

## **Degree Requirements**

## **Bachelor of Science in Biology Education**

## **Student Advisement Record**

Leading to Certification for Grades 6-12
Bagwell College of Education Department of Biology and Physics

The program of study in Biology education leads to a Bachelor of Science degree in Biology Education and provides the students with Biology teaching licensure for grades 6-12 in Biology education. Candidates in the KSU Biology Education program must earn a grade of "C" or above in all required science courses.

NAME: KSU ID#:

Area A: Essential Skills:   9 Credit Hours	General education courses	Hrs.	44 semester hours
ENGL 1102   3	Area A: Essential Skills:		9 Credit Hours
MATH 1113 OR MATH 1112   3	ENGL 1101	3	English Composition I
Area B: Social Issues:   ANTH 2105 or GEOG 2105 or PSYCH 2105 or SOCI 2105 (or the 1101/2201 versions)	ENGL 1102	3	English Composition II
Anthr 2105 or GEOG 2105 or PSYCH 2105 or SOCI 2105 (or the 1101/2201 versions )   2		3	
SOCI 2105 (or the 1101/2201 versions )         COM 1109 or FL 1002 or PHIL 2200         3         Communications, Foreign Language or Philosophy           Area C: Humanities/Fine Arts         6 Credit Hours           ENGL 2110         3         World Literature           ART 1107, MUSI 1107 or TPS 1107         3         Intro to Art, Music or Theatre           Area E: Social Science         12 Credit Hours           ECON 1100         3         Global Economics           HIST 1110         3         America Since 1890           POLS 1101         3         American Government           Area D: Science, Math, Technology 12 Credit Hours         General Chemistry I & Lab           MEM 1113)         General Chemistry II & Lab           MATH 1190         4         Calculus I           Area F: LOWER DIVISION MAJOR REQUIREMENTS         16 Credit Hours           BIOL 2107         4         Biological Principles I           BIOL 2108         4         Biological Principles II           PHYS 1111 OR PHYS 2211         4         Introduction to Physics I OR Principles of Physics II           Upper Division Major Biology Requirements         3         Biostatistics           STAT 3125         3         Biostatistics           BIOL 3300         4         Genetics	Area B: Social Issues:		5 Credit Hours
Area C: Humanities/Fine Arts         6 Credit Hours           ENGL 2110         3 World Literature           ART 1107, MUSI 1107 or TPS 1107         3 Intro to Art, Music or Theatre           Area E: Social Science         12 Credit Hours           ECON 1100         3 Global Economics           HIST 1110         3 World Civilization           HIST 2112         3 America Since 1890           POLS 1101         3 American Government           Area D: Science, Math, Technology 12 Credit Hours           CHEM 1211/1211Lab (Co-requisite w/Math 1112 or Math 1113)         3/1 General Chemistry I & Lab           MATH 1190         4 Calculus I           Area F: LOWER DIVISION MAJOR REQUIREMENTS         16 Credit Hours           BIOL 2107         4 Biological Principles I           BIOL 2108         4 Biological Principles II           PHYS 1111 OR PHYS 2211         4 Introduction to Physics I OR Principles of Physics I           PHYS 1112 OR PHYS 2212         4 Introduction to Physics II OR Principles of Physics II           Upper Division Major Biology Requirements         3 Biostatistics           BIOL 3300         4 Genetics           BIOL 3310 OR         4 Invertebrate Zoology OR		2	Anthropology, Geography, Psychology or Sociology
ENGL 2110   3   World Literature	COM 1109 or FL 1002 or PHIL 2200	3	Communications, Foreign Language or Philosophy
ART 1107, MUSI 1107 or TPS 1107   3	Area C: Humanities/Fine Arts		6 Credit Hours
Area E: Social Science         12 Credit Hours           ECON 1100         3         Global Economics           HIST 1110         3         World Civilization           HIST 2112         3         America Since 1890           POLS 1101         3         American Government           Area D: Science, Math, Technology 12 Credit Hours           CHEM 1211/1211Lab (Co-requisite w/Math 1112 or Math 1113)         3/1         General Chemistry I & Lab           CHEM 1212/1212L (Co-requisite w/Math 1190)         3/1         General Chemistry II & Lab           MATH 1190         4         Calculus I           Area F: LOWER DIVISION MAJOR REQUIREMENTS         16 Credit Hours           BIOL 2107         4         Biological Principles I           BIOL 2108         4         Biological Principles I           PHYS 1111 OR PHYS 2211         4         Introduction to Physics I OR Principles of Physics I           PHYS 1112 OR PHYS 2212         4         Introduction to Physics II OR Principles of Physics II           Upper Division Major Biology Requirements         30 semester hours           STAT 3125         3         Biostatistics           BIOL 3310 OR         4         Invertebrate Zoology OR		3	World Literature
