



Hutson School of Agriculture



Tony Brannon, Dean
103 South Oakley Applied Science Building
270-809-3328

DEPARTMENTS

Agricultural Science	212	Veterinary Technology and	
Animal and Equine Science	219	Pre-Veterinary Medicine	220

PROGRAMS

UNDERGRADUATE

Associate
Agricultural Science and Technology

Baccalaureate
Agricultural Science
Animal Technology

Certificate
Unmanned Aerial Systems

Minor
Agriculture
Equine Science
Golf Course Management
Unmanned Aerial Systems

GRADUATE

Master's
Agriculture

Certificate
Veterinary Hospital Management

Hutson School of Agriculture

Broad opportunities for students to prepare for agricultural and related careers are offered by the Hutson School of Agriculture. The Hutson School of Agriculture offers three undergraduate degree programs: a Bachelor of Science in Agriculture (B.S.A.), a Bachelor of Science with a major in Agriculture, and an Associate of Science with emphasis in agricultural science and technology. Minors are available in agriculture, equine science, golf course management, and unmanned aerial systems.

The Hutson School of Agriculture also offers a Master of Science degree with both traditional and on-line options. The purpose of this degree is to provide an opportunity for professional agricultural personnel to obtain an education at the graduate level or to prepare for terminal degree work at the doctoral level. Faculty advisors assist students in planning an appropriate course of study to meet individual goals and to assure a balanced program.

The Hutson School of Agriculture includes the Department of Agricultural Science, the Department of Animal and Equine Science, and the Department of Veterinary Technology and Pre-Veterinary Medicine. Agricultural facilities include the farm laboratory complexes, the Cherry Agricultural Exposition Center, and the Breathitt Veterinary Center. The horse, beef, agronomy, and horticulture facilities are a part of the farm-laboratory complexes. The Cherry Agricultural Exposition Center is utilized for equine and rodeo classes, field days, judging contests, clinics, and numerous agricultural activities.

MSU's Breathitt Veterinary Center (BVC), located in Hopkinsville, Kentucky, has as its primary mission the provision of diagnostic data; however, its mission also includes instruction and research. The laboratory is accredited through the American Association of Veterinary Laboratory Diagnosticians. The center's facilities and personnel provide learning experiences for students in the animal health technology program. The BVC also conducts research dealing with infectious diseases of food animals.

Unmanned Aerial Systems

The market for unmanned aerial applications is a rapidly rising commercial enterprise. The Unmanned Aerial Systems minor and certificate provide students with the knowledge to explore the vast interdisciplinary potential for aircraft drone systems. Aerial/field mapping, agriculture applications, disaster and emergency management, environmental research, law enforcement and photogrammetry, parcel and freight delivery are just a few of the many application fields in this growing technology.

CERTIFICATE:

Unmanned Aerial Systems CIP 01.9999

Total Requirements 15 hrs

Required Courses 12 hrs

- UAS 110 Introduction to Aviation
- UAS 310 Introduction to Unmanned Aerial Systems Applications
- UAS 410 Unmanned Aerial Systems Sensors and Data Display
- UAS 480 Experiential Learning in Unmanned Aerial Systems Technology

Approved Electives 3 hrs

Selected with advisor approval.

MINOR:

Unmanned Aerial Systems

Total Requirements 21 hrs

Required Courses 12 hrs

- UAS 110 Introduction to Aviation
- UAS 310 Introduction to Unmanned Aerial Systems Applications
- UAS 410 Unmanned Aerial Systems Sensors and Data Display
- UAS 480 Experiential Learning in Unmanned Aerial Systems Technology

Approved Electives 9 hrs

Selected with advisor approval.

Department of Agricultural Science

212 Oakley Applied Science South
270-809-3327

Head: Brian Parr. **Faculty:** Ballard, Bellah, Ferguson, Handayani, Hoover, Morrow, Musunuru, Payne, Santiago, M. Shultz, Still.

The Department of Agriculture Science offers a Bachelor of Science in Agriculture with the following tracks: (1) agronomy, (2) agriculture science/agriculture technology track, (3) agricultural education, (4) agribusiness, (5) agriculture systems technology, and (6) horticulture. The agriculture science/agriculture technology track includes emphases in emerging technology, communications/public relations, environmental/ health, agriculture public service/leadership, and agriculture technology.

Facilities for agriculture science include classrooms and labs in Oakley Applied Science South, Howton Agriculture Engineering Building, the West Farm, the Hutson Farm, the North Farm, the Pullen Farm Complex with three greenhouses and environmental center lab, and the agriculture systems technology farm lab.

Agricultural Science and Technology

Associate of Science

CIP 01.9999

University Studies Requirements 21 hrs

(See Academic Degrees and Programs.)

University Studies selections must include:

•Scientific Inquiry, Methodologies, and Quantitative Skills

- BIO 101 Biological Concepts
or
- CHE 105 Introductory Chemistry I
or
- PHY 120 General Physics I
- MAT 140 College Algebra

Agriculture Core Courses 41 hrs

- AGR 100T Transitions
- AGR 100 Animal Science
- AGR 130 Agricultural Economics
- AGR 133 Field Applications for Agriculture
- AGR 160 Horticultural Science
or
- AGR 240 Crop Science
- AGR 170 Introduction to Agricultural Systems Technology
- AGR 199 Contemporary Issues in Agriculture¹
- AGR 339 Computer Applications for Agriculture
- AGR 345 Soil Science

- AGR 399 Professional Development Seminar I
or
AGR 499 Leadership/Professional Development Seminar II
AGR electives (16 hrs)

Total Curriculum Requirements 62 hrs
¹AGR 199 will fulfill both the agriculture core and university studies elective.

AREA:

Agricultural Science/AgriScience Technology Track

Bachelor of Science in Agriculture CIP 01.9999

Note: This track may be earned via an online format. Contact your advisor for more information.

