Biology Major: Human Biology Concentration
(BIOL)—B.S.
Degree: Bachelor of Arts
Required: 122 semester hours, to include at least 36 hours at or above the 300 course level
AOS Code: U863
This concentration is designed for biology majors who want to develop the ability to integrate biological knowledge as it relates to human beings. The study of human biology requires fundamental knowledge of basic life science, since humans and other animals share a large number of structural, chemical, and control mechanisms. Moreover, human behavior occurs within a specific evolutionary and ecological setting, just as it does in other animals. Full appreciation of human biology, including our complex brains, our communication and conceptual abilities, and our social structures, requires an understanding drawn not only from biology but also from basic courses in anthropology and psychology, and from additional academic disciplines in the humanities and sciences.

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—Historial 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
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

Human Biology Concentration
1. Required
   BIO 277 Human Physiology
or
BIO 271 Human Anatomy

2. At least three courses chosen from the following:
BIO 425 Biological Clocks
BIO 438/PSY 438 Animal Behavior
BIO 453 Vertebrate Morphogenesis
BIO 464 Developmental Biology
BIO 472 Histology
BIO 479 Neurobiology
BIO 481 General Microbiology
BIO 535 Biochemistry: Metabolic Regulation in Health and Disease
BIO 536 Biology of Aging
BIO 538 Human Evolutionary Genetics
BIO 555 Vertebrate Reproduction
BIO 573 Drugs and the Brain
BIO 578 Hormones in Action
BIO 583 Virology
BIO 584 Immunology
BIO 586 Cell Cycle and Cancer
BIO 587 Epigenetics
BIO 593 Genetics of Complex Traits
BIO 595 Advanced Genetics

V Related Area Requirements
B.S. in Biology Base
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
Strongly Recommended
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

Human Biology Concentration
1. Required
ATY 253 Introduction to Biological Anthropology
2. Required
PSY 230 Biological Psychology
3. Two courses in two different departments selected from the courses listed below.
ATY 331 Race and Human Diversity
ATY 357 Monkeys, Apes, and Humans
ATY 453 Human Osteology
ATY 455 Human Evolution
ATY 465 Medical Anthropology
ATY 557 Primate Behavior
ATY 559 Disease and Nutrition in Ancient Populations
CHE 420 Chemical Principles of Biochemistry
CHE 556 Biochemistry I
GRO 501 Seminar: Critical Issues of Aging
HDF 211 Human Development Across the Life Span
HDF 212 Families and Close Relationships
HEA 201 Personal Health
HEA 207 International Health
HEA 260 Human Sexuality
HEA 314 Public Health Diseases
HEA 315 Epidemiology
HEA 316 Environmental Health
HIS 311 Darwin and the Theory of Evolution
HIS 359 Sexuality in Historical Perspective
KIN 375 Physiology of Sport and Physical Activity
KIN 376 Biomechanics of Sport and Physical Activity
NTR 213 Introductory Nutrition
PHI 220 Medical Ethics
PHI 520 Advanced Topics in Biomedical Ethics
PSY 346 The Psychology of Gender
PSY 435 Brain and Psychological Processes
PSY 436 Sensory and Perceptual Processes
PSY 457 Developmental Psychobiology
SOC 201 Social Problems
SOC 327 Race and Ethnic Relations
SOC 361 Health and Society
SOC 370 Environmental Sociology

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