



**MASTER OF SCIENCE DEGREE  
IN  
AGRICULTURAL REGULATIONS**

#



***USDA Regulatory Science Center of Excellence***

*University of Arkansas at Pine Bluff*

*Pine Bluff, AR 71601*

# MASTER OF SCIENCE DEGREE PROGRAM IN AGRICULTURAL REGULATIONS

[Thesis- option]

School of Agriculture, Fisheries and Human Sciences  
USDA Regulatory Science Center of Excellence  
University of Arkansas at Pine Bluff  
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## Overview of Program

The Master of Science Degree Program in Agricultural Regulations is offered by the USDA Regulatory Science Center of Excellence in conjunction with the Department of Agriculture. The Agriculture Department is comprised of several undergraduate programs and also houses the Regulatory Science Center of Excellence.

The Regulatory Science Center was established in 1995 by the United States Department of Agriculture Animal and Plant Health Inspection Services – Marketing and Regulatory Programs Division. The Regulatory Science Center functions in a multidisciplinary environment that merges the experience of University faculty and personnel with Federal agencies to educate students to conduct research and promote outreach programs. The Regulatory Science Center works in conjunction with the Agriculture Department to prepare students and practitioners to address important regulatory issues in agriculture, environmental biology, food safety, and agricultural risk analysis. The efforts of the Regulatory Science Center help provide safe, high-quality commodity and food products, healthy work and living conditions, and a healthy environment. Faculty members of the Center are also faculty members of the Agriculture Department and have expertise in the fields of agricultural science, regulatory compliance, food safety, biotechnology, natural resource systems, natural resource policy, and agricultural economics.

## **USDA Regulatory Science Center of Excellence Mission Statement**

The Center's mission is to support education, research, and understanding in regulatory sciences and risk analysis. The Center also supports a multidisciplinary program designed to prepare students for meaningful careers in agricultural, environmental, and food safety regulatory affairs. The Center utilizes the experience of university faculty and federal agencies in conducting research and outreach education that advances understanding of and compliance with the federal, state, and local government statutes. To fulfill this mission the Center:

- Provides seminars and workshops that train students and professionals about regulatory issues related to agriculture
- Obtains internships for students enrolled in the regulatory science program
- Performs risk evaluations and recommends measures to reduce risk
- Works closely with regulatory agencies and private industry to provide regulatory expertise.

### **Research**

Research is conducted in the areas of agriculture, economics, and natural resource management. Particular attention is given to the problems and issues that small and limited-resource farmers in Arkansas face. Researchers also address problems that are both timely and important to the general public at the local, state, and national levels. In line with the University's Goals, the Center and the Department "conduct research and scholarly activities that enhance the problem-solving capacity of the institution and contribute to expanding knowledge base."

External research grants, USDA Evans–Allen support, and state support provide the financial basis for both the Center and the Department of Agriculture's research programs. Research and extension programs are categorized under five (5) goals which include supporting: 1) An agricultural system that is highly competitive in the global economy 2) A safe and secure food and fiber system, 3) A healthy, well-nourished population, 4) An agricultural system which protects natural resources and the environment, and 5) Enhanced economic opportunity and quality of life for Americans.

A 540-square-foot distance education/Geographic Information Systems (GIS) laboratory is located in Woodard Hall. Equipment includes twenty-one (21) computers (online) for student use and three (3) big-screen, high-definition monitors. Identical equipment is located at sites in Altheimer, Lake Village, and North Little Rock. These distance education classrooms facilitate course offerings to the above-mentioned remote sites. Woodard Hall also includes classrooms a 54-seat auditorium, a conference room, and faculty/staff offices.

The University of Arkansas at Pine Bluff has laboratory facilities and equipment that are among the best in Arkansas (i.e. Holiday Hall - Applied Sciences Building). The Applied Sciences building houses the Animal Science/Entomology lab, the Soils lab, the Regulatory Science lab, the Biotechnology lab, and the Plant Science lab. A new Food Safety laboratory/building, Plant

Physiology/plant biochemistry, Agronomy/Soil Science, and additional research labs are located in the S. J. Parker research facility.

