiry and professionalism and have additional opportunities to participate in a community of learners. A concurrent practicum offers opportunities to apply concepts and skills. Prerequisite: EDU 312. Corequisites: EDU 324 and 482. Admission to Teacher Education Program. Offered fall and spring.

**EDU 412. PRINCIPLES OF LEARNING AND TEACHING II: MATHEMATICS AND SCIENCES METHODS AND MATERIALS**

**8 sh**

Students learn to investigate, evaluate and select content, methods and materials used in organizing and teaching mathematics and science in the elementary school. They develop and implement appropriate curricula and examine personal beliefs and dispositions. Building on knowledge acquired in PLT I, students design and implement integrated technology-enhanced, problem-based learning units, incorporating the elements of Universal Design (UD). National standards provide the context. They gain a more in-depth pedagogical knowledge base, a deeper understanding of the importance of inquiry and professionalism and have additional opportunities to participate in a community of learners. A concurrent practicum offers opportunities to apply concepts and skills. Prerequisite: EDU 311. Corequisites: EDU 324 and 482. Admission to Teacher Education Program. Offered fall and spring.

**EDU 421. MATERIALS AND METHODS OF TEACHING MIDDLE GRADES AND SECONDARY ENGLISH**

**4 sh**

In this study of the content and organization of the English curriculum with emphasis on methods and materials used in teaching literature, language skills and composition, students review print and nonprint media, create lesson and unit plans, lead classroom discussions and conduct teaching demonstrations. Public school classroom observation and assistance are required. Prerequisites: EDU 211, PSY 321. Offered fall semester.

- EDU 422. MATERIALS AND METHODS OF TEACHING MIDDLE GRADES AND SECONDARY MATHEMATICS** 4 sh  
 Students study the objectives and content of the mathematics curriculum in grades 6-12, including the materials, techniques and methods of evaluation used in teaching mathematics in middle and high school grades. A practicum in the public schools is required. Prerequisites: EDU 211, PSY 321. Offered fall semester.
- EDU 423. MATERIALS AND METHODS OF TEACHING PHYSICAL EDUCATION** 4 sh  
 This course covers the methods, materials and techniques of teaching physical education, including organization and planning of the total curriculum and daily programs. Students also observe and conduct activity classes. Public school practicum required. Prerequisites: EDU 211, PSY 321. Offered fall semester.
- EDU 424. MATERIALS AND METHODS OF TEACHING MIDDLE GRADES AND SECONDARY SCIENCE** 4 sh  
 Students develop, select and evaluate content, methods and materials used in teaching science at the middle or high school level. Study examines current trends in teaching the natural sciences and addresses safety concerns. Observations and practicum in middle and/or high schools required. Prerequisites: EDU 211, PSY 321. Offered fall semester.
- EDU 425. MATERIALS AND METHODS OF TEACHING MIDDLE GRADES AND SECONDARY SOCIAL STUDIES** 4 sh  
 This study of the materials and methods of teaching social studies emphasizes planning, organization, objectives and evaluation. Public school practicum required. Prerequisites: EDU 211, PSY 321. Offered fall semester.
- EDU 427. MATERIALS AND METHODS OF TEACHING HEALTH AND SAFETY** 4 sh  
 This course emphasizes methods of curriculum planning, analyzing and developing content area, unit plans and teaching approaches for all levels of school (K-12). Public school practicum required. Prerequisites: EDU 211, PSY 321. Offered fall semester, even-numbered years.
- EDU 428. MATERIALS AND METHODS OF TEACHING FOREIGN LANGUAGES** 4 sh  
 This study of the content and organization of the foreign language curriculum in the public schools emphasizes methods and materials used in teaching at all levels (K-12) and covers how teaching the four basic skills and the target culture varies at each level. Students discuss theories of planning, instruction, choice of materials and evaluation, and gain practical experience by participating in a public school classroom. Prerequisites: EDU 211, PSY 321. Offered fall semester.
- EDU 435. ASSESSMENT METHODS AND INTERPRETATION IN SPECIAL EDUCATION** 4 sh  
 This course provides teacher candidates with knowledge required to design assessment plans for students with exceptional learning needs. Consideration is given to legal policies and ethical principles in regard to the administration and interpretation of assessment procedures. Candidates learn to evaluate standardized assessment instruments in terms of reliability, validity and adequacy of norm sample and to collaborate with families and other professionals to gather information and share assessment results. Admission to the Teacher Education Program. Offered spring.
- EDU 441. FOUNDATIONS OF MIDDLE LEVEL EDUCATION** 3 sh  
 This course provides a foundation for middle level (6-9) education majors with concentrations in math, science, social studies and language arts. The course explores the unique physical, intellectual, social and personal characteristics of the young adolescent (age 10-14) with implication for curriculum development and instruction. Emphasis is on young adolescent learning needs, middle school philosophy and organization, classroom diversity with emphasis on students with limited English proficiency, responsive curriculum design and scholarly research related to issues of diversity, access to learning, and literacy; management of the learning environment; and professional leadership. Prerequisites: Admission to program. Offered fall.

