### Applied Biological Sciences/Secondary Education Concentration

#### I. English Proficiency (6 hrs)

<table>
<thead>
<tr>
<th>Hrs</th>
<th>Cr</th>
<th>Trans</th>
<th>ASU</th>
<th>Tr</th>
<th>Gr</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Trans</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(University requirement - “C” min required)

ENG 101 First-Year Comp (3) and
ENG 102 First-Year Comp (3) or, if eligible,
ENG 105 Adv First-Year Comp (3)
(see Catalog for eligibility requirements)

Sub Total (I) ________

#### II. General Studies (35 hrs)

A. Humanities & Social Sciences (15 hrs) Combined requirement: Six hours in one area, nine hours in the other, and three hours must be upper-division.

**Humanities/Fine Arts** (6-9 hrs min) (HU)

**Social/Behavioral Sciences** (6-9 hrs min) (SB)

Awareness Areas - Cultural, Global, and Historical awareness areas must be satisfied. Courses that are listed for a core and awareness area may satisfy both requirements concurrently, as may courses that are listed for more than one awareness area.

C:  
G:  
H:  

B. Literacy/Critical Inquiry (6 hrs min)

L:  

C. Natural Sciences (8 hrs min) SQ/SG: At least four hours must be SQ

SQ/SG: BIO 187 General Biology 1 SQ (4)
SQ/SG: BIO 188 General Biology 2 SQ (4)

D. Mathematical Studies (6 hrs min) One MA (mathematics course) and one CS (Computer/statistics/quantitative applications) course.

MA: MAT 210 Brief Calculus (3)
CS: ABS 350 Applied Statistics or Equivalent (3)

Sub Total (II) ________

#### III. Applied Biological Sciences Core (*May be cross listed with General Studies*

ABS 150 Environmental Biology (3)
ABS 301 Technology and Biology (2)
ABS 302 Policy and Biology (2)
ABS 312 Structure & Function (4)
ABS 350 Applied Statistics or equivalent (3) CS
BIO 187 General Biology I (4) SG
BIO 188 General Biology II (4) SQ
BIO 340 General Genetics (4)

Choose between the two courses below:

BIO 360 Animal Physiology (3)

OR

PLB 308 Plant Physiology (4)

MAT 210 Brief Calculus (3) MA

Total: (32 - 33)

#### IV. Secondary Education Concentration Biology Coursework

<table>
<thead>
<tr>
<th>Hrs</th>
<th>Cr</th>
<th>Trans</th>
<th>ASU</th>
<th>Tr</th>
<th>Gr</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Trans</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Choose between the two courses below:

ABS 207 Applied Plant Taxonomy (3)

OR

ABS 355 Vertebrate Zoology (4)
ABS 370 Ecology (3)
MIC 205 Microbiology (3)
MIC 206 Microbiology Laboratory (1)
ABS 490 Applied Biological Sciences Seminar (1)
CHM 113 General Chemistry SQ (4)
CHM 116 General Chemistry SQ (4)
PHY 101 Introduction to Physics SQ (4)
Approved Upper-Division Electives (2)

Total: (25 - 26)

Note: BIO 187, BIO 188, MAT 210, and ABS 350 must be used for both General Studies and concentration requirements to allow graduation within 120 hours.

#### V. Secondary Education Course Work

BIO 480 Methods of Teaching Biology (3)
BIO 482 Adv Methods of Teaching Bio (3)
EDC 350 Educ Tech I: Applications (1)
EDC 351 Educ Tech II: Instr and Eval (1)
EDC 352 Educ Tech III: Design (1)
EDC 494 ST: Professional Knowledge (2)
EDP 303 Human Development (3) L
EDP 310 Educational Psychology (3) SB
RDG 301 Literacy & Instr in Cont Areas (3)
SED 403 Middle and Secondary School Principles, Curriculum, and Methods (3)
SED 478 Stdt Teaching in Sec Schools (10-12)
SED 496 Field Experience (0)
SPE 394 ST: Inclusion Practices at Sec Lvl (3)

Total: (36-38)

Strongly Recommended:

MCE 446 Understanding the Culturally Diverse Child (3) C
SPE 311 Orientation to Education of Exceptional Children (3) SB

### TOTAL PROGRAM HOURS:

I. English
II. General Studies
III. ABS Core
IV. Secondary Educ/Biology Coursework
V. Secondary Educ Course Work

Total Program Hours

Graduation Requirements (Regular Curriculum – 120 hours)
Total upper-division hours ________ (minimum required – 45)