COLLEGE OF EDUCATION

Modern Language Requirement
A number of Clemson University degree programs require the completion of a modern language through a specific course level. Modern languages taught at Clemson University or accepted for transfer credit include American Sign Language, Arabic, Chinese, French, German, Italian, Japanese, Latin, Portuguese, Russian and Spanish. While many degree programs accept any of these modern languages for the requirement, certain programs may have specific modern language requirements. Students should consult their program’s curriculum map for details.

TEACHER EDUCATION PROGRAMS

The College of Education offers CAEP accredited teacher education undergraduate programs leading to teaching licensure in early childhood; elementary, secondary English, mathematics, science and social studies; special education; and agricultural education (in cooperation with the College of Agriculture, Forestry and Life Sciences).

Our excellent preparation in both content and methodology includes many collaborative experiences in local schools. It prepares our graduates to shape the economic future of South Carolina, the United States, and the world by preparing leaders, workers, and citizens for their future roles in society.

The mission of the teacher preparation programs in the College of Education is to prepare critically reflective practitioners who:
• advocate for all learners,
• understand the importance of students’ developmental and sociocultural contexts to learning,
• implement research-based instructional practices,
• utilize current disciplinary knowledge to integrate educational theory, research and practice,
• understand the influence of educational policies on their instruction and educational system, and
• stand firm in their conviction that all students can learn.

Field and clinical practice are integral to teacher preparation. The College of Education is committed to providing candidates with purposeful, challenging, and diverse experiences. It is through a range of diverse, carefully constructed, and challenging field-based experiences, in conjunction with classroom instruction, that candidates recognize the inherent dignity and value of all individuals, value social justice, and advocate on behalf of children and families.

The Teacher Education Programs in Early Childhood, Elementary, Special Education, and secondary school programs in Agriculture, English, Mathematics, Science, and Social Studies are accredited by NCATE (now known as CAEP), the State of South Carolina, and discipline specialized national professional associations.

Criminal Records Check
A criminal record could prevent a person enrolled in a teacher education program in South Carolina from being licensed as a teacher in this state in accordance with State Board of Education guidelines.

Section 59-25-115 of the South Carolina Code of Laws specifies that before beginning the full-time clinical teaching experience in South Carolina, a teacher education candidate shall undergo a state criminal records check by the South Carolina Law Enforcement Division (SLED) and a national criminal records check supported by fingerprints by the Federal Bureau of Investigation (FBI). The applicant is responsible for the cost associated with the FBI background checks. Information reported relative to prior arrests or convictions will be reviewed by the State Department of Education, and the State Board of Education when warranted, according to board guidelines. A teacher education candidate with prior arrests or convictions of a serious nature that could affect his/her fitness to teach in the public schools of South Carolina may be denied the opportunity to complete the clinical teaching experience, and thus affect eligibility for initial teacher licensure. An individual who is denied this opportunity as a result of prior arrests or convictions, after one year, may request reconsideration under guidelines established by the State Board of Education.

The criminal records check will be handled through the Office of Educator Services at the South Carolina State Department of Education and will be considered phase one of a person’s application for a teaching credential. Provided the criminal records check is conducted within 18 months of the time the teacher candidate formally applies for a teaching license, the fingerprinting will not have to be repeated at the time of application. A graduate of a teacher education program applying for initial teacher licensure must have completed the FBI fingerprint process within 18 months of formally applying for initial teacher licensure or the fingerprint process must be repeated. The background check normally requires six (6) to eight (8) weeks to process. If the electronic fingerprints cannot be processed, the South Carolina State Department will inform the individual that it will be necessary to complete another electronic fingerprinting appointment.

Additionally, College of Education teacher candidates must complete a SLED check, a National Sex Offender check and a Tuberculosis (TB) test prior to beginning field and practicum experiences in public schools. Candidates complete field and practicum experiences prior to the full-time clinical teaching experience. Therefore, the teacher education candidate will complete a SLED check for field and practicum experiences and a SLED and FBI background check for the full-time clinical teaching experience.

Admission
Professional—Application to the professional level of a program will be reviewed in the second semester of the sophomore year, the second year of enrollment in the education program. Admission to the professional level requirements include 60 semester hours of education program work, passing scores on all areas of the Praxis CORE and have a minimum cumulative grade-point average of 2.75. A candidate may exempt the CORE by meeting minimum ACT or SAT requirements as determined by the South Carolina Department of Education.

Combined Degree Program BA/BS in Early Childhood Education, Elementary Education, Secondary Education, Science Teaching, or Mathematics Teaching, and MED in Teaching and Learning

Education majors at Clemson University may participate in a combined degree program option in any of the undergraduate majors offered in the College of Education, with the exception of Special Education. The undergraduate curriculum allows up to 12 credits of mutually acceptable graduate course credits to satisfy requirements of both degrees.

Undergraduate/Graduate Transition
1. Undergraduate students who have a minimum overall GPR of 3.4 and have completed a minimum of 90 credit hours may apply for acceptance by the Graduate School and to this combination program. If accepted, students must maintain an overall GPR of 3.4 in Education and a 3.0 average in the Teaching and Learning graduate courses to continue enrollment in this combined program.
2. In consultation with the Undergraduate Advising office and the Department Chair in Teaching and Learning, students in the combined program may choose up to 12 credit hours to satisfy the degree requirements of both degree programs. To count toward the BA/BS degree in Education, these courses must be approved as satisfying the requirements of the graduate curriculum in Teaching and Learning.
3. Students in the combined degree program are conditionally accepted to the graduate program until completion of the BA/BS degree requirements.
4. Graduate assistantships are not available for this program.

Graduate Program
1. The MED in Teaching and Learning requires all students to complete five core classes and select an emphasis area. For this combined program, all students must select the emphasis in Teacher Residency.
2. Students must have at least 150 combined credit hours to earn the graduate degree.
3. Complete information about the MED degree in Teaching and Learning may be found in the MED Teaching and Learning Handbook: http://www.clemson.edu/education/academics/masters-specialist-programs/index.html

Information for Students
Students interested in the combined BA/BS/MED program should consult with the undergraduate academic advising office as early as possible. Students may also wish to consult with the Chair of the Department of Teaching and Learning. An application

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should be submitted by the end of the junior year, but can be made at any time as long as the program requirements are fulfilled. Application is made via the GS68BS/MS form available from the Graduate School web site at http://www.clemson.edu/graduate/files/GS68BSMS.pdf. Please note the GRE requirement for admission is eliminated for students approved via GS68BS/MS forms to pursue graduate degree programs.