- EDU 442. EFFECTIVE MIDDLE LEVEL TEACHING** 4 sh
- This course is designed for middle grades majors (6-9) with concentration areas in math, science, social studies and language arts. The course builds upon and extends the foundational experiences in EDU 441 through in-depth exploration of theory as related to young adolescent learning; focused inquiry, collaboration and teaching on middle level interdisciplinary teams; service learning instructional design; and scholarly research related to issues of diversity, access to learning, and literacy; management of the learning environment; and professional leadership. Prerequisite: EDU 441. Offered spring.
- EDU 444. LANGUAGE, LITERACY AND MATHEMATICS METHODS IN SPECIAL EDUCATION** 4 sh
- In this course, teacher candidates become familiar with the theory and research base on effective instructional techniques for children with exceptional learning needs. They learn how to apply specific methods that involve explicit, systematic and intensive instruction to help children with learning difficulties acquire foundational skills in reading, language arts and mathematics. Candidates learn to use curriculum-based assessment as a basis for planning, monitoring and modifying instruction. Admission to the Teacher Education Program. Offered fall.
- EDU 445. TEACHING AND LEARNING STRATEGIES FOR STUDENTS WITH EXCEPTIONAL LEARNING NEEDS** 4 sh
- This course focuses on effective teaching and learning strategies for adolescents with mild to moderate learning needs. The course emphasizes strategies that reflect a cognitive/metacognitive instructional approach to learning. Consideration is given to the use of technology as a tool for learning and to the assessment of strategy effectiveness by monitoring student progress. Teacher candidates learn to consider learning environments, cultural, linguistic and socioeconomic factors in addition to student abilities in their selection and use of strategies. Admission to the Teacher Education Program. Offered fall.
- EDU 450. MEETING SPECIAL LEARNING NEEDS OF CHILDREN** 4 sh
- This course is designed to prepare high school general education teacher candidates to teach exceptional students in the regular education classroom. The course includes readings and discussions of the collaborative skills necessary for general education teachers to effectively with special education teachers and other professionals involved with the education of exceptional children. The role of the regular education teacher in identifying exceptional students and participating in the special education referral process is explored. A field practicum is required. Prerequisite: Admission to the Teacher Education program. Offered fall and spring.
- EDU 451. TEACHING DIVERSE LEARNERS** 4 sh
- This course is designed to prepare elementary and middle grades teacher candidates to work effectively in inclusive classrooms. The course is comprised of four modules: I. The Ideas in IDEA, which introduces candidates to the historical and legal factors that have contributed to practices governing students with special needs; II. The Differentiation of Instruction, which acquaints candidates with a means for providing flexible and equitable instruction and assessment; III. The Management of Behavior, which encourages candidates to analyze the causes of behavior and provide systems of positive behavioral support; IV. Respectful Collaboration, which promotes linkages with families, colleagues and community agencies to enhance the educational experiences of diverse learners. Elementary and middle grades majors only. Co-requisite: EDU 311, 312, 411 or 412, admission to the Teacher Education Program.
- EDU 480. STUDENT TEACHING SEMINAR** 2 sh
- Designed as an inquiry-based capstone course, this experience allows secondary student teachers to investigate and process how educational theory and practice intersect in the field and how teaching performance informs practice. Teacher candidates will formally assess their own teaching to strengthen their professional skills of reflection related to

instructional practice, assessment of student learning and analysis of personal philosophy. Emphasis will also be placed on issues related to working and conferencing with families of diverse cultures, leadership, ethical advocacy, licensure and employment. Must be taken concurrently with EDU 481. Offered fall and spring.