### **Admission Process**

Applicants to the Graduate Agricultural Regulations Program must submit a complete set of application materials to the Center for Regulatory Science. All correspondence regarding admissions should be directed to the Graduate Agricultural Regulations Program Coordinator. The application deadline for fall admission is March 15<sup>th</sup>. The application deadline for spring admission is October 15<sup>th</sup>. A complete application package should be submitted by the appropriate deadline. A complete application includes the following:

1. Application for Admission to the Graduate Agricultural Regulations Program (<https://uapbactive.uapb.edu/apply/>)
2. Non-refundable \$45.00 application fee
3. Three letters of recommendation
4. A 300-500 word statement of purpose
5. Official transcripts from all colleges and universities attended (minimum 2.7 GPA required)
6. Immunization and TB test Records (Copy)
7. Official GRE score of 290 (verbal + quantitative)
8. Official TOEFL score (international applicants only) of 550 (paper-based test), 213 (computer-based test), or 79 (internet-based test).

Please submit the completed application materials to the Graduate Coordinator or Center Director:

**Shahidul Islam, Ph.D.**

Graduate Coordinator  
Director, Regulatory Science Center  
University of Arkansas at Pine Bluff  
Department of Agriculture, Mail Slot 4913  
1200 North University Drive  
Pine Bluff, AR 71601  
Phone: 870-575-7239  
E-mail: [islams@uapb.edu](mailto:islams@uapb.edu)

## **Admission Requirements and Status**

### **1. Regular Admission**

Admission to the Graduate Agricultural Regulations Program is based upon the complete application package of the applicant and the availability of a departmental graduate advisor and departmental resources. During the application review process, applications are routed to the appropriate faculty member(s) for a detailed review. Applications with specific research interests (as indicated on the application) are matched to the faculty member(s) with corresponding research expertise. Prospective students must hold a four-year baccalaureate degree or higher from a college or university of recognized standing (i.e., degrees from institutions outside the U.S. are evaluated for equivalency to U.S. degrees).

The applicant should possess a cumulative grade-point average of 2.70 (A=4.00) or better on all coursework attempted, or 3.20 (A=4.00) on the last 60 semester hours of coursework attempted, before receipt of a baccalaureate degree from a regionally accredited institution of higher learning and be recommended by the chairperson of the department offering that degree. Scores on the Graduate Record Examination, the Miller Analogies Test, or a similar test will also be considered in determining the admission status of graduates. The applicant must also be recommended by the chairperson of the department conferring the bachelor's degree or that student's undergraduate advisor.

Students who do not have a course equivalent to Administrative Law and Government Regulations (AGRI 3312) will be required to take this undergraduate course in addition to meeting the coursework requirements of the M.S. degree. After the student is admitted, the graduate committee will evaluate the student's transcript to determine if other undergraduate strengthening courses are needed.

### **2. International Admission Status**

An applicant from a foreign country seeking admission to the Graduate Agricultural Regulations Program must meet the same requirements for regular admission as applicants from the United States. Besides, he or she must demonstrate the ability to read, write, speak, and understand the English language. Prospective students whose native language is not English must take the Test of English as a Foreign Language (TOEFL).

### **3. Provisional Admission**

Applicants who appear to meet the admissions requirements but have a baccalaureate degree in a non-natural science field may be accepted on a provisional basis. An applicant who is unable to supply all required documentation before the admission deadline but who otherwise appears to meet the admission requirements, with the recommendation of the Graduate Coordinator and approval of the Center Director, may be granted provisional admission. A complete application package must be received by the Center before the end of the semester for which the student has registered in a provisional status. A student will not be permitted to enroll in the Graduate Agricultural Regulations Program with a provisional status for more than one semester. Provisional admission does not guarantee subsequent regular admission. A student admitted on a provisional basis may not hold an assistantship until regular admission status has been achieved.

International applicants residing outside of the United States at the time of application may not be admitted on a provisional basis.

#### 4. Probationary Admission

An applicant who does not meet all the admission requirements but shows promise for successful graduate study and, upon the recommendation of the graduate coordinator and the approval of the Center Director, may be granted probationary admission. Students in probationary admission status must earn a 3.0 grade point average or better in their first semester to continue in the program. Special course requirements or other conditions may be imposed by the student's graduate committee. A student in probationary admission status may not hold an assistantship or be admitted to candidacy for the Master's degree.