Information for Departments
Departments should ensure the courses to be double counted meet the following requirements: All courses must be at least 6000-level courses. Students may not take more than 12 graduate credit hours during their undergraduate program. Students in the combined program are not eligible for graduate assistantships.

Enrollment in Professional Courses
Once admitted to the professional level, candidates must maintain a 2.75 GPA in order to continue through the coursework sequence. Please see the following pages for additional program-specific academic requirements. On occasion appeals may be reviewed by department chairs.

Directed Teaching/Teaching Internship—A candidate shall apply for student teaching with the Office of Field Experiences prior to the semester in which senior level teaching methods courses are to be scheduled. Admission and maintenance at the professional level and completion of at least 95 semester hours is required for registration to student teaching.

Change of Major
Changing majors into Education is highly competitive. Change of major decisions are made on an annual basis at the end of the fall semester. Applications are due December 1 and can only be obtained after meeting with a College of Education academic advisor. To apply, candidates must have a minimum grade point average of 2.75.

Graduation and Licensure
To graduate, a candidate must have scores for all state-mandated licensure exams on file with the College of Education’s Office of Field Experience. Candidates must pass all required Praxis II tests, including the PLT (Principles of Learning and Teaching) test, before receiving recommendation for South Carolina teaching licensure.

ATHLETIC LEADERSHIP MINOR
One minor is offered in the College of Education: Athletic Leadership. For more information on this minor and the requirements, please see the Minors, Programs and Degrees section.

ATHLETIC LEADERSHIP MINOR
Students completing a nationally recognized coaching certification through the Athletic Leadership Program at Clemson may be eligible to meet the requirements for Athletic Leadership Certification. For more information, contact the Coordinator of Athletic Leadership at 864-656-0434.

Graduate Study
The College of Education offers a comprehensive set of programs at the masters, specialist and doctoral levels in preschool to grade 12 education, educational leadership, counselor education (clinical mental health counseling and school counseling), student affairs and higher education, and human resource development. Browse the Clemson University Office of Graduate Programs or College of Education websites for more information.

AGRICULTURAL EDUCATION
Bachelor of Science
The College of Education and the College of Agriculture, Forestry and Life Sciences conduct a cooperative program to produce agricultural teachers (grades 9–12) for South Carolina. See pages 4445 for the curriculum.

EARLY CHILDHOOD EDUCATION
Bachelor of Arts
The Early Childhood Education curriculum prepares students for teaching positions on the pre-kindergarten and primary levels (Pre-K–3).

Freshman Year
First Semester
1 - ED 1050 Orientation to Education
2 - MATH 1150 Contemporary Mathematics for Elementary School Teachers I
3 - History Requirement
4 - Modern Language Requirement
5 - Natural Science Requirement
6 - Elective
Second Semester
1 - COMM 1500 Intro. to Human Comm. or
2 - COMM 2500 Public Speaking
3 - ENGL 1030 Composition and Rhetoric
4 - MATH 1160 Contemporary Mathematics for Elementary School Teachers II
5 - PSYC 2010 Introduction to Psychology
6 - Modern Language Requirement
7 - Elective
Sophomore Year
First Semester
3 - EDEC 3020 Practicum in Early Childhood Settings
4 - EDEC 3030 Practicum in Early Childhood Settings
5 - MATH 2160 Geometry for Elementary School Teachers
6 - Arts and Humanities (Literature) Requirement
7 - Cross-Cultural Awareness Requirement
8 - Natural Science Requirement
Second Semester
3 - EDEC 3000 Foundations of Early Childhood Education
4 - EDEC 3010 Practicum in Early Childhood Settings
5 - MATH 2190 Geometry for Elementary School Teachers
6 - Arts and Humanities (Literature) Requirement
7 - Cross-Cultural Awareness Requirement
8 - Natural Science Requirement
9 - EDEC 4840 Directed Teaching in Early Childhood Settings III
10 - EDEC 4850 Early Childhood Capstone
11 - Elective
12 - 125 Total Semester Hours

Junior Year
First Semester
1 - EDEC 3030 Practicum in Early Childhood Settings III
2 - EDEC 3360 Concepts of Play and Social Development of Infants and Young Children
3 - EDEL 3100 Arts in the Elementary School
4 - EDSP 3700 Introduction to Special Education
5 - EDSP 3750 Early Intervention for Infants and Children with Special Needs
6 - Elective
Second Semester
1 - EDEC 3040 Practicum in Early Childhood Settings IV
2 - EDEC 4200 Early Childhood Science
3 - EDEC 4500 Early Childhood Curriculum and Social Studies Methods
4 - EDEL 3210 Physical Education Methods and Content for Classroom Teachers
5 - EDF 3010 Principles of American Education
6 - EDL 4580 Early Literacy: Birth–Kindergarten

Senior Year
First Semester
3 - EDEC 4000 Observation and Assessment in Clinical Settings
4 - EDEC 4300 Early Childhood Mathematics
5 - EDEC 4400 Early Childhood Language Arts
6 - EDEC 4600 Critical Issues and Cultural Diversity in Early Childhood Education
7 - EDLT 4590 Teaching Reading in the Early Grades: K–3

Second Semester
9 - EDEC 4840 Directed Teaching in Early Childhood Education
10 - EDEC 4850 Early Childhood Capstone
11 - Elective
12 - 125 Total Semester Hours

*Select from HIST 1010, 1020, 1710, 1730, or 1930
*Students must complete through 2020 in a modern language. See Modern Languages Requirement at Clemson University statement on page 27; Spanish is recommended.
*One biological science and one physical science course, each with laboratory, must be selected from General Education Requirements. See advisor.
*Must be taken the fall semester of the sophomore year.
*Must be taken the fall semester of the sophomore year.
*Must be taken the fall semester of the junior year.
*Must be taken the spring semester of the senior year.
*Must be taken the spring semester of the junior year.

