

## Biology Core and Major Requirements (Bachelor of Arts) – Catalog Year 2002 - 2006

Hrs	Course Requirements	Hrs	Course Requirements	Hrs	Course Requirements
6	Freshmen Composition: <input type="checkbox"/> ENGL 1013 and <input type="checkbox"/> ENGL 1023	3	Philosophy: <input type="checkbox"/> PHIL 2003 or <input type="checkbox"/> PHIL 2103	6	Western Civilization: <input type="checkbox"/> WCIV 1003 and <input type="checkbox"/> WCIV 1013
0-3	Advanced Composition: <input type="checkbox"/> ENGL 2003 or <input type="checkbox"/> ENGL 2013 <i>Exemption may be granted by: 1) grade of at least "B" in ENGL 1013 and "A" in ENGL 1023 taken at the U of A, or 2) passing exemption exam</i>	3-4	Mathematics: <input type="checkbox"/> MATH 2043 ( <i>Math 1203 or equiv.</i> )* or <input type="checkbox"/> MATH 2053 ( <i>Math 1203 or equiv.</i> ) or <input type="checkbox"/> MATH 2193 ( <i>Math 1203 or equiv.</i> ) or <input type="checkbox"/> MATH 2554 ( <i>Math 1203 &amp; 1213 or Math 1285 or equivalent</i> ) <b>Finite Math (MATH 2053) does not meet Biology major requirements in math.</b>	12	Natural Sciences: At least 4 hours must be chosen from biological and 4 hours from physical.  <u>Biological Sciences</u> <input type="checkbox"/> ANTH 1013/1011L <input type="checkbox"/> BIOL 1543/1541 L* <input type="checkbox"/> BIOL 1613/1611L <input type="checkbox"/> BIOL 2013/2011L <input type="checkbox"/> BIOL 1603/1601L  <u>Physical Sciences</u> <input type="checkbox"/> ASTR 2003/2001L <input type="checkbox"/> CHEM 1053/1051L <input type="checkbox"/> CHEM 1103/1101L* <input type="checkbox"/> CHEM 1123/1121L* <input type="checkbox"/> GEOL 1113/1111L <input type="checkbox"/> GEOL 1133/1131L <input type="checkbox"/> PHYS 1023/1021L <input type="checkbox"/> PHYS 2013/2011L* <input type="checkbox"/> PHYS 2033/2031L* <input type="checkbox"/> PHYS 2054/2050* <input type="checkbox"/> PHYS 2074/2070*  <b>* Requirement met by Biology major</b>
6	Fine Arts: <input type="checkbox"/> ARCH 1003 or LARC 1003 <input type="checkbox"/> ARHS 1003 or ARTS 1003 <input type="checkbox"/> COMM 1003 <input type="checkbox"/> DANC 1003 <input type="checkbox"/> DRAM 1003 <input type="checkbox"/> HUMN 1003 <input type="checkbox"/> MLIT 1003	6	Social Science: <input type="checkbox"/> ANTH 1023 <input type="checkbox"/> ECON 2013 ( <i>Math 1203</i> ) or ECON 2143 <input type="checkbox"/> GEOG 2013 or GEOG 2203 <input type="checkbox"/> PLSC 2013 <input type="checkbox"/> PSYC 2003 <input type="checkbox"/> SOCI 2013 or SOCI 2033		
3	Communication: <input type="checkbox"/> COMM 1313	3	U.S. History/American Government: <input type="checkbox"/> HIST 2003 or <input type="checkbox"/> HIST 2013 or <input type="checkbox"/> PLSC 2003		
6	World Literature: <input type="checkbox"/> WLIT 1113 and <input type="checkbox"/> WLIT 1123 ( <i>WLIT 1113</i> ), a foreign language literature course, any other WLIT course, CLST 1003, or CLST 1013	0-12	Foreign Language <sup>1</sup> : <input type="checkbox"/> Completion of the Intermediate II level (2013) in a single language.  <sup>1</sup> Prerequisite determined by number of high school language units completed and placement score.		