Area E: Social Science         12 Credit Hours           ECON 1100         3         Global Economics           HIST 1110         3         World Civilization           HIST 2112         3         America Since 1890           POLS 1101         3         American Government           Area D: Science, Math, Technology 12 Credit Hours           CHEM 1211/1211Lab (Co-requisite w/Math 1112 or Math 1113)         3/1         General Chemistry I & Lab           CHEM 1212/1212L (Co-requisite w/Math 1190)         3/1         General Chemistry II & Lab           MATH 1190         4         Calculus I           Area F: LOWER DIVISION MAJOR REQUIREMENTS         16 Credit Hours           BIOL 2107         4         Biological Principles I           BIOL 2108         4         Biological Principles I           PHYS 1111 OR PHYS 2211         4         Introduction to Physics I OR Principles of Physics I           PHYS 1112 OR PHYS 2212         4         Introduction to Physics II OR Principles of Physics II           Upper Division Major Biology Requirements         30 semester hours           STAT 3125         3         Biostatistics           BIOL 3310 OR         4         Invertebrate Zoology OR	ART 1107, MUSI 1107 or TPS 1107	3	Intro to Art, Music or Theatre
HIST 1110			
HIST 2112   3   America Since 1890			
POLS 1101  Area D: Science, Math, Technology 12 Credit Hours  CHEM 1211/1211Lab (Co-requisite w/Math 1112 or Math 1113)  CHEM 1212/1212L (Co-requisite w/Math 1190)  MATH 1190  Area F: LOWER DIVISION MAJOR REQUIREMENTS  BIOL 2107  BIOL 2108  HYS 1111 OR PHYS 2211  HYS 1111 OR PHYS 2212  Area F: LOWER DIVISION Major Biology Requirements  Throduction to Physics I OR Principles of Physics I Untroduction to Physics II OR Principles of Physics II  BIOL 3300  American Government  3 American Government  General Chemistry II & Lab  Calculus I  Acalculus I  Biological Principles I  Biological Principles II  Introduction to Physics I OR Principles of Physics I  Biological Principles of Physics II  Biological Principles II			
Area D: Science, Math, Technology 12 Credit Hours  CHEM 1211/1211Lab (Co-requisite w/Math 1112 or Math 1113)  CHEM 1212/1212L (Co-requisite w/Math 1190)  CHEM 1212/1212L (Co-requisite w/Math 1190)  Area F: LOWER DIVISION MAJOR REQUIREMENTS  BIOL 2107  BIOL 2108  PHYS 1111 OR PHYS 2211  PHYS 1111 OR PHYS 2211  PHYS 1112 OR PHYS 2212  Upper Division Major Biology Requirements  STAT 3125  BIOL 3300  Area D: Ceredit Hours  SHOL 2108  A Biological Principles II  Introduction to Physics I OR Principles of Physics II  Upper Division Major Biology Requirements  STAT 3125  BIOL 3300  A Genetics  BIOL 3310 OR  A Invertebrate Zoology OR			
CHEM 1211/1211Lab (Co-requisite w/Math 1112 or Math 1113)  CHEM 1212/1212L (Co-requisite w/Math 1190)  ARTH 1190  AREA F: LOWER DIVISION MAJOR REQUIREMENTS  BIOL 2107  BIOL 2108  PHYS 1111 OR PHYS 2211  PHYS 1112 OR PHYS 2212  Upper Division Major Biology Requirements  STAT 3125  BIOL 3300  Ageneral Chemistry I & Lab  General Chemistry I & Lab  Calculus I  Habory  Habory  General Chemistry I & Lab  General Chemistry I & Lab  Calculus I  Habory  Habory  General Chemistry I & Lab  Calculus I  Biological Principles I  Biological Principles I  Biological Principles I  Biological Principles I  Introduction to Physics I OR Principles of Physics I  General Chemistry II & Lab  General Chemistry II & Lab  General Chemistry II & Lab  Calculus I  Area F: Lower Biology  General Chemistry II & Lab  General Chemistry II & Lab  Calculus I  Area F: Lower Biology  General Chemistry II & Lab  Calculus I  Area F: Lower Biology  General Chemistry II & Lab			American Government