ELEMENTARY EDUCATION
Bachelor of Arts
The Elementary Education curriculum prepares students to teach on the elementary school level (grades 2–6). Students select one of two Emphasis Areas: Literacy, Culture and Diversity; or Mathematics and Science.
### LITERACY, CULTURE AND DIVERSITY EMPHASIS AREA

#### Freshman Year
**First Semester**
- BIOL 1090 Introduction to Life Science
- ED 1050 Orientation to Education
- GEOG 1030 World Regional Geography
- MATH 1150 Contemporary Mathematics for Elementary School Teachers
- Modern Language Requirement

**Second Semester**
- ENGL 1030 Composition and Rhetoric
- HIST 1010 History of the United States or HIST 1020 History of the United States
- MATH 1160 Contemporary Mathematics for Elementary School Teachers
- PHSC 1170 Intro. to Chemistry and Earth Science for Elementary Education Majors
- Modern Language Requirement

#### Sophomore Year
**First Semester**
- COMM 1500 Intro. to Human Comm. or COMM 2500 Public Speaking
- EDF 3460 Child Growth and Development
- MATH 2160 Geometry for Elem. Sch. Teachers
- PHSC 1180 Intro. to Physics, Astronomy, and Earth Science for Elementary Education Majors
- Arts and Humanities (Non-Lit.) Requirement

**Second Semester**
- EDEL 3100 Arts in the Elementary School
- EDF 3010 Principles of American Education
- EDF 3020 Educational Psychology
- EDF 4800 Found. of Digital Media & Learning
- ENSP 2010 Intro. to Environ. Sci. for Ed. Majors

#### Junior Year
**First Semester**
- BIOL 1090 Introduction to Life Science
- ED 1050 Orientation to Education
- GEOG 1030 World Regional Geography
- MATH 1160 Contemporary Mathematics for Elementary School Teachers I
- Modern Language Requirement

**Second Semester**
- ENGL 1030 Composition and Rhetoric
- HIST 1010 History of the United States or HIST 1020 History of the United States
- MATH 1150 Contemporary Mathematics for Elementary School Teachers II
- PHSC 1170 Intro. to Chemistry and Earth Science for Elementary Education Majors

#### Senior Year
(Courses must be taken as listed in both semesters.)
**First Semester**
- EDEL 4010 Elementary Field Experience
- EDEL 4450 Elem. Methods in Science Teaching
- EDEL 4870 Elementary Methods in Language Arts Teaching
- EDEL 4860 Content Area Reading: Grades 2-6

**Second Semester**
- EDEL 4820 Capstone Sem. in Elem. Teaching
- EDEL 4830 Directed Teaching in the Elementary School

122 Total Semester Hours

2 Students must complete through 2020 in a modern language. See Modern Languages Requirement at Clemson University statement on page 27.

3 Select from ENGL 2120, 2130, 2140 or 2150

4 See General Education Requirements.

### MATHEMATICS AND SCIENCE EMPHASIS AREA

#### Freshman Year
**First Semester**
- BIOL 1090 Introduction to Life Science
- ED 1050 Orientation to Education
- GEOG 1030 World Regional Geography
- MATH 1150 Contemporary Mathematics for Elementary School Teachers I
- Modern Language Requirement

**Second Semester**
- ENGL 1030 Composition and Rhetoric
- HIST 1010 History of the United States or HIST 1020 History of the United States
- MATH 1160 Contemporary Mathematics for Elementary School Teachers II
- PHSC 1170 Intro. to Chemistry and Earth Science for Elementary Education Majors

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**Sophomore Year**
**First Semester**
- COMM 1500 Intro. to Human Comm. or COMM 2500 Public Speaking
- EDF 3460 Child Growth and Development
- MATH 2160 Geometry for Elementary School Teachers
- PHSC 1180 Intro. to Physics, Astronomy, and Earth Science for Elementary Education Majors
- Arts and Humanities (Literature) Requirement

**Second Semester**
- EDEL 3100 Arts in the Elementary School
- EDF 3010 Principles of American Education
- EDF 3020 Educational Psychology
- EDF 4800 Found. of Digital Media & Learning
- ENSP 2010 Intro. to Environ. Sci. for Ed. Majors

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#### Junior Year
**First Semester**
- EDEL 4010 Elementary Field Experience
- EDEL 4450 Elem. Methods in Science Teaching
- EDEL 4870 Elementary Methods in Language Arts Teaching
- EDEL 4880 Elementary Methods in Language Arts Teaching
- EDEL 4860 Content Area Reading: Grades 2-6

**Second Semester**
- EDEL 4820 Capstone Sem. in Elem. Teaching
- EDEL 4830 Directed Teaching in the Elementary School

12

122 Total Semester Hours

2 Students must complete through 2020 in a modern language. See Modern Languages Requirement at Clemson University statement on page 27.

3 Select from ENGL 2120, 2130, 2140 or 2150

4 See General Education Requirements.

5 Any ASTR, BIOL, CH, ENR, ENSP, ENT, FOR, FNR, GEN, GEOl or PHYS course chosen in conjunction with advisor.

### MATHMATICS TEACHING
#### Bachelor of Science

The program leading to a Bachelor of Science degree in Mathematics Teaching is designed for students planning to teach mathematics on the secondary school level (grades 9-12). (Note: The program leading to a Bachelor of Arts degree in Secondary Education with a Teaching Area of Mathematics is also designed for students planning to teach mathematics on the secondary school level.) To be recommended for licensure, students must earn a grade of C or higher in all required mathematics content and education courses.

#### Freshman Year
**First Semester**
- CH 1050 Chemistry in Context I or CH 1060 Chemistry in Context II
- ED 1050 Orientation to Education
- MATH 1060 Calculus of One Variable I
- PHIL 1020 Introduction to Logic
- Cross-Cultural Awareness Requirement

103
Second Semester
3 - ENGL 1030 Composition and Rhetoric
4 - MATH 1080 Calculus of One Variable II
3 - PHYS 1220 Physics with Calculus I
1 - PHYS 1240 Physics Lab I
3 - Science Requirement\(^{1}\)
14

Sophomore Year
First Semester
3 - COMM 1500 Intro. to Human Comm. or
3 - COMM 2500 Public Speaking
3 - EDSC 2260 A Prof. Approach to Sec. Algebra
4 - MATH 2060 Calculus of Several Variables
3 - PHYS 2210 Physics with Calculus II
1 - PHYS 2230 Physics Lab II
3 - Arts and Humanities (Literature) Requirement\(^{1}\)
17
Second Semester
3 - EDF 3020 Educational Psychology
4 - MATH 2080 Intro. to Ordinary Diff. Equations
3 - MATH 3110 Linear Algebra
3 - MATH 3190 Introduction to Proofs
3 - Economics Requirement\(^{4}\)
16