#### 5. Special Students

A person who wishes to take graduate courses in Agricultural Regulations but who does not plan to pursue a graduate degree may be admitted as a special student with the approval of the Center Director. Admission as a special student will be granted primarily to participate in special graduate course offerings, or for taking courses that will be transferred to another institution. Special Student status is not intended for a student who has been denied admission or dismissed from the Graduate School and will not be permitted to enroll as a special student. An applicant for special student admission must submit a completed graduate application, pay the graduate application fee (\$37.00), and indicate that they desire "Special Student" status. Official transcripts of previous college work showing evidence of an undergraduate degree and, if applicable, other graduate-level coursework. Special student admission status is granted for the semester for which the application is submitted. Further enrollment as a special student must be approved on a semester-by-semester basis. Special students may not hold graduate assistantships or enroll in thesis research courses.

A former or currently enrolled special student who wants to apply for regular admission to a graduate degree program must submit a complete Graduate School Application for Admission by the appropriate deadline (with all supporting documents). The application fee may be waived if the applicant has already paid the fee at a prior time. Admission as a special student in no way guarantees subsequent regular admission into the graduate program. Credit earned as a special student may be applied to a degree program only with the approval of the student's graduate committee; no more than six semester hours of coursework earned as a special student may be applied to a graduate degree in the Agricultural Regulations Program, and only grades of A or B may be so applied, although a grade in any course taken as a special student will be considered in computing the student's graduate grade-point average.

### **Graduate Program Readmission**

Students who have previously enrolled in the Agricultural Regulations Graduate Program and left for one semester or more must seek readmission to the program. Returning graduate students who have been enrolled in the Agricultural Regulations Graduate Program within the past 12 months must send a letter to the graduate coordinator formally requesting readmission to the

graduate program. The student does not have to apply for readmission if the student has been enrolled in the program within the past 12 months.

Returning graduate students who have not been enrolled in the Agricultural Regulations Graduate Program for over one year but not more than three years and who are not within one year of the six-year limit on the graduate-level study must submit the following to the Graduate Coordinator or the Center Director:

1. Application for Admission to the Graduate Agricultural Regulations Program
2. Three letters of recommendation
3. Official transcripts from all colleges and universities attended
4. Official GRE scores from the general GRE test
5. Official TOEFL scores (international applicants only).

Applications for admission may be obtained from the UAPB Graduate School or the Agricultural Regulations Graduate Coordinator.

### **Tuition and Fees**

Graduate student tuition and fees are based on factors such as the number of credit hours taken and residency/non-residency in the State of Arkansas. Tuition and fees are established by the University. Current information regarding the cost of graduate tuition and fees may be found at the University website ([http://www.uapb.edu/83\\_tuition-and-fees.php](http://www.uapb.edu/83_tuition-and-fees.php)) or by calling the University Admissions office (870.575.8492).

### **Graduate Research Assistantships**

A 1/2-time Graduate Research Assistant is required to spend a minimum of 20 hours per week fulfilling the assigned research responsibilities associated with the stipend. These duties may be independent of research activities that contribute to the requirements of the degree program. Research assistantships are typically awarded for two years; however, assistantships may be awarded for a maximum of three years in non-typical situations. Research assistantships may be funded through Center funds or research or teaching grants secured by individual faculty members. Funding opportunities should be discussed with prospective graduate advisors before enrolling in the graduate program.

The stipend amount for graduate students is \$18,800 per year for two years. Students receiving stipends are expected to enroll as full-time students. Students are responsible for all tuition and fee payments and may enter into installment payment agreements with the UAPB Student Accounts Department.

### **Transfer Credit**

A maximum of 6 graduate credits may be transferred from other universities with the approval of the student's advisor, the graduate coordinator, and the center director. All transfer credit must be of a 'B' grade or higher on a four-point scale.

If a student desires to take graduate-level courses at another accredited U.S. university while enrolled in the Graduate Agricultural Regulations Program at UAPB and have the course credit transferred to UAPB for use in the Graduate Agricultural Regulations Program, the student must have prior approval from their advisor, the Graduate Coordinator, and the Center Director. A maximum of 6 graduate credits may be transferred and all transfer credits must be of 'B' grade or higher on a four-point scale.

### **Enrollment in Graduate Classes**

Students who have not been admitted to the Graduate Agricultural Regulations Program (including undergraduate students) may only enroll in course offerings with the approval of the center director and the course instructor. Graduate courses can not be used to simultaneously fill both graduate and undergraduate level requirements.