Math 1113)         CHEM 1212/1212L (Co-requisite w/Math 1190)         3/1         General Chemistry II & Lab           MATH 1190         4         Calculus I           Area F: LOWER DIVISION MAJOR REQUIREMENTS         16 Credit Hours           BIOL 2107         4         Biological Principles I           BIOL 2108         4         Biological Principles II           PHYS 1111 OR PHYS 2211         4         Introduction to Physics I OR Principles of Physics I           PHYS 1112 OR PHYS 2212         4         Introduction to Physics II OR Principles of Physics II           Upper Division Major Biology Requirements         30 semester hours           STAT 3125         3         Biostatistics           BIOL 3300         4         Genetics           BIOL 3310 OR         4         Invertebrate Zoology OR			
MATH 1190 4 Calculus I  Area F: LOWER DIVISION MAJOR REQUIREMENTS 16 Credit Hours  BIOL 2107 4 Biological Principles I  BIOL 2108 4 Biological Principles II  PHYS 1111 OR PHYS 2211 4 Introduction to Physics I OR Principles of Physics I  PHYS 1112 OR PHYS 2212 4 Introduction to Physics II OR Principles of Physics II  Upper Division Major Biology Requirements 30 semester hours  STAT 3125 3 Biostatistics  BIOL 3300 4 Genetics  BIOL 3310 OR 4 Invertebrate Zoology OR	Math 1113)		
Area F: LOWER DIVISION MAJOR REQUIREMENTS  BIOL 2107  4 Biological Principles I  BIOL 2108  4 Biological Principles II  PHYS 1111 OR PHYS 2211  4 Introduction to Physics I OR Principles of Physics I  PHYS 1112 OR PHYS 2212  4 Introduction to Physics II OR Principles of Physics II  Upper Division Major Biology Requirements  STAT 3125  3 Biostatistics  BIOL 3300  4 Genetics  BIOL 3310 OR  4 Invertebrate Zoology OR			
BIOL 2107  BIOL 2108  4 Biological Principles II  PHYS 1111 OR PHYS 2211  4 Introduction to Physics I OR Principles of Physics I  PHYS 1112 OR PHYS 2212  4 Introduction to Physics II OR Principles of Physics II  Upper Division Major Biology Requirements  STAT 3125  BIOL 3300  4 Genetics  BIOL 3310 OR  4 Invertebrate Zoology OR			
BIOL 2108  PHYS 1111 OR PHYS 2211  Introduction to Physics I OR Principles of Physics I PHYS 1112 OR PHYS 2212  Introduction to Physics II OR Principles of Physics II Upper Division Major Biology Requirements  STAT 3125  BIOL 3300  Invertebrate Zoology OR	Area F: LOWER DIVISION MAJOR REQUIREMENTS 16 Credit Hours		
PHYS 1111 OR PHYS 2211 4 Introduction to Physics I OR Principles of Physics I PHYS 1112 OR PHYS 2212 4 Introduction to Physics II OR Principles of Physics II Upper Division Major Biology Requirements 30 semester hours  STAT 3125 3 Biostatistics  BIOL 3300 4 Genetics  BIOL 3310 OR 4 Invertebrate Zoology OR	BIOL 2107	4	Biological Principles I
PHYS 1112 OR PHYS 2212 4 Introduction to Physics II OR Principles of Physics II Upper Division Major Biology Requirements 30 semester hours  STAT 3125 3 Biostatistics  BIOL 3300 4 Genetics  BIOL 3310 OR 4 Invertebrate Zoology OR	BIOL 2108	4	Biological Principles II
Upper Division Major Biology Requirements     30 semester hours       STAT 3125     3 Biostatistics       BIOL 3300     4 Genetics       BIOL 3310 OR     4 Invertebrate Zoology OR	PHYS 1111 <b>OR</b> PHYS 2211	4	Introduction to Physics I <b>OR</b> Principles of Physics I
STAT 3125         3         Biostatistics           BIOL 3300         4         Genetics           BIOL 3310 OR         4         Invertebrate Zoology OR	PHYS 1112 <b>OR</b> PHYS 2212	4	Introduction to Physics II OR Principles of Physics II
BIOL 3300 4 Genetics BIOL 3310 OR 4 Invertebrate Zoology OR	Upper Division Major Biology Requirements		30 semester hours
BIOL 3310 OR 4 Invertebrate Zoology OR	STAT 3125	3	Biostatistics
minimum = cong,	BIOL 3300	4	Genetics
	BIOL 3310 <b>OR</b>	4	Invertebrate Zoology OR
DIOL 3313   VEREDIATE ZOOLOGY	BIOL 3315		Vertebrate Zoology
BIOL 3320 4 Plant Morphology OR	BIOL 3320	4	Plant Morphology OR
BIOL 4422 Plant Ecology	BIOL 4422		Plant Ecology
BIOL 3340 4 Microbiology	BIOL 3340	4	Microbiology
BIOL 4350 <b>OR</b> 4 Comparative Vertebrate Anatomy <b>OR</b>	BIOL 4350 <b>OR</b>	4	· · · · · · · · · · · · · · · · · · ·
BIOL 3390 (pre-req. BIOL 3300) <b>OR</b> Developmental Biology <b>OR</b>	BIOL 3390 (pre-req. BIOL 3300) <b>OR</b>		Developmental Biology OR
BIOL 4431 <b>OR</b> Human Physiology <b>OR</b>	BIOL 4431 <b>OR</b>		Human Physiology OR
BIOL 4400 Directed Study			Directed Study
BIOL 3370 4 Ecology		4	Ecology
BIOL 3380 (pre-req. BIOL 3300)  3 Evolutionary Biology	DIOL 2002 / DIOL 2002)	2	Fuglitionary Dialogy