Junior Year
First Semester
3 - EDF 3370 T echnology in Secondary Math.
3 - EDF 3350 Adolescent Growth and Development
First Semester
Junior Year
Second Semester
3 - BIOL 1030 General Biology I and
1 - BIOL 1050 General Biology Lab. I or
5 - BIOL 1100 Principles of Biology
4 - CH 1010 General Chemistry
2 - ED 1050 Orientation to Education
4 - MATH 1060 Calculus of One Variable I
3 - Modern Language Requirement\(^{1}\)
17-18
Second Semester
3 - BIOL 1040 General Biology I and
1 - BIOL 1060 General Biology Lab. II or
5 - BIOL 1110 Principles of Biology II
4 - CH 1020 General Chemistry
3 - ENGL 1030 Composition and Rhetoric
3 - Modern Language Requirement\(^{1}\)
3 - Statistics Requirement\(^{2}\)
17-18

Senior Year
First Semester
3 - EDF 4260 Teaching Secondary Mathematics\(^{6}\)
3 - EDLT 4980 Secondary Content Area Reading\(^{6}\)
3 - MATH 4000 Theory of Probability or
3 - MATH 4020 Statics for Science and Eng. II
3 - MATH 4080 Topics in Geometry
3 - MATH 4530 Advanced Calculus I
15
Second Semester
9 - EDSC 4460 Teaching Internship in Sec. Math.\(^{7}\)
12
123 Total Semester Hours

\(^{1}\)See General Education Requirements. Cross-Cultural Awareness Requirement must be in an area other than history.
\(^{2}\)Select from courses in ASTR, BIOL, CH, GEOL, PHYS
\(^{3}\)ENGL 2120, 2130, 2140, 2150
\(^{4}\)Select from ECON 2000, 2100, or 2120
\(^{5}\)Select from HIST 1010, 1020, 1720, 1730, or 1930
\(^{6}\)EDSC 4260 and EDLT 4980 must be taken concurrently prior to the teaching internship. Offered fall semester only.
\(^{7}\)EDSC 4460 and 4560 must be taken concurrently. Offered spring semester only.

SCIENCE TEACHING
The programs leading to a Bachelor of Arts or Bachelor of Science degree in Science Teaching are designed for students planning to teach physical sciences, chemistry, or biology at the secondary school level (grades 9–12). To be recommended for licensure, students must earn a grade of C or higher in all required science content and education courses.

Double Majors in Science Teaching and Content Area
The Bachelor of Arts Degree in Science Teaching could result in a double major in Science Teaching and the select content area (Biological Sciences, Chemistry, or Physics). To receive a double major in Science Teaching and the selected content area, a Change of Academic Program form must be completed to declare both majors. To achieve a double major, the appropriate plan of study listed under Science Teaching must be followed and all major requirements from both programs must be satisfied. The double major prepares students for teaching science on the secondary level and graduate school in the respective content field.

TEACHING AREA: BIOLOGICAL SCIENCES
Bachelor of Arts
Freshman Year
First Semester
3 - BIOL 1030 General Biology I and
1 - BIOL 1050 General Biology Lab. I or
5 - BIOL 1100 Principles of Biology
4 - CH 1010 General Chemistry
2 - ED 1050 Orientation to Education
4 - MATH 1060 Calculus of One Variable I
3 - Modern Language Requirement\(^{1}\)
17-18
Second Semester
3 - BIOL 1040 General Biology I and
1 - BIOL 1060 General Biology Lab. II or
5 - BIOL 1110 Principles of Biology II
4 - CH 1020 General Chemistry
3 - ENGL 1030 Composition and Rhetoric
3 - Modern Language Requirement\(^{1}\)
3 - Statistics Requirement\(^{2}\)
17-18

Sophomore Year
First Semester
3 - CH 2010 Survey of Organic Chemistry
1 - HIST 1220 History, Technology and Society or
3 - HIST 1240 Environmental History Survey
3 - PHYS 2070 General Physics I
1 - PHYS 2090 General Physics I Lab.
3 - Arts and Humanities (Literature) Requirement\(^{3}\)
3 - Biochemistry or Genetics Requirement\(^{4}\)
17
Second Semester
3 - EDF 3010 Principles of American Education
3 - EDF 3020 Educational Psychology
3 - MATH 2080 General Physics II
1 - PHYS 2100 General Physics II Lab.
3 - Biochemistry or Genetics Requirement\(^{4}\)
4 - Organismal Diversity Requirement\(^{5}\)
17

Junior Year
First Semester
3 - ANTH 2010 Introduction to Anthropology or
3 - GEOG 1030 World Regional Geography
3 - BIOL 4610 Cell Biology
2 - BIOL 4620 Cell Biology Laboratory
3 - EDLT 4800 Foundations of Adolescent Literacy
3 - EDSC 3270 Practicum in Secondary Science
3 - Ecology Requirement\(^{6}\)
17
Second Semester
3 - BIOL 3350 Evolutionary Biology
3 - BIOL (EDSC) 4820 Laboratory Techniques for Teaching Science
3 - EDF 3350 Adolescent Growth and Development
3 - ENGL 3150 Scientific Writing and Comm.
3 - Functional Biology Requirement\(^{7}\)
15

Senior Year
First Semester
3 - COMM 1500 Intro. to Human Comm. or
3 - COMM 2500 Public Speaking
3 - EDSP 3700 Introduction to Special Education
3 - EDSC 4270 Teaching Secondary Science\(^{8}\)
3 - EDLT 4980 Secondary Content Area Reading\(^{6}\)
3 - Arts and Humanities (Non-Lit.) Requirement\(^{8}\)
15
Second Semester
9 - EDSC 4470 Teaching Internship in Sec. Sci.\(^{9}\)
3 - EDSC 4570 Sec. Science Capstone Seminar\(^{9}\)
12
127–129 Total Semester Hours

\(^{8}\)Students must complete through 2020 in a modern language. See Modern Languages Requirement at Clemson University statement on page 27.

\(^{9}\)STAT 2300 or 3090

\(^{1}\)See General Education Requirements

\(^{2}\)One lecture course must be completed for both biochemistry (BCHM 3010 or BCHM 3050) and for genetics (GEN 3010 or GEN 3020).