University Studies Requirements 40 hrs
(See *Academic Degrees and Programs.*)

University Studies selections must include:

•Global Awareness, Cultural Diversity and the World's Artistic Traditions

Choose one of the following:

- AGR 200 International Agricultural Experience
AGR 353 World Food, Agriculture and Society
SPA 106 Basic Spanish and Culture for Agriculture

•Scientific Inquiry, Methodologies, and Quantitative Skills

- BIO 101 Biological Concepts
CHE 105 Introductory Chemistry I
MAT 140 College Algebra

•Social and Self-Awareness and Responsible Citizenship

- AGR 199 Contemporary Issues in Agriculture¹
BIO 103 Saving Planet Earth

or

- POL 140 American National Government

•University Studies Electives

- CHE 210 Brief Organic Chemistry
and
CHE 215 Organic Chemistry Laboratory
or
EES 199 Earth Science

Agriculture Core Courses 26 hrs

- AGR 100T Transitions
AGR 100 Animal Science
AGR 130 Agricultural Economics
AGR 133 Field Applications for Agriculture
AGR 160 Horticultural Science
or
AGR 240 Crop Science
AGR 170 Introduction to Agricultural Systems Technology
AGR 199 Contemporary Issues in Agriculture¹
AGR 339 Computer Applications for Agriculture
AGR 345 Soil Science
AGR 399 Professional Development Seminar I
or
AGR 499 Leadership/Professional Development Seminar II
AGR 599 Agriculture Senior Capstone

AgriScience Technology Track 24 hrs

- AGR 377 Agriculture Safety
AGR 433 Farm Management
and one of the following:
AGR 300 Principles of Animal Nutrition
AGR 301 Livestock Judging and Evaluation
AGR 302 Horse Science

- AGR 311 Beef Science
AGR 312 Dairy Science
AGR 321 Poultry Science
AGR 326 Swine Science
and one of the following:
AGR 330 Principles of Agribusiness
AGR 333 Agribusiness Records and Analysis
AGR 337 Agricultural Sales and Merchandising
and one of the following:
AGR 360 Greenhouse Production and Management
AGR 461 Plant Propagation
AGR 542 Plant Breeding I
AGR 549 Weeds and Their Control
one of the following:
AGR 372 Agricultural Metal Processes
AGR 379 Field Equipment Technology Management
AGR 470 Soil and Water Engineering
AGR 477 Agricultural Power Units
AGR 576 Agricultural Electrification Systems
AGR 577 Tractor Power Principles
and
AGR electives (6 hrs)²

Required Support Courses 21-22 hrs
Choose one of the following support course emphases.

Emerging Technology Emphasis (22 hrs)

- AGR 471 Applications in Precision Agriculture²
AGR 571 Advanced Precision Agriculture²
EES 202 Introduction to Geographic Information Science
EES 312 Introduction to Remote Sensing

Select three of the following:

- AGR 439 Software Applications for Agriculture²
AGR 539 Advanced Computer Applications for Agriculture²
CSC 125 Internet and World Wide Web Technologies
EES 305 Map Analysis
EES 521 Geographic Information Systems
TSM 120 Introduction to Telecommunications

Communications Emphasis (21 hrs)

- AGR 385 Disseminating Agriculture, Food, and Natural Resource Messages Through Emerging Media
AGR 585 Specialized Journalism/RTV²
or
AGR 595 Integrated Agricultural Communications Strategies
JMC 168 Contemporary Mass Media
JMC 194 Newswriting
JMC 330 Mass Media Effects
JMC 590 Mass Communications Law
Advisor-approved AGR, COM, or JMC elective

Environmental/Health Emphasis (21 hrs)

- AGR 378 Agricultural Environmental Management Systems
CET 330 Water Quality Technology I
CET 331 Water Quality Technology II
CET 342 Air Quality Technology
CET 353 Solid and Hazardous Waste Management
CET 555 Environmental Regulatory Affairs
ENT 286 Introduction to Environmental Engineering Technology

Agriculture Public Service/Leadership Emphasis (21 hrs)

- AGR 488 Cooperative Education/Internship²
AGR 489 Cooperative Education/Internship²
NLS 290 Community Engagement and the Nonprofit Sector
NLS 350 Program Development
NLS 351 Leadership, Governance, and Board Development
AGR, AED, COM, CTE, MGT, NLS advisor approved electives (6 hrs)²

Agricultural Technology Emphasis (21-22 hrs)

AGR 313	Livestock Production Management Systems
AGR 439	Software Applications for Agriculture ²
AGR 471	Applications in Precision Agriculture ²
AGR 499	Leadership/Professional Development Seminar II
AGR 537	Seminar in Agricultural Business Systems
AGR 538	Seminar in Production Agricultural Systems
<i>or</i>	
AGR 571	Advanced Precision Agriculture
AGR 539	Advanced Computer Applications for Agriculture
AGR 547	Crop Management

Unrestricted Electives..... 8-9 hrs

Total Curriculum Requirements 120 hrs

¹AGR 199 fulfills both Agriculture Core and a University Studies elective requirement.

²These agriculture electives may be fulfilled by agriculture courses used in the chosen emphasis.

AREA:**Agricultural Science/****Agricultural Education Certification (5-12) Track**

Bachelor of Science in Agriculture CIP 01.9999

University Studies Requirements 40 hrs

(See *Academic Degrees and Programs*.)

University Studies selections must include:

•Global Awareness, Cultural Diversity and the World's Artistic Traditions

Choose one of the following:

AGR 200	International Agricultural Experience
AGR 353	World Food, Agriculture and Society
SPA 106	Basic Spanish and Culture for Agriculture

•Scientific Inquiry, Methodologies, and Quantitative Skills

BIO 101	Biological Concepts
CHE 105	Introductory Chemistry I
MAT 140	College Algebra ¹

or

STA 135	Introduction to Probability and Statistics ¹
---------	---

•Social and Self-Awareness and Responsible Citizenship

BIO 103	Saving Planet Earth
---------	---------------------

or

POL 140	American National Government
---------	------------------------------

•University Studies Electives

AGR 199	Contemporary Issues in Agriculture ^{2,3}
---------	---

Choose one of the following:

BIO 221	Zoology
BIO 222	Botany
CHE 101	Consumer Chemistry
EES 199	Earth Science

Note: Certification requires a grade of *B* or better in one English composition course and a *B* or better in a University Studies math course, public speaking, and AED 380 or equivalent course. Additional requirements for admission to teacher education and student teaching must be met. See advisor and/or Office of Teacher Education Services for details.