### Major Requirements for Biology:

❖ Requirements in cognate sciences and mathematics include the following:

#### Physical Sciences

- CHEM 1103/1101L University Chemistry I/ Univ. Chem. I Lab (*MATH 1203*)
- CHEM 1123/1121L University Chemistry II/ Univ. Chem. II Lab (*CHEM 1103*)  
and either
  - CHEM 2613/2611L/2610D Organic Physiological Chemistry/ Lab/ Drill (*CHEM 1123/1121L or CHEM 1074/1071L*)
- OR
  - CHEM 3603/3601L Organic Chemistry I/ Organic Chemistry I Lab (*CHEM 1123/1121L*) and
  - CHEM 3613/3611L Organic Chemistry II/ Organic Chemistry II Lab (*CHEM 1123/1121L & CHEM 3603/3601L*)
- PHYS 2013/2011L College Physics I/ College Physics I Lab (*MATH 1203 & 1213 or equivalent*)
- PHYS 2033/2031L College Physics II/ College Physics II Lab (*PHYS 2013/2011L*)

#### Mathematical Sciences

- MATH 2043 Survey of Calculus (*MATH 1203*) OR
- MATH 2554 Calculus I (*MATH 1203 & 1213 or 1285*)

- ❖  BIOL 1543/1541L Principles of Biology/Principles of Biology Lab
  - Majors may take an additional 1000-level BIOL course BIOL1603/1601L (Principles of Zoology) OR BIOL 1613/1611L (Plant Biology). Majors may apply a maximum of eight 1000-level credits toward the major.
- ❖ An additional 24 hours of biological sciences including the following:
  - Bibliographic Practicum:
    - BIOL 2001 **Bibliographic Practicum is required of all majors.**
  - One course from four of the following six areas of specialization (**I-VI**), with at least one course from each of the three general areas of biology. Refer to groups below: **Group 1: Botany, Group 2: Microbiology, Group 3: Zoology.**
    - **I. Microorganism Biology:**
      - BIOL 2533/2531L Cell Biology/Cell Biology Lab\* (*\*lab optional*)  
(*Pre: BIOL 1543/1541L; Pre or Co: CHEM 1123/1121L or CHEM 1223/1221L*)
      - BIOL 2013/2011L General Microbiology/ Gen Micro Lab  
(*BIOL 1543/1541L and 2 semester of Gen. Chemistry*)
    - **II. Genetics:**
      - BIOL 2323/2321L General Genetics/General Genetics Lab  
(*BIOL 1543/1541L & CHEM 1123/1121L & MATH 1203 or STAT 2023*)
      - BIOL 4233 Microbial Genetics (*BIOL 2013/2011L & CHEM 3603/3601L, CHEM 3613/3611L*)

- **III. Morphology:**
  - ❑ BIOL 4404/4400L Comparative Botany
  - ❑ BIOL 4104/4100L Taxonomy of Flowering Plants (BIOL 1613/1611L & BIOL 1543/1511L)
  - ❑ BIOL 4424/4420L Mycology (BIOL 1613/1611L & BIOL 1543/1511L)
  - ❑ BIOL 3123 Microbial Cell Structure (BIOL 2013/2911L & CHEM 1103)
  - ❑ BIOL 2404/2400L Comparative Vertebrate Morphology (BIOL 1543/1511L or equivalent)
  - ❑ BIOL 2814/2800L Invertebrate Zoology (BIOL 1543/1511L or equivalent)
- **IV. Physiology:**
  - ❑ BIOL 4304/4300L Plant Physiology (BIOL 1613/1611L & BIOL 1543/1511L & CHEM 1103)
  - ❑ BIOL 4313 Physiology of Microorganisms (MBIO 2013/2011L & CHEM 3603/360L & CHEM 3613/3611L)
  - ❑ BIOL 2213/2211L Human Physiology/Human Phys. Lab  
(CHEM 1023/1021L or CHEM 1074/1071L or CHEM 1103/1101L or CHEM 1123/1121L or equivalent & MATH 1203)
- **V. Evolution:**
  - ❑ BIOL 3023 Evolutionary Biology (BIOL 1543/1541L)
- **VI. Ecology:**
  - ❑ BIOL 3863/3861L General Ecology/General Ecology Lab (7 Hours of Biological Sciences)

- Remaining 8-10 credit hours of biology electives of advanced level BIOL classes (3000 level or greater):
  - ❑ BIOL \_\_\_\_\_
  - ❑ BIOL \_\_\_\_\_
  - ❑ BIOL \_\_\_\_\_

