**Bioscience/Biotechnology Option**  

**Fall 2022/Spring 2023**

**NAME__________________________**

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

45 hours must be at the 300 level or above

<table>
<thead>
<tr>
<th><strong>GENERAL COURSES</strong></th>
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<tbody>
<tr>
<td>ASI 101  Found in ASI (freshman)</td>
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<tr>
<td>GENAG 200  Topics in Ag (transfer)</td>
</tr>
<tr>
<td>BIOL 198  Principles of Biology</td>
</tr>
<tr>
<td>CHM 210  Chemistry I</td>
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<tr>
<td>COMM 105  Public Speaking IA</td>
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<tr>
<td>ENGL 100  Expository Writing I</td>
</tr>
<tr>
<td>ENGL 200  Expository Writing II</td>
</tr>
<tr>
<td>MATH 100  College Algebra</td>
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</tbody>
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**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 |
| ASI 290  Micro Computer Appl | 3 |
| CIS Any course | |
| MATH 150 to 799 | |
| 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)

<table>
<thead>
<tr>
<th><strong>CHEMISTRY</strong> (Minimum 9 hours)</th>
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<tbody>
<tr>
<td>BIOCH 265  Intro Organic &amp; Bioch</td>
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<tr>
<td>BIOCH 521*  Gen Biochem</td>
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<tr>
<td>BIOCH 522  Gen Biochem Lab</td>
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<tr>
<td>CHM 230*  Chemistry II</td>
</tr>
<tr>
<td>CHM 350*  Gen Organic Chem</td>
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<tr>
<td>CHM 351  Gen Organic Chem Lab</td>
</tr>
<tr>
<td>CHM 531  Organic Chemistry I</td>
</tr>
<tr>
<td>CHM 532  Organic Chemistry Lab</td>
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<tr>
<td>CHM 550  Organic Chemistry II</td>
</tr>
</tbody>
</table>

**BIOSCIENCES/BIOTECH Cours**

(Select 1)

| ASI 210  Intro to Animal Biotech | 3 |
| ASI 455*  Gen Microbiology | 4 |
| ASI 600  Appl Animal Biotech | 3 |
| PLPTH 610  Biotechnology | 3 |
| ASI 561  Undergrad Research | 0-3 |
| ASI 598  Bioscience Internship | 1-6 |
| ASI 600  Applied Animal Biotech | 3 |
| ASI 601  Endocrinology & Lactation | 3 |
| ASI 658  Growth & Development | 3 |
| ASI 695  Equine Exercise Physiol | 3 |
| BIO 330  Public Health Biology | 3 |
| BIO 410  Biology of Cancer Cells | 2 |
| BIO 450  Modern Genetics | 4 |
| BIO 510  Developmental Biol | 3 |
| BIO 511  Developmental Biol Lab | 1 |
| BIO 530  Pathogenic Micro | 3 |
| BIO 541  Cell Biology | 3 |
| BIO 545  Human Parasitology | 3 |
| BIO 546  Human Para. Lab | 1 |
| BIO 670  Immunology | 4 |
| BIO 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 |

Course list on the back.

**UNRESTRICTED ELECTIVES**

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
Sales - SALES 542
General Agriculture – GENAG 450
Journalism & Mass Communications – MC 110, 120 & 180
Modern Language – Any course in foreign language

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
Finance - Any course
Management - Any course
Management Information Systems – Any course
Marketing - Any course

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 to 299, 310, 320 to 399, 420 to 499,
536 to 599, 605 to 660, 670 to 695, 700 to 760, 790 to 799
Environmental Design – ENVD 250, 251
Family Studies and Human Services – Any course
History – Any course
Leadership Studies – Any course 320 or above
Modern Language – Any foreign language
Music – Any course
Philosophy – Any course
Political Science – Any course
Psychological Sciences – Any course
Sociology – Any course
Social Work – Any course
Theater – Any course
Gender, Women & Sexuality Studies – Any course

Ag Courses: (1-hour courses do not apply)
Ag Communications – Any course
Ag Economics – Any course
Ag Technology Management – Any course
Agronomy – Any course
ASI 660 Study Abroad

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.
ASI 310 Poultry and Poultry Product Evaluation
ASI 315 Livestock and Meat Evaluation
ASI 320 Principles of Feeding
ASI 325 Beginning Horse Evaluation
ASI 326 Advanced Horse Evaluation
ASI 333 Equine Enterprise Management
ASI 345 Beginning Horse Training and Mgmt
ASI 350 Meat Science
ASI 361 Meat Animal Processing
ASI 370 Principles of Meat Evaluation
ASI 385 Wool Grading and Evaluation
ASI 395 Intermediate Horse Training & Mgmt
ASI 396 Dairy Cattle Judging
ASI 402 Calving
ASI 403 Foaling
ASI 404 Lambing
ASI 405 Fundamentals of Milk Processing
ASI 420 Advanced Dairy Cattle Judging
ASI 422 Livestock Sales Management
ASI 444 Equine Health
ASI 445 Advanced Horse Training and Mgmt
ASI 450 Principles of Livestock Selection
ASI 470 Form and Function in Livestock
ASI 495 Advanced Meat Evaluation
ASI 504 Equine Reproduction Management
ASI 505 Equine Reproduction Management Lab
ASI 510 Animal Breeding Principles
ASI 512 Bovine Reproductive Technologies
ASI 515 Beef Science
ASI 521 Horse Science
ASI 524 Sheep and Meat Goat Science
ASI 533 Swine Science
ASI 540 Principles of Animal Disease Control
ASI 561 Undergraduate Research in ASI
ASI 595 Contemporary Issues in Animal Sci and Ag
ASI 598 Bioscience Internship in Animal Science
ASI 599 Animal Science Internship
ASI 600 Applied Animal Biotechnology
ASI 601 Endocrinology and Lactation
ASI 602 Equine Breeding and Genetics
ASI 608 Dairy Foods Processing & Technology
ASI 610 Processed Meat Operations
ASI 620 Beef Systems Management
ASI 621 Dairy Cattle Management
ASI 635 Gamebird Production and Management
ASI 640 Poultry Products Technology
ASI 645 Poultry Management
ASI 650 ID and Data Mgmt of Food Animals
ASI 655 Behavior of Domestic Animals
ASI 659 Animal Growth and Development
ASI 660 International Study Exp in Animal Science
ASI 661 Animal Sciences and Industry Problems
ASI 662 Special Topics in Animal Science
ASI 675 Monogastric Nutrition
ASI 676 Avian Nutrition
ASI 677 Companion Animal Nutrition
ASI 678 Equine Nutrition
ASI 679 Swine Nutrition
ASI 680 Ruminant Nutrition
ASI 681 Dairy Cattle Nutrition
ASI 682 Formulation of Livestock and Poultry Diets
ASI 683 Grazing Livestock Nutrition
ASI 684 Nutrition of Feedlot Cattle
ASI 685 Stored Forage Sys for Rum Animals
ASI 695 Principles of Equine Exercise Physiology
ASI 700 Physiology of Repro in Farm Animals
ASI 710 Physiology of Repro in Farm Animals
ASI 720 Anaerobic Bacteriology
ASI 741 Quant Genetics Appl of Matrix Algebra
ASI 742 Cybersheep: A Genetic Simulation Game
ASI 749 Advanced Animal Breeding
ASI 776 Meat Industry Technology
ASI 777 Meat Technology
DMP 610 Feedlot Health Systems
DMP 611 Cow/Calf Health Systems

One course cannot be used to fulfill multiple requirements; must select ASI electives not used elsewhere in curriculum.