Agriculture Core Courses 23 hrs

AGR 100T	Transitions
AGR 100	Animal Science
AGR 130	Agricultural Economics
AGR 133	Field Applications for Agriculture
AGR 160	Horticultural Science
<i>or</i>	
AGR 240	Crop Science
AGR 170	Introduction to Agricultural Systems Technology

AGR 199	Contemporary Issues in Agriculture ^{2,3}
AGR 339	Computer Applications for Agriculture
AGR 345	Soil Science
AGR 399	Professional Development Seminar I

or

AGR 499	Leadership/Professional Development Seminar II
AGR 599	Agriculture Senior Capstone

Agricultural Education Track 24 hrs

AED 104	Agricultural Education, Leadership and Life Knowledge
AGR 360	Greenhouse Production and Management
AGR 337	Agricultural Sales and Merchandising

or

AGR 433	Farm Management
AGR 372	Agricultural Metal Processes
AGR 570	Agricultural Systems Technology Laboratory Management

Choose one of the following:

AGR 361	Greenhouse Practicum
AGR 362	Floral Design
AGR 368	Landscape Construction
AGR 461	Plant Propagation

Choose one of the following:

AGR 300	Principles of Animal Nutrition
AGR 301	Livestock Judging
AGR 302	Horse Science
AGR 311	Beef Science
AGR 326	Swine Science

and a three hour advisor approved 300-400 level AGR elective

Required Support Courses 33 hrs

AED 250	Special Problems in Agricultural Education ⁵
AED 380	Agricultural Education, Extension, and Leadership ¹
AED 501	Methods of Teaching Agricultural Education ¹
EDU 180	Exploring the Teaching Profession ¹
EDU 280	Educating for Human Development ¹
EDU 380	Inclusive Teaching of Diverse Learners ¹
EDU 480	Effective Pedagogy ^{1,4}
EDU 485	Professional Perspectives for Teaching ^{1,4}
SEC 421	Student Teaching in Secondary School

Total Curriculum Requirements 120 hrs

¹With a grade of *B* or better.

²AGR 199 will fulfill both the agriculture core and university studies elective.

³Identified as discipline specific writing intensive course.

⁴Admission to Teacher Education required.

⁵AGR 250 should be taken concurrently with EDU 480 and 485 and may be repeated as needed to complete a minimum of 200 clinical hours prior to student teaching.

AREA:**Agricultural Science/Agribusiness Track**

Bachelor of Science in Agriculture CIP 01.9999

University Studies Requirements 40 hrs

(See *Academic Degrees and Programs*.)

University Studies selections must include:

•Global Awareness, Cultural Diversity and the World's Artistic Traditions

Choose one of the following:

AGR 200	International Agricultural Experience
AGR 353	World Food, Agriculture and Society
SPA 106	Basic Spanish and Culture for Agriculture

•Scientific Inquiry, Methodologies, and Quantitative Skills

- BIO 101 Biological Concepts
- CHE 105 Introductory Chemistry I
or
- CHE 210 Brief Organic Chemistry
- MAT 140 College Algebra
or
- MAT 220 Business Calculus
or
- MAT 250 Calculus and Analytical Geometry I

•Social and Self-Awareness and Responsible Citizenship

- COM 260 Communication Ethics
or
- POL 140 American National Government
- ECO 230 Principles of Macroeconomics

•University Studies Electives

- ECO 231 Principles of Microeconomics
- FIN 230 Personal Finance

Agriculture Core Courses 26 hrs

- AGR 100T Transitions
- AGR 100 Animal Science
- AGR 130 Agricultural Economics
- AGR 133 Field Applications for Agriculture
- AGR 160 Horticultural Science
or
- AGR 240 Crop Science
- AGR 170 Introduction to Agricultural Systems Technology
- AGR 199 Contemporary Issues in Agriculture
- AGR 339 Computer Applications for Agriculture
- AGR 345 Soil Science
- AGR 399 Professional Development Seminar I
or
- AGR 499 Leadership/Professional Development Seminar II
- AGR 599 Agriculture Senior Capstone

Agribusiness Track 24-25 hrs

- ACC 200 Principles of Accounting I
- AGR 328 Statistics for Food and Agriculture
or
- STA 135 Introduction to Probability and Statistics
- AGR 330 Principles of Agribusiness
- AGR 336 Agricultural Marketing and Price Analysis
- AGR 337 Agricultural Sales and Merchandising
- AGR 433 Farm Management
- AGR 531 Agricultural Finance
- AGR 552 Agricultural Policy

Required Support Courses 15 hrs

Choose one of the following support course emphases.

Crop Production Emphasis

- AGR 547 Crop Management
 - AGR 549 Weeds and their Control
- and three of the following: AGR 455, 470, 471, 542, 546, or 555.

Entrepreneurship Emphasis

- AGR 334 Entrepreneurship in Agribusiness
 - MGT 350 Fundamentals of Management
 - MGT 358 Entrepreneurial Business Plan Development
- Upper-level, advisor approved electives (6 hrs)

Global Emphasis

- MKT 360 Principles of Marketing
 - MKT 568 Global Marketing Management
- Choose three of the following:
- AGR 353 World Food, Agriculture and Society

- AGR 529 International Trade and Agriculture
 - AGR 533 Seminar in International Agriculture Systems
- Three hours of foreign language

Marketing/Management Emphasis

- MGT 350 Fundamentals of Management
 - MKT 360 Principles of Marketing
 - FIN 330 Principles of Finance
- Upper-level, advisor approved electives (6 hrs)

Unrestricted Electives 14-15 hrs¹

Total Curriculum Requirements 120 hrs

¹Students wishing to qualify for admission to Murray State's Master of Business Administration (MBA) program should chose the following courses as part of the Unrestricted Electives requirement: ACC 201, BUS 355, CIS 443, MAT 220.

AREA:

Agricultural Science/

Agricultural Systems Technology Track

Bachelor of Science in Agriculture

CIP 01.9999

University Studies Requirements 40-41 hrs

(See *Academic Degrees and Programs.*)

University Studies selections must include:

•Global Awareness, Cultural Diversity and the World's Artistic Traditions

Choose one of the following:

- AGR 200 International Agricultural Experience
- AGR 353 World Food, Agriculture and Society
- SPA 106 Basic Spanish and Culture for Agriculture

•Scientific Inquiry, Methodologies, and Quantitative Skills

- BIO 101 Biological Concepts
- CHE 105 Introductory Chemistry I
- MAT 130 Technical Math I
or
- MAT 140 College Algebra

•Social and Self-Awareness and Responsible Citizenship

- AGR 199 Contemporary Issues in Agriculture¹

•University Studies Electives

- CHE 210/215 Brief Organic Chemistry and Organic Chemistry Laboratory
or

- EES 199 Earth Science
or

- PHY 130 General Physics I

Agriculture Core Courses 26 hrs

- AGR 100T Transitions
- AGR 100 Animal Science
- AGR 130 Agricultural Economics
- AGR 133 Field Applications for Agriculture
- AGR 160 Horticultural Science
or
- AGR 240 Crop Science
- AGR 170 Introduction to Agricultural Systems Technology
- AGR 199 Contemporary Issues in Agriculture¹
- AGR 339 Computer Applications for Agriculture
- AGR 345 Soil Science
- AGR 399 Professional Development Seminar I
or
- AGR 499 Leadership/Professional Development Seminar II
- AGR 599 Agriculture Senior Capstone

