Bioscience/Biotechnology Option

NAME__________________________________________

*** 120 Total Hours Required for Graduation ***

45 hours must be at the 300 level or above

GENERAL COURSES

ASI 101 Found in ASI (freshman) or \( 1 \)
GENAG 200 Topics in Ag (transfer) \( 0 \)
BIOL 198* Principles of Biology \( 4 \)
CHM 210* Chemistry I \( 4 \)
COMM 105* Public Speaking IA \( 2 \)
ENGL 100* Expository Writing I \( 3 \)
ENGL 200* Expository Writing II \( 3 \)
MATH 100 College Algebra \( 3 \)

BUSINESS & ECONOMICS

2 courses (Minimum 6 hours)

Course list on the back.

COMMUNICATIONS

(Select 1)

AGCOM 400 Ag Bus Comm \( 3 \)
COMM 311 Bus Prof Speaking \( 3 \)
COMM 321 Pub Speaking II \( 3 \)
ENGL 510 Intro to Prof Writing \( 3 \)
ENGL 516 Written Comm for Sci \( 3 \)
MC 110 Mass Comm in Soc \( 3 \)

More courses listed on the back.

AGRICULTURE

2 courses from 2 other AG depts.

(Minimum 5 hours-1 hr courses do not apply)

Course list on the back.

STAT/COMP/MATH/PHYS

(Select 1)

STAT 325 Intro to Statistics \( 3 \)
STAT 340 Biometrics I \( 3 \)
STAT 350 Business Econ Stat \( 3 \)
(3 hours)

ASI 290 Micro Computer Appl \( 3 \)
CIS Any course \( 3 \)
MATH 150 to 799 \( 3 \)
PHYS 113* Gen Physics I \( 4 \)
PHYS 114* Gen Physics II \( 4 \)

* Required Pre-Vet Courses for K-State (always check the requirements for other schools you are considering applying to as requirements vary among schools)

** Required Pre-med Courses for K-State (always check the requirements for other schools you are considering applying to as requirements vary among schools)

\( ^* \) The KSU Veterinary School requires a minimum of 12 hours in humanities/social science. The vet school counts AGEC 120 as a humanities/social science course.

CHEMISTRY

(3 hours)

ASI 265 Intro Organic & Bioch \( 5 \)
ASI 521 Gen Biochem \( 5 \)
ASI 522 Gen Biochem Lab \( 5 \)
CHM 230* Chemistry II \( 4 \)
CHM 350* Gen Organic Chem \( 3 \)
CHM 351* Gen Organic Chem Lab \( 2 \)
CHM 531 Organic Chemistry I \( 3 \)
CHM 532 Organic Chemistry Lab \( 2 \)
CHM 550 Organic Chemistry II \( 3 \)

BIOSCIENCES/BIOTECH COURSES

(Core Required)

ASI 210 Intro to Animal Biotech \( 3 \)
ASI 455* Gen Microbiology \( 4 \)
(Select 1)

ASI 600 Appl Animal Biotech \( 3 \)
PLPTH 610 Biotechnology \( 3 \)
(3 hours)

ASI 561 Undergrad Research \( 0-3 \)
ASI 598 Bioscience Internship \( 1-6 \)
ASI 601 Endocrinology & Lactation \( 3 \)
ASI 658 Growth & Development \( 3 \)
ASI 695 Equine Exercise Physiol \( 3 \)
BIOL 330 Public Health Biology \( 3 \)
BIOL 410 Biology of Cancer Cells \( 2 \)
BIOL 450 Modern Genetics \( 4 \)
BIOL 510 Developmental Biol \( 3 \)
BIOL 511 Developmental Biol Lab \( 1 \)
BIOL 530 Pathogenic Micro \( 3 \)
BIOL 541 Cell Biology \( 3 \)
BIOL 545 Human Parasitology \( 3 \)
BIOL 546 Human Para. Lab \( 1 \)
BIOL 625 Animal Parasitology \( 4 \)
BIOL 670 Immunology \( 4 \)
BIOL 671 Immunology Lab \( 2 \)
ENTOM305 Anml Hlth Entomology \( 2 \)
ENTOM306 Anml Hlth Entomology Lab \( 1 \)
FDSCI 530 Undergraduate Res \( 1-3 \)
FDSCI 600 Food Microbiology \( 2 \)
FDSCI 601 Food Microbiology Lab \( 2 \)
PSYCH 470 Psychobiology \( 3 \)

HUMANITIES/SOCIAL SCIENCE

ECON 110 Prin Macroeconomics \( 3 \)
(3 hours)

Course list on the back.

