



Hutson School of Agriculture



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

DEPARTMENTS

Agricultural Science	214	Veterinary Technology and	
Animal and Equine Science	221	Pre-Veterinary Medicine	222

PROGRAMS

UNDERGRADUATE

Associate
Agricultural Science and Technology

Baccalaureate
Agricultural Science
Animal Technology

Minor
Agriculture
Equine Science
Golf Course Management

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, and golf course management.

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, contests, 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.

Department of Agricultural Science

212 Oakley Applied Science South
270-809-3327

Head: Brian Parr. **Faculty:** 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/ agriscience technology track, (3) agricultural education, (4) agribusiness, (5) agriculture systems technology, and (6) horticulture. The agriculture science/ agriscience 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
		<i>or</i>
CHE	105	Introductory Chemistry I
		<i>or</i>
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
		<i>or</i>
AGR	240	Crop Science
AGR	170	Introduction to Agricultural Systems Technology
AGR	199	Contemporary Issues in Agriculture ¹
AGR	339	Computer Applications for Agriculture
AGR	345	Soil Science
AGR	399	Professional Development Seminar I
		<i>or</i>
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

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 Agriculture ¹
BIO	103	Saving Planet Earth

or

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

•**University Studies Electives**

CHE	210	Brief Organic Chemistry
		<i>and</i>
CHE	215	Organic Chemistry Laboratory
		<i>or</i>
GSC	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
- GSC 202 Introduction to Geographic Information Science
- GSC 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
- GSC 305 Map Analysis
- GSC 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 Introduction to the Role of Service and the Nonprofit Sector
- NLS 350 Program Development in Nonprofit Organizations
- NLS 351 Leadership and Support Systems in Nonprofit Organizations
- 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 Agriculture²
- AGR 471 Applications in Precision Agriculture²
- AGR 499 Leadership/Professional Development Seminar II
- AGR 537 Seminar in Agricultural Business Systems
- AGR 538 Seminar in Production Agricultural Systems
- or*
- 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 Algebra¹
- or*
- STA 135 Introduction to Probability and Statistics¹
- Social and Self-Awareness and Responsible Citizenship**

- BIO 103 Saving Planet Earth
- or*
- POL 140 American National Government
- EDP 260 Psychology of Human Development

- 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
- GSC 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 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^{2,3}
- AGR 339 Computer Applications for Agriculture^{4,5}
- 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 303 Advanced Horse Science
- AGR 321 Poultry Science
- AGR 325 Small Animal Science
- AGR 461 Plant Propagation
- AGR 471 Applications in Precision Agriculture
- AGR 555 Advanced Soil Fertility
- AGR 573 Agricultural Processing Systems

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

Required Support Courses 32 hrs

- AED 380 Agricultural Education, Extension, and Leadership¹
 - AED 501 Methods of Teaching Agricultural Education^{1,6,7}
 - CTE 502 Assessment and Curricula in CTE
 - SEC 421 Student Teaching in Secondary School⁶
 - SED 300 Educating Students with Disabilities
- and an advisor approved content literacy course (3 hrs)⁸*

Total Curriculum Requirements 122 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.
- ⁴Identified as discipline specific writing intensive course.
- ⁵With a grade of *C* or better.
- ⁶Admission to Teacher Education required.
- ⁷Must be repeated for a total of six hours.
- ⁸ENG 445 or REA 407.

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

- GSC 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 will fulfill both the agriculture core and 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 Agriculture ¹

•University Studies Electives

CHE 210	Brief Organic Chemistry
CHE 215	Organic Chemistry Laboratory
GSC 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
<i>or</i>	
AGR 240	Crop Science
AGR 170	Introduction to Agricultural Systems Technology

AGR 199	Contemporary Issues in Agriculture ¹
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
---------	--------------------

Choose 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
<i>or</i>	
AGR 337	Agricultural Sales and Merchandising
Agronomy advisor approved electives (3 hrs)	

Unrestricted Electives 12 hrs**Total Curriculum Requirements 120 hrs**¹AGR 199 will fulfill both the agriculture core and 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 CitizenshipAGR 199 Contemporary Issues in Agriculture¹**•University Studies Electives**

CHE 210 Brief Organic Chemistry

and

CHE 215 Organic Chemistry Laboratory

or

GSC 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 will fulfill both the agriculture core and 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

BIO 103 Saving Planet Earth

or

POL 140 American National Government

AGR 199 Contemporary Issues in Agriculture¹**•University Studies Electives**

CHE 210/215 Brief Organic Chemistry and Organic Chemistry Laboratory

or

GSC 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 will fulfill both the agriculture core and 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. Six hours must be upper-level courses.

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

The Master of Science in Agriculture provides concentrations in agribusiness economics, agricultural education, sustainable agriculture, and veterinary hospital management. An on-line master's is also available. 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: L=literature; R=research; PT=professional training. See page 58.

**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, 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 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,1,2} (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,3}

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 Education⁴

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. See HSOA Creative Component Guidelines for details.

²Must be taken with advisor/committee chair.

³Can be substituted with AED 735.

⁴Experience 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,1,2} (6 hrs)
AGR 713	Graduate Computer Applications
AGR 720	Experimental Design and Statistical Analysis
AGR 722	Graduate Capstone Seminar ^{3,PT}
AGR 735	Research Methodology ^{L,4}

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 Workshop ⁵
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 include a significant creative or scholarly component that will be presented as part of a student's final oral presentation. See HSOA Creative Component Guidelines for details.

²Must be taken with advisor/committee chair.

³Must be taken during semester of graduation.

⁴Can be substituted with AED 735.

⁵Intended 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,1,2} (6 hrs)
AGR 713	Graduate Computer Applications
AGR 720	Experimental Design and Statistical Analysis
AGR 722	Graduate Capstone Seminar ^{3,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 Education ⁴

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, GSC, WSC.

¹Must include a significant creative or scholarly component that will be presented as part of a student's final oral presentation. See HSOA Creative Component Guidelines for details.

²Must be taken with advisor/committee chair.

³Must be taken during semester of graduation.

⁴Experience 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,1,2} (6 hrs)
<i>or</i>	
AGR 798/799	Thesis ³ (6 hrs)
AGR 720	Experimental Design and Statistical Analysis
AGR 722	Graduate Capstone Seminar ^{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 include a significant creative or scholarly component that will be presented as part of a student's final oral presentation. See HSOA Creative Component Guidelines for details.

²Must be taken with advisor/committee chair.

³Students who plan to pursue a terminal degree are encouraged to enroll in AGR 798/799 in lieu of AGR 700.

⁴Must be taken during semester of graduation.

Department of Animal and Equine Science

212 Oakley Applied Science South
270-809-3327

Interim Head: O.L. Robertson. **Faculty:** Atkerson, Conover, Davis, Porr, Robertson, 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 emphasis and (2) equine science emphasis and (3) equine 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

GSC 101 The Earth and the Environment

GSC 102 Earth Through Time

GSC 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 506 Reproductive Physiology

AGR 523 Artificial Insemination Techniques for Cattle

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 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 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.

**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 veterinarian technology curriculum will involve students taking courses, which have been labeled the BVC (Breathitt Veterinary Center) courses. The BVC courses include AGR 340, AGR 400, AGR 410, AGR 420, and AGR 430. BVC courses must be taken together in one semester. 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 506 Reproductive Physiology
AGR 523 Artificial Insemination Techniques for Cattle

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 506 Reproductive Physiology
 AGR 523 Artificial Insemination Techniques for Cattle

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.