Agriculture Systems Technology Track..... 24 hrs

- AGR 371 Agricultural Buildings and Construction
 AGR 372 Agricultural Metal Processes
 AGR 377 Agriculture Safety
 AGR 477 Agricultural Power Units
 or
 AGR 577 Tractor Power Principles
 AGR elective (3 hrs)
Choose nine hours from the following:
 AGR 379 Field Equipment Technology Management
 AGR 470 Soil and Water Engineering
 AGR 471 Applications in Precision Agriculture
 AGR 488 Cooperative Education/Internship
 AGR 489 Cooperative Education/Internship
 AGR 551 Selected Studies in Agriculture
 AGR 570 Ag Systems Technology Lab Management
 AGR 571 Advanced Precision Agriculture
 AGR 572 Advanced Metal Work
 AGR 573 Agriculture Processing Systems
 AGR 574 Agricultural Irrigation and Water
 AGR 575 Combine and Grain Handling Systems
 AGR 576 Agriculture Electrification Systems
 AGR 578 Research and Development of Agriculture Tractors and Equipment

Support Courses 6 hrs

- AGR 471 Applications in Precision Agriculture
 AGR 488 Cooperative Education/Internship
or select from the following:
 AGR 489 Cooperative Education/Internship
 AGR 571 Advanced Precision Agriculture
 TSM 110 Electrical Systems I
 ITD 102 CAD Applications
 ITD 104 Computer-Aided Design
 ITD 107 Introduction to Technical Drawing and Computer Aided Drafting
 ITD 330 Machine Tool Processes

Unrestricted Electives..... 23-24 hrs**Total Curriculum Requirements 120 hrs**

¹AGR 199 fulfills the agriculture core and the university studies elective.

AREA:**Agricultural Science/Agronomy Track**

Bachelor of Science in Agriculture

CIP 01.9999

University Studies Requirements 42 hrs

(See *Academic Degrees and Programs*.)

University Studies selections must include:

•Global Awareness, Cultural Diversity and the World's Artistic Traditions

Choose one of the following:

- AGR 200 International Agricultural Experience
 AGR 353 World Food, Agriculture and Society
 SPA 106 Basic Spanish and Culture for Agriculture

•Scientific Inquiry, Methodologies, and Quantitative Skills

- BIO 222 Botany: Plant Form and Function
 CHE 105 Introductory Chemistry I
 MAT 140 College Algebra

•Social and Self-Awareness and Responsible Citizenship

- BIO 103 Saving Planet Earth
 or

- POL 140 American National Government
 AGR 199 Contemporary Issues in Agriculture¹

•University Studies Electives

- CHE 210 Brief Organic Chemistry
 CHE 215 Organic Chemistry Laboratory
 EES 199 Earth Science

Agriculture Core Courses 26 hrs

- AGR 100T Transitions
 AGR 100 Animal Science
 AGR 130 Agricultural Economics
 AGR 133 Field Applications for Agriculture
 AGR 160 Horticultural Science
 or
 AGR 240 Crop Science
 AGR 170 Introduction to Agricultural Systems Technology
 AGR 199 Contemporary Issues in Agriculture¹
 AGR 339 Computer Applications for Agriculture
 AGR 345 Soil Science
 AGR 399 Professional Development Seminar I
 or
 AGR 499 Leadership/Professional Development Seminar II
 AGR 599 Agriculture Senior Capstone

Agronomy Track 25 hrs

- AGR 346 Soil Science Laboratory
 AGR 378 Agricultural Environmental Management Systems
 AGR 455 Soil Management
 AGR 470 Soil and Water Engineering
 AGR 471 Applications in Precision Agriculture
 AGR 542 Plant Breeding I
 AGR 546 Integrated Pest Management
 AGR 547 Crop Management
 AGR 549 Weeds and Their Control

Required Support Courses 15 hrs

Choose one of the following support course emphases.

Practicum Emphasis

- AGR 498 Agronomy Practicum
and one of the following:
 AGR 330 Principles of Agribusiness
 AGR 433 Farm Management
 AGR 571 Advanced Precision Agriculture

Research Emphasis

- AGR 328 Statistics for Food and Agriculture
 AGR 571 Advanced Precision Agriculture
 BIO 300 Introductory Microbiology
 Agronomy advisor approved research electives (5 hrs)

Sales/Production Emphasis

- AGR 330 Principles of Agribusiness
 AGR 433 Farm Management
 AGR 333 Agribusiness Records and Analysis
 AGR 336 Agricultural Marketing and Price Analysis
 or
 AGR 337 Agricultural Sales and Merchandising
 Agronomy advisor approved electives (3 hrs)

Unrestricted Electives 12 hrs**Total Curriculum Requirements 120 hrs**

¹AGR 199 fulfills the agriculture core and the university studies elective.

AREA:

Agricultural Science/Horticulture Track

Bachelor of Science in Agriculture

CIP 01.9999

University Studies Requirements 40 hrs
(See *Academic Degrees and Programs.*)

University Studies selections must include:

•Global Awareness, Cultural Diversity and the World’s Artistic Traditions

Choose one of the following:

- AGR 200 International Agricultural Experience
- AGR 353 World Food, Agriculture and Society
- SPA 106 Basic Spanish and Culture for Agriculture

•Scientific Inquiry, Methodologies, and Quantitative Skills

- BIO 222 Botany: Plant Form and Function
- CHE 101 Consumer Chemistry

or

- CHE 105 Introductory Chemistry I
- MAT 140 College Algebra

•Social and Self-Awareness and Responsible Citizenship

- AGR 199 Contemporary Issues in Agriculture¹

•University Studies Electives

- CHE 210 Brief Organic Chemistry

and

- CHE 215 Organic Chemistry Laboratory

or

- EES 199 Earth Science

Agriculture Core Courses 26 hrs

- AGR 100T Transitions
 - AGR 100 Animal Science
 - AGR 130 Agricultural Economics
 - AGR 133 Field Applications for Agriculture
 - AGR 160 Horticultural Science
- or
- AGR 240 Crop Science
 - AGR 170 Introduction to Agricultural Systems Technology
 - AGR 199 Contemporary Issues in Agriculture¹
 - AGR 339 Computer Applications for Agriculture
 - AGR 345 Soil Science
 - AGR 399 Professional Development Seminar I
- or
- AGR 499 Leadership/Professional Development Seminar II
 - AGR 599 Agriculture Senior Capstone

Horticulture Track..... 25 hrs

- AGR 263 Woody Plant Materials I
 - AGR 346 Soil Science Laboratory
 - AGR 360 Greenhouse Production and Management
 - AGR 361 Horticulture and Greenhouse Management Practicum
- or
- AGR 460 Professional Experience in Horticulture
 - AGR 363 Woody Plant Materials II
 - AGR 365 Herbaceous Plant Materials
 - AGR 367 Residential Landscape Design
- or
- AGR 462 Fine Turf Management
- or
- AGR 563 Arboriculture
 - AGR 461 Plant Propagation
- AGR electives (6 hrs)

Unrestricted Electives..... 29 hrs

Total Curriculum Requirements 120 hrs

¹AGR 199 fulfills the agriculture core and the university studies elective.

