



Bioscience/Biotechnology Option

FALL 2022/SPRING 2023

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
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)

[^]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

(Minimum 9 hours)

BIOCH	265	Intro Organic & Bioch	5
BIOCH	521*	Gen Biochem	3
BIOCH	522	Gen Biochem Lab	3
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
BIOL	455*	Gen Microbiology	4

(Select 1)

ASI	600	Appl Animal Biotech	3
PLPTH	610	Biotechnology	3

(Minimum 9 hours)

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
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	670	Immunology	4
BIOL	671	Immunology Lab	2
ENTOM305		Anml Hlth Entomology	2
ENTOM306		Anml Hlth Entomology Lab1	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^A

(Minimum 6 hours)

Course list on the back.

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	480	Career Preparation	1
ASI	500*	Genetics	3
ASI	520	Companion Animal Mgmt	3
ASI	533	Anatomy & Physiology	4

(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 ≥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., AGECE, 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		_____
Nat/Phys Sci		CHM 210
Social		ECON 110

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 – AGECE 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 – ENV 250, 251
 Family Studies and Human Services – Any course
 Geography – GEOG 100, 200, 201, 300 to 799 NOT 321

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

Entomology – Any course
 Food Science – Any course
 Grain Science – Any course
 Horticulture and Natural Resources – Any except RRES 200
 General Agriculture – GENAG 210-505

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 504 Equine Reproduction Management	ASI 658 Animal Growth and Development
ASI 315 Livestock and Meat Evaluation	ASI 505 Equine Reproduction Management Lab	ASI 660 International Study Exp in Animal Science
ASI 320 Principles of Feeding	ASI 510 Animal Breeding Principles	ASI 661 Animal Sciences and Industry Problems
ASI 325 Beginning Horse Evaluation	ASI 512 Bovine Reproductive Technologies	ASI 662 Special Topics in Animal Science
ASI 326 Advanced Horse Evaluation	ASI 515 Beef Science	ASI 675 Monogastric Nutrition
ASI 333 Equine Enterprise Management	ASI 521 Horse Science	ASI 676 Avian Nutrition
ASI 345 Beginning Horse Training and Mgmt	ASI 524 Sheep and Meat Goat Science	ASI 677 Companion Animal Nutrition
ASI 350 Meat Science	ASI 535 Swine Science	ASI 678 Equine Nutrition
ASI 361 Meat Animal Processing	ASI 540 Principles of Animal Disease Control	ASI 679 Swine Nutrition
ASI 370 Principles of Meat Evaluation	ASI 561 Undergraduate Research in ASI	ASI 680 Ruminant Nutrition
ASI 385 Wool Grading and Evaluation	ASI 595 Contemporary Issues in Animal Sci and Ag	ASI 681 Dairy Cattle Nutrition
ASI 395 Intermediate Horse Training & Mgmt	ASI 598 Bioscience Internship in Animal Science	ASI 682 Formulation of Livestock and Poultry Diets
ASI 396 Dairy Cattle Judging	ASI 599 Animal Science Internship	ASI 683 Grazing Livestock Nutrition
ASI 402 Calving	ASI 600 Applied Animal Biotechnology	ASI 684 Nutrition of Feedlot Cattle
ASI 403 Foaling	ASI 601 Endocrinology and Lactation	ASI 685 Stored Forage Sys for Rum Animals
ASI 404 Lambing	ASI 602 Equine Breeding and Genetics	ASI 695 Principles of Equine Exercise Physiology
ASI 405 Fundamentals of Milk Processing	ASI 608 Dairy Foods Processing & Technology	ASI 710 Physiology of Repro in Farm Animals
ASI 420 Advanced Dairy Cattle Judging	ASI 610 Processed Meat Operations	ASI 720 Anaerobic Bacteriology
ASI 422 Livestock Sales Management	ASI 620 Beef Systems Management	ASI 741 Quant Genetics Appl of Matrix Algebra
ASI 444 Equine Health	ASI 621 Dairy Cattle Management	ASI 742 Cybersheep: A Genetic Simulation Game
ASI 445 Advanced Horse Training and Mgmt	ASI 635 Gamebird Production and Management	ASI 749 Advanced Animal Breeding
ASI 450 Principles of Livestock Selection	ASI 640 Poultry Products Technology	ASI 776 Meat Industry Technology
ASI 470 Form and Function in Livestock	ASI 645 Poultry Management	-OR-
ASI 495 Advanced Meat Evaluation	ASI 650 ID and Data Mgmt of Food Animals	ASI 777 Meat Technology
	ASI 655 Behavior of Domestic Animals	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.