UNRESTRICTED ELECTIVES

ANIMAL SCIENCE COURSES

(Core Required)

ASI 102 Prin Animal Science \( 3 \)
ASI 318 Fund of Nutrition \( 3 \)
ASI 400 Farm Animal Repro \( 3 \)
ASI 401 Farm Animal Repro Lab \( 1 \)
ASI 500* Genetics \( 3 \)
ASI 520 Companion Animal Mgmt \( 3 \)
ASI 533 Anatomy & Physiology \( 4 \)
ASI 580 Career Preparation \( 1 \)
(Introductory Labs)

ASI 105 Animal Science Lab \( 1 \)
ASI 106 Dairy/Poultry Lab \( 1 \)
ASI 107 Comp Anml/Horse Lab \( 1 \)
(Animal Mgmt. - Select 1)

ASI 515 Beef Science \( 3 \)
ASI 521 Horse Science \( 3 \)
ASI 524 Sheep & Meat Goat Sci \( 3 \)
ASI 535 Swine Science \( 3 \)
ASI 621 Dairy Cattle Mgmt \( 3 \)
ASI 645 Poultry Management \( 3 \)

Upper Level ASI Electives

(Minimum 9 hours-6 hrs \( \geq 500 \))

No more than 3 hrs from ASI 561, 599, 660 or 661

ASI course list on the back.

K-STATE 8 REQUIREMENTS

- Each student must successfully complete credit-bearing courses/experiences to cover all of the K-State 8 areas.
- A minimum of four different course prefixes (e.g., AGEC, MATH, FSHS, COMM) must be represented.
- When a course is tagged for two K-State 8 areas, the student may count that course toward both areas.

Subject Catalog Number

Aesthetics
Emp/Quant BIOL 198
Ethical
Global ECON 110
Historical
Diversity CHM 210
Nat/Phys Sci ECON 110
Social

Animal Sciences & Industry

KANSAS STATE UNIVERSITY
College of Agriculture
**Communications Courses:**  
- Ag Communications – AGCOM 310, 400, 410, 590, 610 & 712  
- Animal Sciences & Industry – ASI 326, 420, 470, & 495  
- Communications – COMM any course 311 or higher  
- English – ENGL 300, 417, 510, & 516  

**Business/Economics Courses:**  
- Accounting - ACCTG 231 to 799  
- Agricultural Economics – AGEC 202 to 420, 445 to 799  
- Economics - ECON 505 to 799  
- Entrepreneurship – Any course  
- Family Studies – PFP 105, PFP 305  

**Humanities/Social Science Courses:** *(Max 3 hrs from participatory courses. Must be taken from more than one department.)*  
- American Ethnic Studies – AMETH 160 to 501  
- Anthropology – Any course  
- Architecture – ARCH 301  
- Art – Any course  
- Dance – DANCE 120 to 200, 225 to 420, 495 to 690  
- Engineering – DEN 325, 450  
- Economics - ECON 300 to 799  
- English – ENGL 150, 210, 299, 300 to 760, 790 to 799  
- Environmental Design – ENVD 250, 251  
- Family Studies and Human Services – Any course  
- Geography – GEOG 100, 200, 201, 300 to 799  

**Ag Courses:** *(1-hour courses do not apply)*  
- Ag Communications – Any course  
- Ag Economics – Any course  
- Ag Technology Management – Any course  
- Agronomy – Any course  

**Upper Level ASI Electives:**  
Minimum of 9 hours with 6 hours over 500, no more than 3 hours from ASI 561, 599, 660 or 661.  

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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<td>ASI 315</td>
<td>Livestock and Meat Evaluation</td>
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<td>ASI 320</td>
<td>Principles of Feeding</td>
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<td>ASI 325</td>
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<td>ASI 370</td>
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<td>ASI 450</td>
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<td>ASI 470</td>
<td>Form and Function in Livestock</td>
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<td>ASI 495</td>
<td>Advanced Meat Evaluation</td>
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One course cannot be used to fulfill multiple requirements; must select ASI electives not used elsewhere in curriculum.