MAJOR:

Agricultural Science

Bachelor of Science/Bachelor of Arts

CIP 01.9999

University Studies Requirements 40 hrs
(See *Academic Degrees and Programs.*)

University Studies selections must include:

•Global Awareness, Cultural Diversity and the World’s Artistic Traditions

Choose one of the following:

- AGR 200 International Agricultural Experience
- AGR 353 World Food, Agriculture and Society
- SPA 106 Basic Spanish and Culture for Agriculture

•Scientific Inquiry, Methodologies, and Quantitative Skills

- BIO 101 Biological Concepts
- CHE 105 Introductory Chemistry I
- MAT 140 College Algebra

•Social and Self-Awareness and Responsible Citizenship

- AGR 199 Contemporary Issues in Agriculture¹
- BIO 103 Saving Planet Earth

or

- POL 140 American National Government

•University Studies Electives

- CHE 210 Brief Organic Chemistry

and

- CHE 215 Organic Chemistry Laboratory

or

- EES 199 Earth Science

Agriculture Core Courses 38 hrs

- AGR 100T Transitions
 - AGR 100 Animal Science
 - AGR 130 Agricultural Economics
 - AGR 133 Field Applications for Agriculture
 - AGR 160 Horticultural Science
- or
- AGR 240 Crop Science
 - AGR 170 Introduction to Agricultural Systems Technology
 - AGR 199 Contemporary Issues in Agriculture¹
 - AGR 339 Computer Applications for Agriculture
 - AGR 345 Soil Science
 - AGR 399 Professional Development Seminar I
- or
- AGR 499 Leadership/Professional Development Seminar II
 - AGR 599 Agriculture Senior Capstone
- AGR electives (12 hrs)

Required Minor 21 hrs

Unrestricted Electives..... 21 hrs

Total Curriculum Requirements 120 hrs

¹AGR 199 fulfills the agriculture core and the university studies elective.

Agriculture Minor 21 hrs

Program must be approved by an advisor with at least six hours of 300-level or above completed at Murray State.

Golf Course Management Minor 21 hrs

ACC 200; AGR 160, 345, 460; MGT 350; and three hours of electives selected from either AGR 462 or MGT 370. Six hours must be upper-level courses.

Graduate Program

Graduate Coordinator - Alyx Shultz
216S Oakley Applied Science Building
270-809-6925

Note: *This master's degree may be earned via an online format. Contact the graduate coordinator for more information.*

The Master of Science in Agriculture provides concentrations in agribusiness economics, agricultural education, sustainable agriculture, and veterinary hospital management. Please contact the graduate coordinator for details.

Requirements for Admission

Applicants must meet all Murray State University requirements (see *Graduate Admissions*). The status (conditional/unconditional) of an applicant must be determined before the student enrolls in the first class. Additional requirements for unconditional and conditional admission are as follows.

Unconditional

For unconditional admission, students must meet both of the following requirements:

- An overall grade point average (GPA) of 3.0 in the last 60 hours of undergraduate work; and
- The equivalent of an undergraduate area or major in agriculture is required.

Conditional

Students may be conditionally admitted according to the following requirements:

- An undergraduate GPA of at least 2.75 or a GPA of 3.0 in the last 60 hours of undergraduate work; and
- In some cases, students without the undergraduate area or major may be admitted on the condition of significant agricultural work experience and/or complete prerequisites consisting of at least the undergraduate agriculture core courses in a respective field. The plan of study must be approved by the advisor and graduate coordinator and may allow taking of a combination of undergraduate/graduate courses concurrently.

Upon completion of nine hours of graduate work a student admitted conditionally must have a 3.0 GPA or the student will be dropped from the program. A graduate student dropped for academic reasons may reapply after withdrawal from the graduate program for one semester. Readmission decisions will be made according to the recommendation of an appointed graduate admissions committee.

Note: See page 58 for graduate courses notated with ^L, ^R, or ^{PT}.

**Master of Science
Agriculture**

CIP 01.9999

THESIS REQUIREMENTS

Total Course Requirements..... 31 hours

- AGR 686 Training and Presentation Development Strategies for Agricultural Audiences
- AGR 713 Graduate Computer Applications^R
- AGR 720 Experimental Design and Statistical Analysis
- AGR 722 Graduate Capstone Seminar^{1,PT}
- AGR 735 Research Methodology^L
- AGR 798 Thesis^R
- AGR 799 Thesis^R

Specialty..... 12 hrs

600- or 700-level, chosen in consultation with faculty advisor from courses that effectively achieve the student's educational goals.

Other Degree Requirements

Comprehensive written examination over coursework.

¹Class must be taken during the last semester of enrollment. Each student will be expected to prepare and present one seminar based on their thesis project.

NON-THESIS REQUIREMENTS

Total Course Requirements..... 31 hours

- AGR 686 Training and Presentation Development Strategies for Agricultural Audiences
- AGR 700 Research in Agriculture^{R,1}
- AGR 713 Graduate Computer Applications
- AGR 720 Experimental Design and Statistical Analysis
- AGR 722 Graduate Capstone Seminar^{2,PT}
- AGR 735 Research Methodology^L

Specialty..... 15 hrs

600- or 700-level, approved by faculty advisor.

The specialty area courses may be chosen, in consultation with an advisor, from courses that most effectively achieve the student's educational goals.

Other Degree Requirements

Comprehensive written examination, oral examination, and research presentation.

¹Course must include a creative component or significant research report.

²Class must be taken during the last semester of enrollment. Each student will be expected to prepare and present one seminar based on their creative component, research report or work experience.