**EDU 481. SUPERVISED OBSERVATION AND STUDENT TEACHING 10 sh**

Teacher candidates experience the classroom full time for one semester, with periodic conferences with the university supervisor(s) and classroom teacher(s). The student becomes acquainted with the duties and observes the methods and activities of an experienced teacher, with gradual induction into full-time teaching responsibilities. Corequisite: EDU 480 or EDU 483. Prerequisites: EDU 211 and grade(s) of C or better in appropriate methods course(s). Offered fall and spring.

**EDU 482. CRITICAL ISSUES IN EDUCATION: CAPSTONE SEMINAR I 2 sh**

This course is an inquiry-based capstone course that explores social, historical, political and philosophical issues that impact K-12 education nationally and internationally. Special emphasis is placed in diversity and equality issues, leadership, community service and ethical advocacy. Students are involved in a diversity service learning project that involves local or international service learning or scholarly inquiry. Prerequisite: Admission to Teacher Education Program. This course is to be taken the semester prior to student teaching. Elementary, Middle Grades and Special Education majors only.

**EDU 483. THOUGHTFUL ANALYSIS OF PRACTICE: CAPSTONE SEMINAR II 2 sh**

This course is an inquiry-based capstone seminar that is taken concurrently with student teaching. It is designed to strengthen the professional skills of reflection as related to instructional practice, assessment of student learning and analysis of personal philosophy. Emphasis is placed on leadership, ethical advocacy and family-community relationships. Corequisite: EDU 481. Elementary, Middle Grades and Special Education majors only.

**EDU 499. RESEARCH 1-4 sh**

Students engage in undergraduate research under the direction of an education department faculty member. Maximum of eight semester hours total credit. Prerequisites: eligibility as determined by the undergraduate research guidelines of Elon University and approval by the department.

### ***Elon College Fellows Program***

*Director: Associate Professor N. Harris*

Elon College Fellows is a four-year program for qualified, selected students who are passionate about the Arts and Sciences. The program is constructed to provide students with both breadth and depth of study within the Arts and Sciences. The breadth is an extended exposure to and immersion in the different “ways of knowing” offered by the three traditional branches of Arts and Sciences. For more information about Elon’s Fellows Programs, see <http://www.elon.edu/fellows>.

**The following courses are required of and restricted to students admitted to the Elon College Fellows Program.**

**ECF 111. PATHS OF INQUIRY IN THE ARTS AND SCIENCES 4 sh**

This course is an exploration of the three branches of the Arts and Sciences. The focus in this team taught class is on exploring the various ways that these branches construct knowledge, learning to ask interesting questions appropriate to the arts and sciences and gaining an appreciation of the powerful applications of these disciplines. Course includes a five day trip to Washington, D.C. Prerequisite: Elon College Fellows status. Required of all first year Elon College Fellows. Offered in winter term.

**ECF 211, 212, 213. ELON COLLEGE FELLOWS FIRST YEAR SEMINAR****1 sh**

This course exposes students to the disciplines that comprise each branch of the Arts and Sciences. The course is team taught and the focus is on becoming familiar with the kinds of questions that each discipline addresses as well as the tools, resources and paradigms used by each field to seek answers. Fellows enroll in the section that most closely matches the student's academic major. Prerequisite: Elon College Fellows status. One seminar is required of all first-year Elon College Fellows. Offered spring.

**ECF 311, 312, 313. ELON COLLEGE FELLOWS JUNIOR SEMINAR****2 sh**

This course provides an intellectual and collaborative framework within which third-year Elon College Fellows develop a discipline-specific research-expression project question and proposal. Fellows work outside of class with their individual faculty mentors and present, share and critique ideas in the seminar class. A formal project proposal including literature review, methods and budget is the expected outcome. Fellows enroll in the section that most closely matches the student's academic major. Prerequisite: Elon College Fellows status, junior status and ECF 211, 212 or 213. Corequisite: Students must co-register for at least one hour of departmental 499. Fellows take this course in the fall of the junior year. Offered fall.

**Engineering**

*Director: Associate Professor D'Amato*

*Assistant Professor: Hargrove-Leak*

Engineers have the opportunity to be of profound service to humanity. Engineering means problem solving. Through the application of mathematics and science, an engineer may be solving problems dealing with energy, space exploration, environmental issues, product manufacturing, construction or any number of interesting areas of study. Possible engineering disciplines include aerospace engineering, biomedical engineering, chemical engineering, civil engineering, computer engineering, electrical engineering, environmental engineering, industrial engineering, materials science engineering, mechanical engineering, nuclear engineering and textile engineering.