### **Graduate Course Offerings**

**GAGRI 6001/6002/6003 (0 credit hour): Agricultural and Environmental Regulatory Practices Seminar:** This course is designed to provide students a forum to observe graduate research project presentations and to provide an opportunity for faculty and agricultural professionals to present seminars relative to issues in *biosecurity* agricultural and environmental regulatory affairs. All graduate students are required to take this course each semester that they are enrolled in the graduate program except their final semester. During the student's final semester, they will enroll in GAGRI 6101 and present their research project. Sequential course numbers are used to correspond with each semester that the student is enrolled in the graduate program.

**GAGRI 6101 Agricultural and Environmental Regulatory Practices Seminar (1 credit hour):** This course is designed to provide students a forum for the presentation of their graduate research project and to provide an opportunity for faculty and agricultural professionals to present seminars relative to issues in agricultural and environmental regulatory affairs. All graduate students are required to take this course during their final semester of enrollment in the graduate program.

**GAGRI 6102 Ethical Concepts (1 credit hour):** This course will provide students an understanding of best practices for responding to ethical issues that an agricultural professional is likely to encounter in real-world situations and a forum in which students will identify and develop positions on key ethical agricultural issues. The course will also provide students with a framework for making ethical judgments in difficult situations and determining how to act on those judgments. Finally, the course will analyze how one can influence and lead others to act ethically in challenging situations.

**GAGRI 6280 Scientific Writing and Editing in Agriculture (2 credit hours):** This writing course is designed for graduate students in agricultural regulations, the sciences, and natural



resources disciplines who are ready to begin, or who are currently working on a master's thesis. The course assumes that writing is inseparable from thinking and that writing is a process that benefits from collaboration with peers and mentors. Students will learn to use writing to help develop their thinking as a scientist, understand how to organize and compose the major scientific writing genres, identify the various scientific article genres and their function in the academic community, identify a well-conceived rationale, purpose, organization, focus, and conclusion, understand what makes an effective oral presentation and be able to present their work accordingly as well as to relate their presentations to specific audience needs.

**GAGRI 5306 (3 credit hours): Geographic Information Systems and Water Management:**

This course introduces students to the application of geographic information systems (GIS) including cartography, data structure, map overlays, and spatial analysis. This course approaches GIS in the context of environmental issues relating to hydrology and watershed management, soil science, land-use planning, and conservation. Both field activities and GIS and GPS software/hardware are incorporated into course experiences. After completing this class, students will be able to describe what GIS is and several ways that it may be used as a tool in agriculture and resource management; enter data into ArcView and describe the primary GIS data types and sources; describe how GIS is used in the context of watershed management; analyze and query data in ArcView; present results of the analysis using the ArcView software; and create a GIS database.

**GAGRI 5400 Molecular Biology (4 credit hours):** Molecular biology provides an overview of the basic molecular process and recombinant DNA technologies that play an important role in forensics, therapeutics, drug discovery, and agriculture. This includes the structure and function of DNA, RNA, and proteins; DNA replication and repair processes; RNA synthesis and processing; protein synthesis and regulations; and basic recombinant DNA technology.

**GAGRI 6408 Post-Harvest Physiology (4 credit hours):** This course will provide a fundamental understanding of post-harvest physiology, handling, and technology. The course aims to provide a basic understanding of the structure, physiology, and biochemistry of horticultural and food production concerning post-harvest handling and storage. The importance of preharvest factors and genetic material, as well as environmental conditions and handling during distribution and storage periods, is considered.

**GAGRI 6369 Principles of Pest Management (3 credit hours):** Students will be exposed to concepts and principles underlying the development of pest management systems. Pest population dynamics, economic and action thresholds, control methods and their environmental impacts, governmental restrictions and their development, and ethical and moral considerations will be discussed. A historical and practical justification of pest management will be developed and related to the presentation of current pest management systems.

**GAGRI 6320 Food Safety (3 credit hours):** This course provides a comprehensive application of up-to-date topics in food science technology and safety. This course covers the interdisciplinary nature of food science, including biology, engineering, chemistry, microbiology, nutrition, and physics, in all major food commodities. This course helps students

apply their knowledge of contributory sciences to thinking critically about core topics in food science, technology, and safety.

**GAGRI 6420 Food Microbiology (4 credit hours):** This course provides an overview of the role of microorganisms in food spoilage, food safety, food processing, food preservation, foodborne illness, and food intoxication. This course is meant as a basic laboratory course in food microbiology and safety.

