Biology Major: Comprehensive Science High School Teaching Licensure (BIOL)—B.S.
Degree: Bachelor of Science
Required: 122 semester hours, to include at least 36 hours at or above the 300 course level; note that licensure programs may require hours beyond the minimum listed.
AOS Code: U218
The Comprehensive Science High School Licensure (BIOL) program provides a strong background in biology as well as licensure for high school biology teaching. In addition, successful completion of this program qualifies candidates to teach other high school science subjects as well.

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The Bachelor of Science degree is offered for those students aspiring to a professional career in biology, and for those students with particularly strong interests in the discipline. See also Preprofessional Programs. A student pursuing the Bachelor of Science is expected to develop a stronger background in mathematics and related sciences and to attain a greater understanding of biology than will a student pursuing a Bachelor of Arts degree. Bachelor of Science students will also be strongly encouraged to undertake an individual research project with a faculty member during their junior and/or senior year.

Students seeking admission to the UNCG Teacher Education Program with a major in Biology must meet the following minimum requirements of the Department of Biology:

1. Completion of a minimum of 9 s.h. in biology courses, with at least six of those hours from courses taken at UNCG
2. A grade point average of at least 2.50 for biology courses completed at UNCG

Students already admitted to the UNCG Teacher Education Program with a major in Biology who are seeking admission to Student Teaching must meet the following requirements of the Department of Biology:

1. Completion of a minimum of 18 s.h. of biology courses, with at least 15 of those hours from courses taken at UNCG
2. A grade point average of at least 2.50 for biology courses completed at UNCG
I General Education Core Requirements (GEC)

See complete GEC requirements under General Education Program in the University Requirements section. See the GEC Course Summary Table for approved courses.

GLT—Literature (6 s.h.)
Student selects 6 s.h. from GLT list.
GFA—Fine Arts (3 s.h.)
Student selects 3 s.h. from GFA list.
GPR—Philosophical, Religious, Ethical Principles (3 s.h.)
Student selects 3 s.h. from GPR list.
GHP—Historical Perspectives on Western Culture (3 s.h.)
Student selects 3 s.h. from GHP list.
GNS—Natural Sciences (7 s.h.)
BIO 111 Principles of Biology I
CHE 111 General Chemistry I
GMT—Mathematics (3 s.h.)
MAT 191 Calculus I
GRD—Reasoning and Discourse (6 s.h.)
ENG 101 College Writing I
or
FMS 115 Freshman Seminar in Reasoning and Discourse I
or
RCO 101 College Writing I
Student selects additional 3 s.h. from the GRD list.
GSB—Social and Behavioral Sciences (6 s.h.)
Student selects 6 s.h. from GSB list.

II General Education Marker Requirements

See complete GEC requirements under General Education Program in the University Requirements section. See the GEC Course Summary Table for approved courses.

GL/GN—Global/Global Non-Western Perspectives Four courses carrying GL/GN markers, at least one of which must carry the GN marker.

One SI (Speaking Intensive) Course
In addition to this SI Marker requirement, students must also complete a second SI course within the major. All programs have identified at least one course among their major requirements that is taught as Speaking Intensive.
One WI (Writing Intensive) Course
In addition to this WI Marker requirement, students must also complete a second WI course within the major. All programs have identified at least one course among their major requirements that is taught as Writing Intensive.

III College of Arts and Sciences Additional Requirements (CAR)
See CAR requirements in the Academic Units section. See the GEC Course Summary Table for approved CAR courses.

GMO/GPM—Historical Perspectives (3 s.h.)
Student selects 3 s.h. from GMO or GPM list, depending on category used to satisfy GHP requirement.

GLS/GPS—Natural Sciences (3–4 s.h.)
Required:

BIO 112 Principles of Biology II

GSB—Social and Behavioral Sciences (3 s.h.)
Student selects 3 s.h. from GSB list.

GFL—Foreign Language (0–12 s.h.)
Intermediate-level proficiency in one language, demonstrated by placement test, or completion of course work through course number 204.

WI—Writing Intensive Courses
A total of four WI courses.

IV Major Requirements
Program Qualifications
BIO 111 Principles of Biology I
BIO 112 Principles of Biology II

Additional Qualifications
• A minimum of 30 semester hours of Biology courses above the 100 level.
• A maximum of 4 s.h. at the 200 level may be counted toward the major.
• Students must have a grade point average of at least 2.0 in Biology courses completed at UNCG.

B.S. in Biology Core Courses
In meeting the requirement for hours above the 100 level, all B.A. in Biology majors must complete the following core courses; completion of at least four of these requirements is strongly recommended prior to enrollment in courses numbered 400 and higher.
1. Ecology
   BIO 301 Principles of Ecology
2. Cell Biology
   BIO 355 Cell Biology
3. Genetics
   BIO 392 Genetics
4. Evolution
   BIO 330 Evolution
5. Two laboratory courses
   BIO 315 Ecology and Evolution Laboratory
   BIO 375 Cell Biology and Genetics Laboratory
6. One additional course at the 500 level
   **Strongly recommended**
   BIO 499 Undergraduate Research
   BIO 493 Honors Work

**V Related Area Requirements**
1. Required
   CHE 111 General Chemistry I
   CHE 112 General Chemistry I Laboratory
   CHE 114 General Chemistry II
   CHE 115 General Chemistry II Laboratory
   CHE 351 Organic Chemistry I
   CHE 352 Organic Chemistry II
   CHE 354 Organic Chemistry Laboratory
2. Required
   MAT 191 Calculus I
   MAT 292 Calculus II
   or
   STA 271 Fundamental Concepts of Statistics
3. Required
   PHY 211 General Physics I
   and
   PHY 212 General Physics II
   or
   PHY 291 General Physics I with Calculus
   and
   PHY 292 General Physics II with Calculus
VI Additional Requirements for Teacher Licensure
The Teaching Licensure program in Biology includes a diverse science curriculum in order to align with licensure requirements of the North Carolina Department of Public Instruction.
a. Required
   1. Required
      1. GEO 103 Introduction to Earth Science
      2. One or more of the following:
      3. GEO 111 Physical Geology
      5. GEO 311 Weather and Climate
      6. GEO 314 Physical Geography: Landscape Processes
b. The following courses must be taken in a specified sequence terminating in student teaching in the spring semester of the senior year. See the online Secondary Education Handbook for more information.
   1. Required
      1. TED 535 Literacy in the Content Area
      2. Required
      3. ERM 401 Assessment I: Accountability in Our Nation’s Schools
      4. ERM 402 Assessment II: Standardized Tests
      5. ERM 403 Assessment III: Classroom Assessment
      2. Required
      7. TED 401 Child and Adolescent Development and Learning
      8. SES 401 Understanding and Teaching Students with Disabilities in Inclusive Settings
      9. TED 403 Teaching English Learners with Diverse Abilities
      3. Required
      10. TED 445 Human Diversity, Teaching, and Learning
      4. Required
      11. TED 559 Teaching Practices and Curriculum in Science
      5. The course listed below for 12 s.h.
      12. TED 465 Student Teaching and Seminar: Secondary School
      6. Strongly recommended
      13. LIS 120/TED 120 Introduction to Instructional Technology for Educational Settings

VII Electives
Electives sufficient to complete the 122 semester hours required for the degree.