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The unique dual-degree engineering programs at Elon support students in working toward two degrees: one from Elon and one from an engineering university. Elon currently has affiliations with North Carolina State University, Georgia Tech, Virginia Tech, Columbia University, Washington University in St. Louis and North Carolina A&T State University. The student will complete three years at Elon. These years will include a full array of science, mathematics, computer science and general studies courses along with their discipline-specific courses. Also included will be foundational engineering courses every fall and spring taught by engineering faculty. After finishing these three years at Elon and also satisfying the entry requirements of the affiliate engineering university, the student will transfer to this engineering institution, normally for two more years. Upon completion of these years of study, a student will receive either a B.S. degree from Elon in Engineering Physics, Environmental Studies/Environmental Engineering or Engineering Mathematics or an A.B. degree in Chemistry/Chemical Engineering or Computer Science/Engineering. Students will also receive a B.S. degree from the engineering school in an engineering area of choice. Students must complete Elon's General Studies program requirements, the engineering core and one of the five options listed below.

**All dual-degree engineering programs** require the following core courses:

CHM	111	General Chemistry I	3 sh
CHM	113	General Chemistry I Lab	1 sh



CHM	112	General Chemistry II	3 sh
CHM	114	General Chemistry II Lab	1 sh
PHY	113	General Physics I with Calculus w/lab	4 sh
PHY	114	General Physics II with Calculus w/lab	4 sh
MTH	121	Calculus and Analytic Geometry I	4 sh
MTH	221	Calculus and Analytic Geometry II	4 sh
MTH	321	Calculus and Analytic Geometry III	4 sh
MTH	421	Differential Equations	4 sh
CSC	130	Introduction to Computer Science	4 sh
<b>TOTAL</b>			<b>36 sh</b>

**Engineering Foundations**

EGR	101	Introduction to Engineering	1 sh
EGR	102	Introduction to Engineering Graphics and Design	2 sh
EGR	206	Engineering Mechanics - Statics	3 sh
EGR	208	Engineering Mechanics - Dynamics	3 sh
EGR/PHY	211	Circuit Analysis	3 sh
EGR/PHY	212	Circuit Analysis Lab	1 sh
EGR/PHY	310	Engineering Thermodynamics	4 sh
<b>TOTAL</b>			<b>17 sh</b>

*The student will select one of the following five options:*

**I. Engineering Physics**

PHY	213	Introduction to Modern Physics	4 sh
PHY	311	Classical Electrodynamics	4 sh
PHY	397-98	Physics Lab/Seminar	4 sh
Eight semester hours of Physics at the 300-400 level (excluding PHY 305)			8 sh
<b>TOTAL</b>			<b>20 sh</b>

**II. Engineering Mathematics**

MTH	231	Mathematical Reasoning	4 sh
MTH	311	Linear Algebra	4 sh
MTH	312	Abstract Algebra	4 sh
MTH	341	Probability Theory and Statistics	4 sh
MTH	415	Numerical Analysis	4 sh
CSC	230	Algorithm Development	4 sh
<b>TOTAL</b>			<b>24 sh</b>

**III. Computer Science/Engineering**

MTH	206	Discrete Structures	4 sh or
MTH	231	Mathematical Reasoning	4 sh
CSC	230	Algorithm Development	4 sh
CSC	331	Algorithm Analysis	4 sh
CSC	342	Computer Organization and Architecture	4 sh

CSC	351	Theory of Computation	4 sh
CSC	441	Operating Systems/Networking	4 sh

In addition, one upper-level course in programming languages at another institution (if electrical or computer engineering). For another engineering degree, an additional upper level CSC course is required.

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<b>TOTAL</b>			<b>28 sh</b>
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#### **IV. Chemistry/Chemical Engineering**

CHM	125	The Chemical Literature	1 sh
CHM	205	Inorganic Chemistry I	4 sh
CHM	211	Organic Chemistry I	3 sh
CHM	213	Organic Chemistry Lab I	1 sh
CHM	212	Organic Chemistry II	3 sh
CHM	214	Organic Chemistry Lab II	1 sh
CHM	311	Quantitative Analysis	4 sh
CHM	332	Physical Chemistry I	4 sh
CHM	461	Senior Seminar	1 sh

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<b>TOTAL</b>			<b>22 sh</b>
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#### **V. Environmental Studies/Environmental Engineering**