**GAGRI 6323 Statistics in Agriculture (3 credit hours):** To introduce a basic and practical overview of descriptive and inferential statistics as applied to the fields of plant and soil sciences, animal science, and regulatory science. To enable graduate students to collect, summarize, and analyze data, state meaningful hypotheses statements, and draw accurate conclusions from research results. Students will gain experience in experimental design, data analysis, computer statistical software, and interpretation of results. The laboratories will include an example of applications from research in agriculture science.

**GAGRI 6342 Risk Analysis (3 credit hours):** This is an introductory course in risk analysis, with applications to *biosecurity*, agricultural, environmental health, and technological problems. Mathematical and statistical topics covered include flow models, lognormal and other distributions, Monte Carlo methods, Bayesian estimates, basic toxicological models, and basic epidemiological models. Applications will apply to carcinogens and other toxic substances. Other topics such as event trees, fault trees, risk perception, and risk communication will be addressed.

**GAGRI 6345 Ecological Economics (3 credit hours):** The application of economic analysis to problems of resource depletion and environmental pollution. Fundamental questions will be addressed. Does economic growth imply environmental destruction? What are the optimal levels of pollution control and energy conservation? What policy options exist for achieving these goals? Should the government sell permits to pollute, tax polluters, or impose direct legal restrictions on the quantities of pollutants? What are the effects of market structure and uncertainty on the rate of resource depletion?

**GAGRI 6350 Agricultural Law and Regulatory Practices (3 credit hours):** This course includes a survey of current and emerging policies and policy issues that regulate agricultural producers, agri-business firms, and other related sectors. The course will address a variety of issues including the history and objectives of agricultural policy, land use planning for agricultural activities, resource use and allocation, industrialization in the agricultural sector, intergenerational transfers of farm businesses, international trade, *biosecurity*, and ethical issues that confront the agricultural sector.

**GAGRI 6369 Environmental Policy Analysis (3 credit hours):** This course provides students with economic tools and techniques for use in analyzing natural resource and environmental policy issues. This course involves an intensive exploration of the environmental policy process and its conceptual framework. Recognizing and defining natural resource or environmental problems in issues; aggregating interests; agenda-setting; formulating and selecting alternative

solutions; implementation and evaluation stages; and the roles of lobbyists, legislature, the executive branch, and other actors will be explored. Case studies, presentations by, and discussions with local and regional legislators appearing as guest lecturers are a primary component of the course.

**GAGRI 6398 Animal Health Issues and Epidemiology (3 credit hours):** This course helps students develop an understanding of general principles of health and the prevention of disease in farm animals. The application of epidemiologic procedures to the understanding of the occurrence and control of infections and chronic diseases, in general, is also covered. Students will become familiar with examples of causative agents of infections and zoonotic diseases, including viruses, bacteria, and parasites; recognize and describe a variety of non-infectious diseases and develop a basic understanding of surveillance for analysis of emerging animal health issues; learn about specific methods and techniques for surveillance and analysis of emerging animal health issues; explore the design and implement a system for identification and assessment of emerging animal health issues; practice interpretation and assessment of emerging animal health issues; foster their ability to recognize and create rational arguments regarding animal health issues through discussion and written assignments; and learn to discuss practical social, economic and legal issues that relate to animal health issues.

**GAGRI 6301 Environmental Soil Chemistry (3 credit hours):** This course will provide a better understanding of reactions and processes controlling the toxicity of contaminants in the soil. There are growing concerns about organic and inorganic contamination of important resources and potential ecological and human health risks. Knowledge of environmental soil chemistry is important in understanding the fate, mobility, and potential toxicity of contaminants in the environment. Upon completion of this course, students will be able to predict the fate and toxicity of contaminants and develop sound and cost-effective remediation strategies.

**GAGRI 6100, 6103, 6104, 6105, 6106, 6107 Research/Thesis (1 credit hour)**

**GAGRI 6200, 6201, 6202 Research/Thesis (2 credit hours)**

**GAGRI 6302, 6303 Research/Thesis (3 credit hours)**

**GAGRI 6401 Research/Thesis (4 credit hours)**

**GAGRI 6501 Research/Thesis (5 credit hours)**

**GAGRI 6601 Research/Thesis (6 credit hours)**

Graduate students pursuing a master's degree with a thesis option will complete a graduate research project under the supervision of a major advisor and a graduate faculty committee. The advisor and/or committee will decide upon the amount of research/thesis credit that the student will register for each semester in conjunction with the student's graduate research project and thesis workload. *This course will be offered every semester.*

## Curriculum

### Master of Science Program in Agricultural Regulations-Curriculum (Thesis-option)

Outline for each program curriculum, including the sequence of courses (final course selection will be decided by the student and his/her advisors).