\(^{3}\)One lecture and associated laboratory must be selected from BIOL 3160, 4010, 4080, 4590, or MICR 4010.

\(^{4}\)At least one selected from BIOL 4410, 4420, 4430, 4460, 4700, or MICR 4010.

\(^{5}\)At least one selected from BIOL 3160, 4010, 4080, 4590, 4750, or 4800.

\(^{6}\)To be taken the semester prior to EDSC 4470 and 4570. EDSC 4470 and EDLT 4980 must be taken concurrently.

\(^{7}\)EDSC 4470 and 4570 must be taken concurrently. Offered spring semester only.

TEACHING AREA: BIOLOGICAL SCIENCES
Bachelor of Science
Freshman Year
First Semester
3 - BIOL 1030 General Biology I and
1 - BIOL 1050 General Biology Lab. I or
5 - BIOL 1100 Principles of Biology I
4 - CH 1010 General Chemistry
2 - ED 1050 Orientation to Education
4 - MATH 1060 Calculus of One Variable I
3 - Modern Language Requirement\(^{1}\)
15-16
### Second Semester
- 3 - BIOL 1040 General Biology II and
- 1 - BIOL 1060 General Biology Lab. II or
  5 - BIOL 1110 Principles of Biology II
- 4 - CH 1020 General Chemistry
- 2 - ED 1050 Orientation to Education
- 3 - ENGL 1030 Composition and Rhetoric
- 3 - Statistics Requirement 1

16-17

### Sophomore Year
#### First Semester
- 3 - CH 2100 Survey of Organic Chemistry
- 1 - CH 2200 Survey of Organic Chemistry Lab.
- 3 - EDF 3020 Educational Psychology
- 3 - HIST 1220 History, Technology, and Society or
  3 - HIST 1240 Environmental History Survey
- 3 - PHYS 2070 General Physics I
- 1 - PHYS 2090 General Physics I Lab.
- 3 - Genetics Requirement 2

17

#### Second Semester
- 3 - BIOL 3350 Evolutionary Biology
- 3 - EDF 3010 Principles of American Education
- 3 - PHYS 2080 General Physics II
- 1 - PHYS 2100 General Physics II Lab.
- 3 - Biochemistry Requirement 3
- 3 - Ecology Requirement 4

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### Junior Year
#### First Semester
- 3 - BIOL 4610 Cell Biology
- 2 - BIOL 4620 Cell Biology Laboratory
- 3 - EDF 4800 Foundations of Adolescent Literacy
- 3 - EDSC 3270 Practicum in Secondary Science
- 4 - Organismal Diversity Requirement 5

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#### Second Semester
- 3 - ANTH 2010 Introduction to Anthropology or
  3 - GEOG 1030 World Regional Geography
- 3 - BIOL (EDSC) 4820 Laboratory Techniques for Teaching Science
- 3 - EDF 3350 Adolescent Growth and Development
- 3 - Arts and Humanities (Literature) Requirement 6
- 4 - Functional Biology Requirement 7

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### Senior Year
#### First Semester
- 3 - EDSP 3700 Introduction to Special Education
- 3 - EDSC 4270 Teaching Secondary Science and
  1 - Elective

13

#### Second Semester
- 3 - EDSP 4470 Teaching Internship in Sec. Sci.
- 3 - EDSC 4570 Sec. Science Capstone Seminar

17

120–122 Total Semester Hours

1See General Education Requirements.

2STAT 2300 or 3090

3One lecture course must be completed for both biochemistry
  (BCHM 3160 or 3505) and for genetics (GEN 3000 or 3220).

4At least one course selected from BIOL 4410, 4420, 4430, 4460, or 4700

5One lecture and associated laboratory must be selected from
  BIOL 3010, 3020/3060, 3030/3070, 3040/3080, 3200, 4060/4070, or 4250/4260.

6At least one course selected from BIOL 3610, 4010, 4080, 4590, 4750, or 4800. If a threecredit hour course is selected, the remaining one-credit hour must be satisfied with an elective credit.

7To be taken the semester prior to EDSC 4470 and 4570. EDSC 4270 and EDLT 4980 must be taken concurrently. Offered fall semester only.

8EDSC 4470 and 4570 must be taken concurrently. Offered spring semester only.

### TEACHING AREA: CHEMISTRY

#### Bachelor of Arts

### Freshman Year
#### First Semester
- 4 - CH 1010 General Chemistry
- 1 - CH 1410 Chemistry Orientation
- 3 - ENGL 1030 Composition and Rhetoric
- 4 - MATH 1060 Calculus of One Variable I
- 3 - Modern Language Requirement 8

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#### Second Semester
- 4 - CH 1020 General Chemistry
- 3 - CH 1520 Chemistry Communication
- 4 - MATH 1080 Calculus of One Variable II
- 3 - PHYS 1220 Physics with Calculus II
- 1 - PHYS 1240 Physics Laboratory I
- 3 - Modern Language Requirement 8

18

### Sophomore Year
#### First Semester
- 3 - CH 2230 Organic Chemistry
- 1 - CH 2270 Organic Chemistry Laboratory
- 2 - ED 1050 Orientation to Education
- 4 - MATH 2060 Calculus of Several Variables
- 3 - PHYS 2210 Physics with Calculus II
- 1 - PHYS 2230 Physics Laboratory II
- 3 - Arts and Humanities (Non-Lit.) Requirement 9

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#### Second Semester
- 3 - CH 2050 Intro. to Inorganic Chemistry
- 3 - CH 2240 Organic Chemistry
- 3 - CH 3130 Quantitative Analysis
- 1 - CH 3170 Quantitative Analysis Laboratory
- 3 - EDF 3010 Principles of American Education
- 3 - HIST 1220 History, Technology, and Society or
  3 - HIST 1240 Environmental History Survey

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### Junior Year
#### First Semester
- 3 - BIOL 1100 Principles of Biology I and
  1 - BIOL 1050 General Biology Laboratory I or
  1 - BIOL 1100 Principles of Biology I
- 3 - CH 3310 Physical Chemistry
- 3 - EDF 4800 Foundations of Adolescent Literacy
- 3 - EDSC 3270 Practicum in Secondary Science