**Master of Science
Agriculture/Agribusiness Economics Concentration**

CIP 01.9999

NON-THESIS ONLY

Total Course Requirements..... 31 hours

- AGR 686 Training and Presentation Development Strategies for Agricultural Audiences
- AGR 700 Research in Agriculture ^{R,1} (6 hrs)
- AGR 713 Graduate Computer Applications
- AGR 720 Experimental Design and Statistical Analysis
- AGR 722 Graduate Capstone Seminar ^{PT}
- AGR 735 Research Methodology ^{L,2}

Agribusiness Economics Concentration

Select 12 hours from the following:

- AGR 628 Agriculture, Food and Rural Law
- AGR 631 Agricultural Finance
- AGR 652 Agricultural Policy
- AGR 739 Agribusiness Management
- AGR 744 Graduate Cooperative Education³

Advisors may approve substitutions to non-core courses in special situations or to better align coursework with the student's professional goals. Students should consult with their advisor to identify appropriate online courses among the following prefixes: ACC, AGR, COM, ECO, FIN, MGT, or MKT. Note: No more than two classes from ACC, ECO, FIN, MGT or MKT may be taken.

¹Must include a significant creative or scholarly component that will be presented as part of a student's final oral presentation.

²Can be substituted with AED 735.

³Experience must be related to agribusiness and approved by advisor prior to enrollment.

**Master of Science
Agriculture/Agricultural Education Concentration**
CIP 01.9999

- Total Course Requirements..... 31 hours**
- AGR 686 Training and Presentation Development Strategies for Agricultural Audiences
 - AGR 700 Research in Agriculture^R (6 hrs)
 - AGR 713 Graduate Computer Applications
 - AGR 720 Experimental Design and Statistical Analysis
 - AGR 722 Graduate Capstone Seminar^{1,PT}
 - AGR 735 Research Methodology^{L,2}

- Agricultural Education Concentration**
Select 12 hours from the following:
- AED 682 Instructional Design for Agricultural Education
 - AED 683 Instructional Material in Agricultural Education
 - AED 684 Beginning Teacher Workshop³
 - AED 685 Teaching Adults in Agriculture
 - AED 735 Qualitative Research Methods

Advisors may approve substitutions to non-core courses in special situations or to better align coursework with the student’s professional goals. Students should consult with their advisor to identify appropriate online courses among the following prefixes: AGR, COM, CTE, EDU, or NLS.

¹Must be taken during semester of graduation.
²Can be substituted with AED 735.
³Intended for current secondary agriculture teachers. Kentucky teachers should enroll in the fall following completion of the first year of teaching.

**Master of Science
Agriculture/Sustainable Agriculture Concentration**
CIP 01.9999

- Total Course Requirements..... 31 hours**
- AGR 686 Training and Presentation Development Strategies for Agricultural Audiences
 - AGR 700 Research in Agriculture^R (6 hrs)
 - AGR 713 Graduate Computer Applications
 - AGR 720 Experimental Design and Statistical Analysis
 - AGR 722 Graduate Capstone Seminar^{1,PT}
 - AGR 735 Research Methodology^L

- Sustainable Agriculture Concentration**
Select 12 hours from the following:
- AGR 655 Advanced Soil Fertility
 - AGR 661 Sustainable Agriculture
 - AGR 662 Principles of Agroecology
 - AGR 671 Advanced Precision Agriculture
 - AGR 744 Graduate Cooperative Education²

Advisors may approve substitutions to non-core courses in special situations or to better align coursework with the student’s professional goals. Students should consult with their advisor to identify appropriate online courses among the following prefixes: AED, AGR, EES, WSC.

¹Must be taken during semester of graduation.
²Experience must be related to sustainable agriculture and approved by advisor prior to enrollment.

**Master of Science
Agriculture/Veterinary Hospital Management Concentration**
CIP 01.9999

- THESIS OR NON-THESIS**
- Total Course Requirements..... 31 hours**
- AGR 700 Research in Agriculture^R (6 hrs)
or
 - AGR 798/799 Thesis² (6 hrs)
 - AGR 720 Experimental Design and Statistical Analysis
 - AGR 722 Graduate Capstone Seminar^{3,PT}
 - AGR 735 Research Methodology^L

- Veterinary Hospital Management Concentration**
- AGR 680 Veterinary Products
 - AGR 682 Veterinary Practice and Operations
 - AGR 683 Veterinary Law and Ethics
 - AGR 713 Graduate Computer Applications
 - MGT 654 Seminar in Human Resource Management
 - 600-700 level elective in AGR, BUS, MGT, MKT, or Human Resources

Students completing this degree will also receive the Veterinary Hospital Management Certificate.
¹Must be taken with advisor/committee chair.
²Students who plan to pursue a terminal degree are encouraged to enroll in AGR 798/799 in lieu of AGR 700.
³Must be taken during semester of graduation.

**Department of Animal
and Equine Science**
212 Oakley Applied Science South
270-809-3327

Head: Shea Porr. **Faculty:** Conner, Davis, Porr, Robinson, A. Shultz, Van Hooser.

The Department of Animal and Equine Science offers a Bachelor of Science in Agriculture with three emphases: (1) food animal, (2) equine science, and (3) equine business management. The department also offers a minor in equine science. Career preparations include the scientific study of feeding, breeding, management and marketing of animals and their products along with the multitude of related businesses and industries.

Facilities for animal and equine science include an equine center, rodeo facilities, and a beef cattle complex including a registered Angus herd and stocker calf intensive grazing systems.

AREA:
Animal Technology/Animal/Equine Science Track
 Bachelor of Science in Agriculture CIP 51.0808

University Studies Requirements..... 40-41 hrs
 (See *Academic Degrees and Programs.*)

- University Studies selections must include:
•Scientific Inquiry, Methodologies, and Quantitative Skills
- BIO 101 Biological Concepts
or
 - BIO 221 Zoology: Animal Form and Function
 - MAT 140 College Algebra
- and one of the following:*
- CHE 101 Consumer Chemistry
 - CHE 105 Introductory Chemistry I

CHE 201 General College Chemistry
•Social and Self-Awareness and Responsible Citizenship
 AGR 199 Contemporary Issues in Agriculture

•University Studies Elective

Choose one of the following:

CHE 210/215 Brief Organic Chemistry and Organic
 Chemistry Laboratory
 CHE 202 General Chemistry and Qualitative Analysis
 EES 101 The Earth and the Environment
 EES 102 Earth Through Time
 EES 199 Earth Science

Agriculture Core Courses 24 hrs

AGR 100T Transitions
 AGR 100 Animal Science
 AGR 300 Principles of Animal Nutrition
 AGR 310 Applications in Animal Technology
 AGR 339 Computer Applications for Agriculture
 AGR 399 Professional Development Seminar I
 AGR 504 Diseases of Livestock
 AGR 599 Agriculture Senior Capstone

and one of the following:

AGR 170 Introduction to Agricultural Systems Technology
 AGR 377 Agriculture Safety
 AGR 375 Animals Emergency Preparedness

and one of the following:

AGR 403 Equine Reproduction
 AGR 423 Artificial Insemination Techniques for Cattle
 AGR 506 Reproductive Physiology

Required Emphasis Courses 23-24 hrs

Choose one of the following emphases.