<b>Course Number &amp; Name</b>	<b>Credits</b>
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**Fall Semester- Year I**

GAGRI 6323 Statistics in Agriculture (R)	3
GAGRI 6V00 Research/Thesis (R)	1-6
GAGRI 6001 Agricultural Regulatory Practices Seminar (R)	0
GAGRI 5400 Molecular Biology (E)	4
GAGRI 6320 Food Safety (E)	3

**Spring Semester-Year I**

GAGRI 6002 Agricultural Regulatory Practices Seminar (R)	0
GAGRI 6V00 Research/Thesis (R)	1-6
GAGRI 6102 Ethical Concept (R)	1
GAGRI 6301 Environmental Soil Chemistry (E)	3
GAGRI 6342 Risk Analysis (R)	3
GAGRI 6345 Ecological Economics (E)	3

**Fall Semester – Year II**

GAGRI 6350 Agricultural Law and Regulatory Practices (R)	3
GAGRI 6003 Agricultural Regulatory Practices Seminar (R)	0
GAGRI 6V00 Research/Thesis (R)	1-6
GAGRI 6408 Post-harvest Physiology (E)	3
GAGRI 6420 Food Microbiology (E)	4
GAGRI 6349 Environmental Policy Analysis (E)	3

**Spring Semester – Year II**

GAGRI 6280 Scientific Writing and Editing (R)	2
GAGRI 5386 Geographic Information Systems and Watershed Management (E)	3
GAGRI 6101 Agricultural Regulatory Practices Seminar (R)	1
GAGRI 6V00 Research/Thesis (R)	1-6
GAGRI 6398 Animal Health Issues and Epidemiology (E)	3
GAGRI 6313 Principles of Pest Management (E)	3

(R – Required; E – Electives)

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**Total Required hours: 19**

**Total hours required for graduation: 31**

**Table 1.** Core courses in the Agricultural Regulations M.S. degree program (Thesis-Option)

<b>Course Number</b>	<b>Course Title</b>	<b>Instructor</b>	<b>Credits</b>
<b>GAGR 6V00</b>	Research/Thesis	Graduate Coordinator/ S. Islam	6
<b>GAGRI 6001 GAGRI 6002 GARRI 6003</b>	Agricultural Regulatory Practices Seminar	Dr. Park, Dr. Islam	0
<b>GAGRI 6101</b>	Agricultural Regulatory Practices Seminar	Dr. Park, Dr. Islam	1
<b>GAGRI 6102</b>	Ethical Concepts	Dr. Islam	1
<b>GAGRI 6323</b>	Statistics in Agriculture	Dr. Mathis	3
<b>GAGRI 6350</b>	Agricultural Law and Regulatory Practices	Dr. Moore	3
<b>GAGRI 6280</b>	Scientific Writing and Editing	Dr. Islam	2
<b>GAGRI 6342</b>	Risk Assessment and Analysis	Dr. Sanad	3
<b>Total</b>			19

**Table 2.** Courses (as Electives) are available in the Graduate Agricultural Regulations Program\*.

<b>Course Number</b>	<b>Course Title</b>	<b>Hours</b>
<b>GAGRI 5386</b>	Geographical Information Systems (GIS)	3
<b>GAGRI 6408</b>	Post-Harvest Physiology	4
<b>GAGRI 5400</b>	Molecular Biology	4
<b>GAGRI 6313</b>	Principles of Pest Management	3
<b>GAGRI 6320</b>	Food Safety	3
<b>GAGRI 6301</b>	Environmental Soil Chemistry	3
<b>GAGRI 6345</b>	Ecological Economics	3
<b>GAGRI 6369</b>	Environmental Policy Analysis	3
<b>GAGRI 6398</b>	Animal Health Issues and Epidemiology	3
<b>GAGRI 6420</b>	Food Microbiology	4

\*Other UAPB Graduate Courses

Additional UAPB graduate courses are available in other graduate programs on campus. The addition of graduate courses outside the department to the student's plan of study will be determined by the student's graduate committee and graduate coordinator.