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Second Semester
3 - BIOL 1040 General Biology II and
1 - BIOL 1060 General Biology Lab. II or
5 - BIOL 1110 Principles of Biology II
3 - CH 2050 Intro. to Inorganic Chemistry
4 - EDF 3010 Principles of American Education
3 - PHYS 2220 Physics with Calculus III
1 - PHYS 2240 Physics Lab. III
3 - Arts and Humanities (Literature) Requirement1

17-18

Junior Year
First Semester
3 - ASTR 1050 Physics of the Universe or
3 - ASTR 1020 Stellar Astronomy and
1 - ASTR 1040 Stellar Astronomy Lab.
3 - CH 3130 Quantitative Analysis
1 - CH 3170 Quantitative Analysis Lab.
3 - CH 3300 Introduction to Physical Chemistry
3 - EDLT 4800 Foundations of Adolescent Literacy
3 - EDSC 3270 Practicum in Secondary Science

16-17

Second Semester
3 - BIOL (EDSC) 4820 Laboratory Techniques for Teaching Science
3 - EDF 3020 Educational Psychology
3 - EDF 3350 Adolescent Growth and Development
3 - Social Science Requirement2
3 - Statistics Requirement3

15

Senior Year
First Semester
3 - EDSP 3700 Introduction to Special Education
3 - EDLT 4980 Secondary Content Area Reading4
3 - EDSC 4270 Teaching Secondary Science5
3 - PHIL 3240 Philosophy of Technology or
3 - PHIL 3250 Philosophy of Science or
3 - PHIL 3260 Science and Values
3 - PHYS 3110 Intro. to Meth. of Theoretical Phys.

15

Second Semester
9 - EDSC 4470 Teaching Internship in Sec. Sci.5
3 - EDSC 4570 Sec. Science Capstone Seminar6
12
122–125 Total Semester Hours

1ENGL 2120, 2130, 2140, or 2150
2ANTH 2010, GEOG 1030, POSC 1020, or 1040
3STAT 2300 or 3090
4To be taken the semester prior to EDSC 4470 and 4570. EDF 4250, EDSC 4270 and EDSC 4980 must be taken concurrently. Offered fall semester only.
5EDSC 4470 and 4570 must be taken concurrently. Offered spring semester only.

TEACHING AREA: PHYSICS
Bachelor of Arts
Freshman Year
First Semester
4 - CH 1010 General Chemistry
2 - ED 1050 Orientation to Education
3 - ENGL 1030 Composition and Rhetoric
4 - MATH 1060 Calculus of One Variable I
3 - PHYS 1220 Physics with Calculus I
1 - PHYS 1240 Physics Laboratory I

17

Second Semester
4 - CH 1020 General Chemistry
4 - MATH 1080 Calculus of One Variable II
3 - PHYS 2210 Physics with Calculus II
1 - PHYS 2230 Physics Laboratory II
3 - Arts and Humanities (Non-Lit.) Requirement1
3 - Oral Communication Requirement6

18

Sophomore Year
First Semester
5 - BIOL 1100 Principles of Biology I or
3 - BIOL 1030 General Biology I and
1 - BIOL 1050 General Biology I Lab.
4 - MATH 2060 Calculus of Several Variables
3 - PHYS 2220 Physics with Calculus III
3 - PHYS 3250 Experimental Physics I

14-15

Second Semester
3 - ASTR 1030 Solar System Astronomy
5 - BIOL 1110 Principles of Biology II or
3 - BIOL 1040 General Biology II and
1 - BIOL 1060 General Biology II Lab.
3 - EDF 3010 Principles of American Education
4 - MATH 2080 Intro. to Ordinary Diff. Equations
3 - Social Science Requirement2

17-18

Junior Year
First Semester
3 - CH 3300 Intro. to Physical Chemistry or
3 - CH 3310 Physical Chemistry
3 - EDLT 4800 Foundations of Adolescent Literacy
3 - EDSC 3270 Practicum in Secondary Science
3 - MATH 3150 Intro. to Computational Physics
3 - PHYS 3210 Mechanics I
3 - Modern Language Requirement7

18

Second Semester
3 - BIOL (EDSC) 4820 Laboratory Techniques for Teaching Science
3 - EDF 3020 Educational Psychology
3 - EDF 3350 Adolescent Growth and Develop.
3 - MATH 4340 Advanced Engineering Math. or
3 - PHYS 3110 Intro. to the Methods of Theoretical Physics
3 - Modern Language Requirement7
3 - Social Science Requirement2

18

Senior Year
First Semester
3 - EDSP 4270 Teaching Secondary Science1
3 - EDLT 4980 Secondary Content Area Reading4
3 - PHYS 4410 Electromagnetics I
3 - PHYS 4550 Quantum Physics I
3 - Arts and Humanities (Literature) Requirement1

15

Second Semester
3 - EDSP 4700 Introduction to Special Education
3 - EDSC 4470 Teaching Internship in Secondary Science5
3 - EDSC 4570 Sec. Science Capstone Seminar6

15
132-134 Total Semester Hours

1See General Education Requirements. Six of these credit hours must also satisfy the Cross-Cultural Awareness and Science and Technology in Society General Education Requirements.
2Students must complete through 2020 in a modern language. See Modern Languages Requirement at Clemson University statement on page 27.
3To be taken the semester prior to EDSC 4470 and 4570. EDSC 4470 and EDSC 4980 must be taken concurrently.
4EDSC 4470 and 4570 must be taken concurrently. Offered during spring semester only.

SECONDARY EDUCATION
The Bachelor of Arts degree in Secondary Education is available to students preparing to teach English, mathematics, or social studies on the secondary school level (grades 9–12). The teaching field should be selected as early as possible so appropriate freshman and sophomore courses may be taken.

Each curriculum may lead to a double major composed of the major concentration in the teaching field and the corresponding content major. To receive a double major in Secondary Education and the selected content area, a Change of Academic Program form must be completed to declare both majors. To achieve a double major, the appropriate plan of study under Secondary Education must be followed and all major requirements from both programs must be satisfied. Specific courses and sequences have been designated to meet requirements for those planning to teach. The professional education courses should be completed in sequence.

TEACHING AREA: ENGLISH
The Bachelor of Arts Degree in Secondary Education—English offers a double major in Secondary Education—English and English. To be recommended for licensure, students must earn a C or higher in all required English content and education courses.