## **Degree Requirements**

Professional Education sequence		33 credit hours	
EDUC 2110 *	3	Critical and Contemporary Issues in Education (F or Sp)	
EDUC 2120	3	Sociocultural Influences on Teaching & Learning (F or Sp, or Su)	
EDUC 2130	3	Exploring Teaching and Learning (F or Sp, or Su)	
INED 3304	3	Education of Exceptional Students (F or Sp, or Su)	
BED 4416 (Teaching Methods-coreq BED 4417)	6	Teaching Science - TOSS (6-12) [Fall Semester only—MTWThF am]	
BED 4417 (Teaching Practicum-Middle School)	3	Teaching Science Practicum (6-12) - Middle School Science	
BED 4475 (Student Teaching-High School)	12	Student Teaching – High School Biological Science	
Institutional requirement			
HPS 1000	3	Fitness for Living	
	*		
		TOTAL HOURS FOR B.S. 126	

EDUC 2110 must be completed with a grade of "C" or higher prior to admission to Teacher Education at KSU. All science courses must be completed with a grade of "C" or higher. GPA requirement for Teacher Education at KSU is 2.75.

GACE Exam info at: <a href="http://www.gace.nesinc.com/index.asp">http://www.gace.nesinc.com/index.asp</a>

You must pass or Exempt GACE I prior to admission to Teacher Education. Complete Application to Teacher Education after EDUC 2110. Info available at <a href="http://www.kennesaw.edu/education/student\_support.html">http://www.kennesaw.edu/education/student\_support.html</a>

Submit TOSS Application by Feb 28 prior to BED 4416 registration to <a href="mailto:mdias@kennesaw.edu">mdias@kennesaw.edu</a> TOSS Application available at <a href="mailto:http://www.science.kennesaw.edu/~mdias/index.html">http://www.science.kennesaw.edu/~mdias/index.html</a>

Take GACE II during the fall semester in which you are enrolled in BED 4416 (a.k.a. "TOSS" Teaching of Specific Subjects.

Candidates for TOSS Methods Practicum (BED 4417) and Student Teaching (BED 4475) will not be placed in schools where they have family members either employed or in attendance. If a candidate is inadvertently placed in such a school, the candidate must contact the Center for Education Placements and Partnerships (CEPP) and request a different placement.

During the semester before the semester that you plan to graduate, go to the registrar's office and complete the "Petition to Graduate" no later than the first week of that semester.

Additional science courses of interest to middle or high school science teachers: SCI 3360 Earth Science and/or PHYS 3310 Physics in Everyday Life and/or BIOL 2221, 2221L; 2222, 2222L Human Anatomy and Physiology