**Examples:**

**Group 1 Botany** Taxonomy of Flowering Plants (BIOL 4104 /4100L), Protistology (BIOL 4724/4700L), Plant Physiology (BIOL 4304/4300L), Comparative Botany (BIOL 4404/4400L), Mycology (BIOL 4424/4420L), Physiological Ecology of Plants (BIOL 4523),

**Group 2 Microbiology** Microbial Cell Structure (BIOL3123), Physiology of Microorganisms (BIOL 4313), , Molecular Virology (BIOL 4443), Microbial Genetics (BIOL 4233), Mechanisms of Pathogenesis (BIOL 4703), Basic Immunology (BIOL 4713, 4711L), General Virology (BIOL 4753), BIOL 490V Special Topics in Microbiology, Food Microbiology (BIOL 4124/4120L), Special Topics in Microbiology (BIOL 490V).

**Group 3 Zoology** Mechanics of Human Movement (BIOL 3353), Comparative Physiology (BIOL 4234/4230L), Cell Physiology (BIOL 4263/4261L), Ecological Genetics (BIOL 4353), , Principles of Evolution (BIOL 4433) Physiological Ecology of Animals (BIOL 4463), Ecosystem Ecology (BIOL4503), Population Ecology (BIOL 4513/4511L), Vertebrate Embryology (BIOL 4544/4540L), Developmental Biology (BIOL 4554/4550L), Primate Adaptation and Evolution (BIOL 4613), Protistology (BIOL 4724/4720L), Fish Biology (BIOL 4743/4740L) Ornithology (BIOL 4763.4760L), Limnology (BIOL 4814/4810L), Community Ecology (BIOL 4824/4810L), Animal Behavior (BIOL 4833/4830L), Field Ecology (BIOL 485V), Special Topics in Zoology (BIOL 490V, 4933)

- **Additional advanced level BIOL classes (can be counted as Biology electives)**  
BIOL 3923H Honors Biology colloquium, BIOL 399VH Honors Course BIOL 480V Special Problems, BIOL 490V Special Topics in Microbiology, BIOL 4933 Special topics in Zoology, BIOL 498V Senior Thesis BIOL 499V Biology research, BIOL 5001 Seminar in Biology
- **Senior Writing Requirement** The college writing requirement for majors in biology can be fulfilled by
  1. Completion of an honors thesis, or
  2. Completion of a senior thesis (BIOL 498V), or
  3. Completion of required term paper with a grade of B or above in a course numbered above 3000 on a topic approved by the instructor, or
  4. Completion of a paper, supervised by a faculty member in Special Problems (BIOL 480V)

**8 Hour Rule:** Up to 8 hours may be applied towards a degree from the following departments:

AEEED AGAD EXED HLSC MILS PEAC RECR VOED  
AERO DEAC ETEC ITED OFSM PHED UNIV

No more than four of the eight hours may be applied from AERO, MILS, PEAC, or DEAC, unless a student completes an ROTC program and receives a commission.

**40 Hour Rule:** You must present for degree credit at least 40 hours of work in courses numbered 3000 and above. Included in this 40 hours can be courses numbered 2000 if each has a specific course designated as a prerequisite. The following courses are excluded: MILS 2001 AND 2011, AERO 2001 and 2011, and foreign language courses numbered 2003 and 2013. The courses presented to meet this requirement may be from other colleges or universities; however, don't forget the college residency requirement, specifically the 24-Hour Rule.

**24 Hour Rule:** You must complete at least 24 hours of 3000 and 4000 level courses from departments within Fulbright College. You must have a minimum cumulative GPA of 2.00 to graduate from Fulbright College.

**A minimum of 124 is required for graduation.** For more information on graduation requirements, including elective, advanced and upper level credit requirements, students should consult their advisor and the Catalog of Studies. See appropriate Catalog of Studies for requirements from previous years.

For more information on Biology, contact the Department of Biological Sciences:

- SCEN 601
- (479)-575-3251
- <http://biology.uark.edu>

**\*\*This form is NOT a substitute for the Catalog of Studies. Students should verify this information with their advisor, their degree audit, and the Catalog of Studies.\*\***