POL	224	Environmental Policy and Law	4 sh
REL	348	Environmental Ethics	4 sh
ENS	461	Senior Seminar	4 sh
CHM	211/213	Organic Chemistry I w/Lab	4 sh
BIO	112/114	Intro Population Biology w/Lab	4 sh
BIO	452	General Ecology	4 sh
ENS	215	Diversity of Life	4 sh
ENS	381	Internship (during summer)	2-4 sh
CE	323	Earth Systems Chemistry (at engineering school)	4 sh
CE	373	Fundamentals of Env. Engineering (at engineering school)	3 sh
ST	370	Probability and Statistics for Engineers (at engineering school)	3 sh

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<b>TOTAL</b>			<b>40-42 sh</b>
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#### **EGR 101. INTRODUCTION TO ENGINEERING 1 sh**

This course provides general information on engineering disciplines, common engineering practices, the engineering profession and history, engineering education, engineering design, engineering ethics and engineering opportunities from the instructor and/or invited speakers. Preliminary work on a design project will be undertaken by student teams. Offered fall.

#### **EGR 102. INTRODUCTION TO ENGINEERING GRAPHICS AND DESIGN 2 sh**

This course introduces the student to graphics as used by engineers. Both hand sketching and computer graphics will develop the student's ability to communicate graphically. This course also investigates the engineering design process. Students will work in teams to

acquire a client and design a solution to meet the needs enumerated by this client. This design project is a continuation of design work done in EGR 101. Each aspect of the design process will be discussed. Several exercises will attempt to develop the student's creativity, clarity and focus of thought. The semester will end with a full presentation of each team's design work which will incorporate their newly acquired graphics ability. Offered spring.

**EGR 206. ENGINEERING MECHANICS - STATICS 3 sh**

This course is designed to introduce students to the effects of forces on bodies in static equilibrium and to familiarize them with mathematical techniques for finding reactive forces in bodies, frames, mechanics and trusses. Concepts covered include forces, moments, couples, equilibrium of rigid bodies, centroids, moments of inertia and friction resistance. Prerequisite: PHY 113. Corequisite: MTH 221. Offered fall.

**EGR 208. ENGINEERING MECHANICS - DYNAMICS 3 sh**

Kinematics and kinetics of particles in rectangular, cylindrical and curvilinear coordinate systems; energy and momentum methods for particles; kinetics of systems of particles; kinematics and kinetics of rigid bodies in two and three dimensions; and motion relative to rotating coordinate systems are studied. Prerequisites: EGR 206 and MTH 221. Corequisite: MTH 321. Offered spring.

**EGR 211. CIRCUIT ANALYSIS 3 sh**

This course is an introduction to the theory, analysis and design of electric circuits. Studies include circuit parameters and elements: voltage, current, power, energy, resistance, capacitance, inductance. Also included is the application of Kirchhoff's laws, techniques of circuit analysis, the op-amp, the responses of RL, RC and RLC circuits, an introduction to sinusoidal steady-state analysis, Laplace transforms and Fourier series. Prerequisites: MTH 421 and PHY 114. Corequisite: EGR/PHY 212. Offered spring.

**EGR 212. CIRCUIT ANALYSIS LAB 1 sh**

This course involves laboratory application of concepts and principles discussed in EGR 211. Corequisite: EGR/PHY 211. Offered spring.

**EGR 310. ENGINEERING THERMODYNAMICS 4 sh**

This course introduces the concept of energy and the laws governing the transfers and transformations of energy. Study emphasizes thermodynamic properties and First and Second Law analysis of systems and control volumes. Integration of these concepts into the analysis of basic power cycles is introduced. Prerequisites: MTH 421 and PHY 114. Offered fall.

**EGR 381. INTERNSHIP IN ENGINEERING 1-4 sh**

The internship provides advanced work experiences in some aspect of engineering. It is offered on an individual basis, under the guidance of the engineering program director, when suitable opportunities can be arranged. It will typically be taken in the summer of the sophomore year. This experience will broaden the practical work experience of the student and enhance his/her classroom abilities. Prerequisite: permission of the department. Offered summer.

## English

*Chair, Department of English: Professor Lyday-Lee*

*Professors: Angyal, Blake, Bland, Boyle, Braye, Gill, Haskell, Warman*

*Associate Professors: Cassebaum, Gordon, Mackay, Myers, Peebles, Schwind*

*Assistant Professors: Hairston, Kapper, Kircher, Layne, Perry, Pyne, Ramirez, Rosinski*

*Lecturers: Holmes, Strickland*

The field of English involves the theoretical study of literature, language and writing, as well as the practice of literary criticism and analysis, creative writing and other