Freshman Year
First Semester
3 - COMM 1500 Intro. to Human Comm. or
3 - COMM 2500 Public Speaking
2 - ED 1050 Orientation to Education
3 - ENGL 1030 Composition and Rhetoric
3 - Modern Language Requirement7
3 - Mathematics Requirement2

14

Second Semester
3 - BIOL 2000 Biology in the News7
3 - ENGL 2120 World Literature
3 - HIST 1730 The West and the World II
3 - Modern Language Requirement7
4 - Natural Science Requirement6

16

Sophomore Year
First Semester
3 - EDF 3010 Principles of American Education
3 - EDF 3020 Educational Psychology
3 - ENGL 3100 Critical Writing About Literature
3 - HIST 3160 American Social History or
3 - HIST 3610 History of England to 1688 or
3 - HIST 3630 Britain Since 1688 or
3 - HIST 3650 British Cultural History
3 - Arts and Humanities (Non-Lit.) Req.4
3 - English Literature Survey Requirement5

18
Second Semester
3 - EDF 3350 Adolescent Growth and Development
3 - ENGL 3860 Adolescent Literature
3 - ENGL 4110 Shakespeare
3 - HIST 1720 The West and the World
3 - English Language Survey Requirement
3 - Fine Arts Requirement
18

Junior Year
First Semester
3 - EDLT 4800 Found. in Adolescent Literacy
3 - EDSC 3240 Pract. in Teaching Secondary Engl.
3 - Literature Emphasis Area Requirement I

Second Semester
3 - ENGL 4850 Composition for Teachers
3 - English Language Literature Requirement
3 - Literary Theory Requirement
3 - Literature Emphasis Area Requirement II
3 - Social Science Requirement
15

Senior Year
First Semester
3 - EDLT 4440 Teaching Internship in Secondary English
3 - EDSC 4540 Secondary English Capstone Sem.
12

Second Semester
9 - EDSC 4440 Teaching Internship in Secondary English
3 - ENGL 4540 Secondary English Capstone Sem.
12
123 Total Semester Hours

Bachelor of Arts
Freshman Year
First Semester
2 - ED 1050 Orientation to Education
3 - ENGL 1030 Composition and Rhetoric
4 - MATH 1060 Calculus of One Variable I
3 - Modern Language Requirement
3 - Natural Science Requirement
16
Second Semester
4 - MATH 1080 Calculus of One Variable II
3 - PHIL 1020 Introduction to Logic
3 - PHYS 1220 Physics with Calculus I
1 - PHYS 1240 Physics Laboratory I
3 - History Requirement
3 - Modern Language Requirement
17
Sophomore Year
First Semester
3 - EDSC 2260 A Prof. Approach to Sec. Algebra
4 - MATH 2060 Calculus of Several Variables
3 - Modern Language Requirement
3 - History Requirement
3 - Economics Requirement
17
Second Semester
3 - EDF 3020 Educational Psychology
4 - MATH 2080 Intro. to Ordinary Diff. Equations
3 - MATH 3110 Linear Algebra
3 - MATH 3190 Introduction to Proof
3 - Cross-Cultural Awareness Requirement
16
Junior Year
First Semester
3 - EDF 3010 Principles of American Education
3 - EDLT 4800 Foundations of Adolescent Literacy
3 - EDSC 3260 Practicum in Secondary Math.
3 - MATH 3020 Statistics for Science and Engr.
3 - MATH 4000 Theory of Probability
15
Second Semester
3 - EDF 3350 Adolescent Growth and Development
3 - EDSP 3700 Introduction to Special Education
3 - EDSC 4370 Technology in Secondary Math.
3 - MATH 3080 College Geometry
3 - MATH 4120 Algebra I
15
Senior Year
First Semester
3 - COMM 1500 Intro to Human Comm
3 - COMM 2500 Public Speaking
3 - EDLT 4980 Secondary Content Area Reading
3 - EDSC 4260 Teaching Secondary Mathematics
3 - MATH 4080 Topics in Geometry
3 - MATH 4530 Advanced Calculus I
15
Second Semester
9 - EDSC 4460 Teaching Internship in Secondary Mathematics
3 - EDSC 4560 Secondary Math, Capstone Sem.
12
123 Total Semester Hours

Sophomore Year
First Semester
3 - ECON 2000, 2110, or 2120
3 - EDSC 4260 and EDLT 4980 must be taken concurrently prior to the teaching internship. Offered fall semester only.
3 - EDSC 4460 and 4560 must be taken concurrently. Offered spring semester only.

TEACHING AREA: SOCIAL STUDIES (HISTORY)
The Bachelor of Arts Degree in Secondary Education—Social Studies (History) offers a double major in Secondary Education—Social Studies (History) and History. To be recommended for licensure, students must earn a C or higher in all required history content and education courses.

Freshman Year
First Semester
2 - ED 1050 Orientation to Education
3 - ENGL 1030 Composition and Rhetoric
3 - Mathematics Requirement
3 - Modern Language Requirement
3 - Natural Science Requirement
15
Second Semester
3 - ANTH 2100 Introduction to Anthropology
3 - BIOL 2100 Biology in the News
3 - ENGL 2140 American Literature
3 - GEOG 1010 Introduction to Geography
3 - GEOG 1030 World Regional Geography
3 - PSYC 2100 Introduction to Psychology
3 - Modern Language Requirement
18
Sophomore Year
First Semester
3 - ECON 2000 Economic Concepts
3 - EDF 3020 Educational Psychology
3 - HIST 1010 History of the United States
3 - HIST 1720 The West and the World
3 - POSC 1010 American National Government
15
**SPECIAL EDUCATION**

**Bachelor of Arts**

The Bachelor of Arts degree in Special Education prepares students to teach individuals with mild disabilities in grades P–12. The curriculum is designed to meet the competencies outlined by the Council for Exceptional Children for beginning special education teachers. Students completing the program receive instruction and practical experiences that lead to Multi-Categorical Special Education Licensure in South Carolina. Once admitted to the professional level, candidates must maintain a 2.75 GPA in order to advance through the professional level coursework sequence. To be recommended for certification, candidates must earn a C or higher in all education courses at the professional level and a B or higher in EDSP 4960 and EDSP 4980.