Food Animal Emphasis

AGR 130 Agricultural Economics
 AGR 133 Field Applications for Agriculture
 AGR 240 Crop Science
 AGR 345 Soil Science

and two of the following:

AGR 311 Beef Science
 AGR 321 Poultry Science
 AGR 324 Veterinary Diagnostic Imaging
 AGR 326 Swine Science

and one of the following:

AGR 301 Livestock Judging and Evaluation
 AGR 313 Livestock Production Management Systems
 AGR 320 Livestock Behavioral Analysis
 AGR 402 Advanced Livestock Judging

and one of the following:

AGR 502 Advanced Nutrition
 AGR 503 Genetics and Animal Breeding
 AGR 512 Beef Cattle Management Systems

Equine Business Management Emphasis

AGR 101 Basic Stock Seat Horsemanship
or
 AGR 111 Basic Forward Seat Equitation
 AGR 130 Agricultural Economics
 AGR 133 Field Applications for Agriculture
 AGR 201 Intermediate Horsemanship
 AGR 302 Horse Science
 AGR 309 Equine Facility Management
or
 AGR 317 Equine Health Care and Management
 AGR 318 Equine Forage Management
or
 AGR 319 Equine Nutrition and Feeding

and one of the following:

AGR 304 Advanced Stock Seat
 AGR 306 Advanced Forward Seat
 AGR 405 Equine Behavior Modification
 AGR 514 Teaching Students Horsemanship

Equine Science Emphasis

AGR 101 Basic Stock Seat Horsemanship
or
 AGR 111 Basic Forward Seat Equitation
 AGR 130 Agricultural Economics
 AGR 302 Horse Science
 AGR 303 Advanced Horse Science
 AGR 309 Equine Facility Management
or
 AGR 317 Equine Health Care and Management
 AGR 315 Equine Exercise Physiology
 AGR 318 Equine Forage Management
or
 AGR 319 Equine Nutrition and Feeding
 AGR 407 Equine Selection and Evaluation

Required Support Courses 12 hrs

Choose the following support courses for the equine business management or equine science emphases only:

Equine Management

AGR 330 Principles of Agribusiness
 AGR 333 Agribusiness Records and Analysis
 AGR 433 Farm Management
 MGT 350 Fundamentals of Management

Equine Science

AGR 133 Field Applications for Agriculture
 AGR 240 Crop Science
 AGR 345 Soil Science
 AGR 328 Statistics for Food and Agriculture

Unrestricted Electives 18-33 hrs

Total Curriculum Requirements 120 hrs

Equine Science Minor 21 hrs

Program must include 15 hours of required courses: AGR 101 or 111; and AGR 201, 302, 303, and 317. Six additional hours of upper-level equine courses must be completed.

**Department of Veterinary Technology
 and Pre-Veterinary Medicine**

A. Carman Animal Health Technology Center
 270-809-7001

Head: Terry Canerdy. **Faculty:** Canerdy, DeWees, Hoffman, Jones, Papajeski, Provine, Vaughn-Doom.

The Veterinary Technology Program at Murray State University is one of only 25 schools in the nation that offers a fully accredited bachelor of science degree in the area of veterinary technology. Students are also given the track to complete the prerequisite courses required by any of the thirty veterinary schools in the U.S. The program involves hands-on experience with many animal species including small, large, and exotic animals. The program has been continually accredited by the American Veterinary Medical Association (AVMA) since 1986. Facilities for the Veterinary Technology/Pre-Veterinary Medicine program include classrooms and laboratories at the A.

Carman Veterinary Technology Center and the university farms. This program is not only academically challenging, but provides students the opportunity to gain valuable hands-on experience.

A portion of the veterinary technology curriculum will involve students taking courses, which have been labeled the BVC (Breathitt Veterinary Center) courses that include AGR 340, AGR 400, AGR 410, AGR 420, and AGR 430. Because the Veterinary Technology/Pre-Veterinary Medicine program is an accredited program, available space is limited to ensure the quality of instruction. Registration in BVC courses is based on available openings. The veterinary technology program will make every effort to ensure that students who need BVC courses will be placed, but no guarantee is made that the student will be enrolled during the preferred semester. Applications are due February 1st for the fall term and September 1st for the spring term. Once completed applications are reviewed, students will be notified of their placement into BVC courses by March 1st for the fall semester and October 1st for the spring semester.

The following prerequisites are required for the BVC classes: AGR 310, AGR 322, AGR 332, 329 and eight hours of chemistry. The student must have a grade of C or higher in these courses before being considered. After the prerequisites have been evaluated, the following criteria will be reviewed in order to determine the student's placement into the BVC courses:

- Completed applications were submitted by the appropriate deadline.
- BVC courses are the ONLY classes remaining.
- BVC courses plus one other course are the only classes remaining.
- Unavoidable course conflicts will be evaluated on a case by case basis.
- Once the placed students are enrolled any space available will be given to students on a first come basis.

The following courses are required by the American Veterinary Medical Association for Veterinary Technician certification: AGR 310, 322, 324, 329, 331, 332, 340, 400, 410, 420, 430, 504, 506, 510, 511, 540, 550, 590, and 599.

AREA:

Animal Technology/Veterinary Technology Track

Bachelor of Science in Agriculture CIP 51.0808

ACCREDITED BY: American Veterinary Medical Association

University Studies Requirements 41 hrs
(See *Academic Degrees and Programs.*)

University Studies selections must include:

•Scientific Inquiry, Methodologies, and Quantitative Skills

- BIO 101 Biological Concepts
- CHE 105 Introductory Chemistry I
- MAT 140 College Algebra

•Social and Self-Awareness and Responsible Citizenship

- AGR 199 Contemporary Issues in Agriculture
- Ethics, Social Responsibility and Civic Engagement sub-category elective

•University Studies Electives

- CHE 210 Brief Organic Chemistry
- CHE 215 Organic Chemistry Laboratory

Agriculture Core Courses 24 hrs

- AGR 100T Transitions
- AGR 100 Animal Science
- AGR 300 Principles of Animal Nutrition
- AGR 310 Applications in Animal Technology
- AGR 339 Computer Applications for Agriculture

- AGR 399 Professional Development Seminar I
- AGR 504 Diseases of Livestock¹
- AGR 599 Agriculture Senior Capstone

and one of the following:

- AGR 170 Introduction to Agricultural Systems Technology
- AGR 377 Agriculture Safety
- AGR 375 Animals Emergency Preparedness

and one of the following:

- AGR 403 Equine Reproduction
- AGR 423 Artificial Insemination Techniques for Cattle
- AGR 506 Reproductive Physiology

Veterinary Technology Track¹ 22 hrs

- AGR 322 Introduction to Veterinary Laboratory I
- AGR 324 Veterinary Diagnostic Imaging
- AGR 329 Introductory Veterinary Laboratory II
- AGR 332 Veterinary Nursing
- AGR 510 Animal Anatomy and Physiology
- AGR 540 Veterinary Surgery and Anesthesia
- AGR 489 Cooperative Education/Internship
- or
- AGR 590 Internship in Animal Technology

Required Support Courses 30-31 hrs

Choose one of the following support courses emphases:

Veterinary Technology Emphasis

- AGR 331 Small Animal Diseases
- AGR 340 Veterinary Laboratory Sciences
- AGR 400 Veterinary Microbiology¹
- AGR 410 Advanced Veterinary Hematology¹
- AGR 420 Veterinary Clinical Chemistry¹
- AGR 430 Veterinary Parasitology¹
- AGR 511 Animal Anatomy and Physiology Laboratory¹
- AGR 550 Applied Pharmacology¹
- Approved Electives (6 hrs)

Large Animal Emphasis

- AGR 313 Livestock Production Management Systems
- AGR 340 Veterinary Laboratory Sciences
- AGR 400 Veterinary Microbiology¹
- AGR 410 Advanced Veterinary Hematology
- AGR 420 Veterinary Clinical Chemistry
- AGR 430 Veterinary Parasitology
- AGR 511 Animal Anatomy and Physiology Laboratory
- AGR 550 Applied Pharmacology
- AGR Elective - Animal Science or Animal Health Technology
- and one of the following:
- AGR 302 Horse Science
- AGR 311 Beef Science
- AGR 326 Swine Science

Zoological Animal Health Technology Emphasis

- AGR 331 Small Animal Diseases
- AGR 340 Veterinary Laboratory Sciences
- AGR 400 Veterinary Microbiology¹
- AGR 410 Advanced Veterinary Hematology
- AGR 420 Veterinary Clinical Chemistry
- AGR 430 Veterinary Parasitology
- AGR 511 Animal Anatomy and Physiology Laboratory
- AGR 550 Applied Pharmacology
- Approved elective (3 hrs)
- and one of the following:

- BIO 570 Ichthyology
- BIO 572 Herpetology
- BIO 573 Ornithology
- BIO 574 Mammalogy

Unrestricted Electives..... 2-3 hrs

Total Curriculum Requirements 120 hrs

¹Required by American Veterinary Medical Association for certification.

AREA:

**Animal Technology/
Veterinary Technology/Pre-Veterinary Medicine Track**

Bachelor of Science in Agriculture

CIP 51.0808

ACCREDITED BY: American Veterinary Medical Association

University Studies Requirements 44 hrs

(See *Academic Degrees and Programs.*)

University Studies selections must include:

•**Scientific Inquiry, Methodologies, and Quantitative Skills**

BIO 101 Biological Concepts

CHE 201 General College Chemistry

MAT 150 Algebra and Trigonometry

•**Social and Self-Awareness and Responsible Citizenship**

PHI 202 Ethics

or

POL 140 American National Government

PSY 180 General Psychology

•**World's Historical, Literary, and Philosophical Traditions**

CIV 201 World Civilizations I

•**University Studies Electives**

CHE 202 General Chemistry and Qualitative Analysis

CIV 202 World Civilizations II

Note: 3rd year Veterinary School Applicants must also take HUM 212 and English Literature.

Agriculture Core Courses 24 hrs

AGR 100T Transitions

AGR 100 Animal Science

AGR 300 Principles of Animal Nutrition

AGR 310 Applications in Animal Technology

AGR 339 Computer Applications for Agriculture

AGR 399 Professional Development Seminar I

AGR 504 Diseases of Livestock

AGR 599 Agriculture Senior Capstone

and one of the following:

AGR 170 Introduction to Agricultural Systems Technology

AGR 377 Agriculture Safety

AGR 375 Animals Emergency Preparedness

and one of the following:

AGR 403 Equine Reproduction

AGR 423 Artificial Insemination Techniques for Cattle

AGR 506 Reproductive Physiology

Pre-Veterinary Medicine Track 23 hrs

AGR 322 Introductory Veterinary Laboratory I

AGR 324 Veterinary Diagnostic Imaging

AGR 332 Veterinary Nursing

AGR 510 Animal Anatomy and Physiology

AGR 550 Applied Pharmacology

AGR 489 Cooperative Education/Internship

or

AGR 590 Internship in Animal Technology

BIO 300 Introductory Microbiology

Required Support Courses 25 hrs

AGR 331 Small Animal Diseases

BIO 221 Zoology: Animal Form and Function

CHE 312 Organic Chemistry I

CHE 320 Organic Chemistry II

CHE 330 Basic Biochemistry

PHY 130 General Physics I

PHY 131 General Physics I Laboratory

BIO 321 Cell Biology

Unrestricted Electives 4 hrs

Total Curriculum Requirements 120 hrs

Graduate Program

The Certificate in Veterinary Hospital Management is designed to complement the undergraduate and graduate professional degree programs. The program's objectives are to provide students with opportunities to expand their knowledge in veterinary technology, to explore the business operation of a veterinary clinic, and to experience how the combination of their academic undergraduate and certificate course work can complement their job search.

CERTIFICATE:

Veterinary Hospital Management

CIP 51.0808

Requirements for Admission

Students who hold an undergraduate degree in veterinary technology or are currently enrolled in a graduate program may apply for acceptance to the Certificate in Veterinary Hospital Management program. Persons who already hold a graduate degree may also apply for the program.

Applicants must comply with the Murray State University requirements (see *Graduate Admissions*).

- For unconditional admission, an undergraduate GPA of 3.0 or higher.
- For conditional admission, judgement will be determined by probable success based on 1) Graduate Record Examination scores, 2) letters of recommendation, and/or 3) other evidence such as a planned program of prerequisite courses.

Total Course Requirements 18 hours

AGR 680 Veterinary Products

AGR 682 Veterinary Practice and Operations

AGR 683 Veterinary Law and Ethics

AGR 713 Graduate Computer Applications

MGT 654 Seminar in Human Resource Management

600-level elective in AGR, BUS, MGT, MKT or human resources.