**Freshman Year**

**First Semester**
- EDSP 4900 Teaching Writing to Students with Disabilities
- EDSP 4920 Mathematics Instruction for Individuals with Mild Disabilities
- EDSP 4930 Secondary Methods for Individuals with Learning Disabilities
- EDSP 4940 Teaching Reading to Students with Learning Disabilities
- EDSP 4950 Communication and Collaboration in Special Education
- EDSP 4960 and EDSP 4980 must be taken concurrently during the spring semester of the senior year.

**Sophomore Year**

**First Semester**
- EDSP 4900 Teaching Writing to Students with Disabilities
- EDSP 4920 Mathematics Instruction for Individuals with Mild Disabilities
- EDSP 4930 Classroom and Management for Specified Disabilities
- EDSP 4940 Teaching Reading to Students with Learning Disabilities
- EDSP 4950 Special Education Field Experience
- EDSP 4970 Secondary Methods for Individuals with Disabilities

**Second Semester**
- EDSP 4950 and 4980 must be taken concurrently during the fall semester of the senior year.

**Junior Year**

**First Semester**
- EDEL 3100 Arts in the Elementary School
- EDSP 4920 Mathematics Instruction for Individuals with Mild Disabilities
- EDSP 4930 Classroom and Behavior Management for Specified Disabilities
- EDSP 4940 Teaching Reading to Students with Learning Disabilities
- EDSP 4950 Educational Assessment of Individuals with Disabilities

**Second Semester**
- EDEL 4510 Elem. Meth. in Science Teaching
- EDEL 4870 Elementary Methods in Social Studies Teaching
- EDSP 3730 Characteristics and Instruction of Individuals with Intellectual Disabilities and Autism
- EDSP 3730 Early Intervention Strategies for Young Children with Special Needs
- EDSP 4910 Educational Assessment of Individuals with Disabilities

**Senior Year**

**First Semester**
- EDSP 4900 Teaching Writing to Students with Disabilities
- EDSP 4920 Mathematics Instruction for Individuals with Mild Disabilities
- EDSP 4930 Classroom and Behavior Management for Specified Disabilities
- EDSP 4940 Teaching Reading to Students with Learning Disabilities
- EDSP 4950 Special Education Field Experience
- EDSP 4970 Secondary Methods for Individuals with Disabilities

**Second Semester**
- EDSP 4950 and 4980 must be taken concurrently during the spring semester of the senior year.

**Non-Western history—Six credits selected from HIST 3300, 3330, 3340, 3370, 3580, 3590, 3400, 3410, 3530, 3540, 3940, 3960, 4360, 4380, 4400.**
- EDSC 4280, HIST 4900, and EDLT 4980 must be taken concurrently in the fall semester of the senior year.
- EDSC 4480 and 4580 must be taken concurrently. Offered spring semester only.

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**See General Education Requirements.**

**Students must complete through 2020 in a modern language.** See Modern Languages Requirement at Clemson University statement on page 27.

**Any other Mathematics or Natural Sciences General Education course that satisfies the General Education Science and Technology in Society requirement may be substituted.**

**Select from ART 2100, MUSC 2100, THEA 2100, or any A&H COMM (except 3640, 3680), ENGL (except 3040, 3120, 3140, 3330, 4850, 4900, 4950), HUM, MUSC, PHIL, REL, THEA (except 3770, 4870, 4970), WS, or modern language course numbered 3000 or higher.**

**See General Education Requirements. This course may not fulfill both the General Education Arts and Humanities (Non-Literature) and the Advanced Humanities requirement.**

**Students must complete a minimum of 18 credits of history coursework: A minimum of three credits of United States history at the 3000 or 4000 level; a minimum of six credits of non-Western history coursework at the 3000 or 4000 level; one three-credit HIST course at the 4000 level; and one additional HIST course at the 1000-4000 level (except HIST 1980 or 2000).**

**U.S. history—Three credits selected from HIST 3000, 3010, 3020, 3030, 3060, 3070, 3080, 3100, 3120, 3130, 3140, 3160, 3170, 3180, 3190, 3230, 3250, 3260, 3270, 3280, 3290, 3900, 3920, 4000.**

**European history—Three credits selected from HIST 3210, 3220, 3330, 3340, 3350, 3360, 3360, 3670, 3700, 3720, 3730, 3740, 3750, 3770, 3780, 3800, 3810, 3840, 3850, 3860, 3870, 4500, 4550, 4600, 4720, 4710.**
MINORS

Following are minors acceptable for students in the College of Education. Students cannot major and minor in the same field or acquire a minor that is not allowed by the degree program.

Accounting
Adult/Extension Education
Aerospace Studies
Agricultural Business Management
Agricultural Mechanization and Business
American Sign Language Studies
Animal and Veterinary Sciences
Anthropology
Architecture
Art
Athletic Leadership
Biochemistry
Biological Sciences—not open to Science Teaching—Biological Sciences majors
Brand Communications
British and Irish Studies
Business Administration
Chemistry—not open to Science Teaching—Chemistry majors
Chinese Studies
Cluster
Communication Studies
Computer Science
Creative Writing
Crop and Soil Environmental Science
Digital Production Arts
East Asian Studies
Economics
English—not open to Secondary Education—English majors
Entomology
Entrepreneurship
Environmental Science and Policy
Equine Industry
Film Studies
Financial Management
Food Science
Forest Products
Forest Resource Management
French Studies
Gender, Sexuality and Women's Studies
Genetics
Geography
Geology
German Studies
Global Politics
Great Works
History—not open to Secondary Education: Social Studies (History) majors

Horticulture
Human Resource Management
Italian Studies
Japanese Studies
Legal Studies
Management
Management Information Systems
Mathematical Sciences—not open to Mathematics Teaching or Secondary Education—Mathematics majors
Microbiology
Middle Eastern Studies
Military Leadership
Music
Natural Resource Economics
Nonprofit Leadership
Nuclear Engineering and Radiological Sciences
Packaging Science
Pan African Studies
Park and Protected Area Management
Philosophy
Physics—not open to Science Teaching—Physical Sciences or Science Teaching—Physics majors
Plant Pathology
Political and Legal Theory
Political Science
Precision Agriculture
Psychology
Public Policy
Race, Ethnicity and Migration
Religious Studies
Russian Area Studies
Science and Technology in Society
Screenwriting
Sociology
Spanish Studies
Spanish-American Area Studies
Sustainability
Theatre
Travel and Tourism
Turfgrass
Urban Forestry
Wildlife and Fisheries Biology
Women's Leadership
Writing
Youth Development Studies

See Minors section for details.