**Table 3. Sample program** of study for a student interested in **Plant and Animal Systems** in the Agricultural Regulations M.S. degree program.

<b>Course Number</b>	<b>Fall Semester Year 1</b>	<b>Credits</b>
<b>GAGR 6001</b>	Agricultural and Environmental Regulatory Practices Seminar	0
<b>GAGR 6323</b>	Statistics in Research	3
<b>GAGR 6400</b>	Molecular Biology	3
<b>GAGR 6V00</b>	Research/Thesis	1
<b><u>Spring Semester Year 1</u></b>		
<b>GAGR 6350</b>	Agricultural Law and Regulatory Practices	3
<b>GAGR 6342</b>	Risk Assessment and Analysis	3
<b>GAGR 6002</b>	Agricultural and Environmental Regulatory Practices Seminar	0
<b>GAGR 6V00</b>	Research/Thesis	2
<b><u>Fall Semester Year II</u></b>		
<b>GAGR 6280</b>	Scientific Writing and Editing	2
<b>GAGR 6003</b>	Agricultural and Environmental Regulatory Practices Seminar	0
<b>GAGR 6V00</b>	Research/Thesis	2
<b>GAGR 6386</b>	Geographical Information Systems (GIS)	3
<b><u>Spring Semester Year II</u></b>		
<b>GAGR 6102</b>	Ethical Concepts	1
<b>GAGR 6101</b>	Agricultural and Environmental Regulatory Practices Seminar	1
<b>GAGR 6313</b>	Principles of Pest Management	3
<b>GAGR 6398</b>	Animal Health Issues and Epidemiology	3
<b>GAGR 6V00</b>	Research/Thesis	1
<b>Total</b>		<b>31</b>

**Table 4. Sample program** of study for a student interested in **Food Safety** in the Agricultural Regulations M.S. degree program.

<b>Course Number</b>	<b>Fall Semester Year 1</b>	<b>Credits</b>
<b>GAGR 6323</b>	Statistics	3
<b>GAGR 6001</b>	Agricultural and Environmental Regulatory Practices	0
	Seminar	
<b>GAGR 6320</b>	Food Safety	3
<b>GAGR 6V00</b>	Research/Thesis	1
	<b><u>Spring Semester Year 1</u></b>	
<b>GAGR 6350</b>	Agricultural Law and Regulatory Practices	3
<b>GAGR 6342</b>	Risk Assessment and Analysis	3
<b>GAGR 6002</b>	Agricultural and Environmental Regulatory Practices	0
	Seminar	
<b>GAGR 6V00</b>	Research/Thesis	2
	<b><u>Fall Semester Year II</u></b>	
<b>GAGR 6280</b>	Scientific Writing and Editing	2
<b>GAGR 6003</b>	Agricultural and Environmental Regulatory Practices	0
	Seminar	
<b>GAGR 6408</b>	Post-Harvest Physiology	3
<b>GAGR 6420</b>	Food Microbiology	3
<b>GAGR 6V00</b>	Research/Thesis	1
	<b><u>Spring Semester Year II</u></b>	
<b>GAGR 6102</b>	Ethical Concepts	1
<b>GAGR 6101</b>	Agricultural and Environmental Regulatory Practices	1
	Seminar	
<b>GAGR 6313</b>	Principles of Pest Management	3
<b>GAGR 6V00</b>	Research/Thesis	2
<b>Total</b>		<b>31</b>



**Table 5. Sample program** of study for a student interested in **Agricultural Policy and Economic Risk** in the Agricultural Regulations M.S. degree program.

<b>Course Number</b>	<b>Fall Semester Year 1</b>	<b>Credits</b>
<b>GAGR 6323</b>	Statistics in Research	3
<b>GAGR 6001</b>	Agricultural and Environmental Regulatory Practices Seminar	0
<b>GAGR 6V00</b>	Research/Thesis	3
<b><u>Spring Semester Year 1</u></b>		
<b>GAGR 6350</b>	Agricultural Law and Regulatory Practices	3
<b>GAGR 6342</b>	Risk Assessment and Analysis	3
<b>GAGR 6002</b>	Agricultural and Environmental Regulatory Practices Seminar	0
<b>GAGR 6345</b>	Ecological Economics	3
<b><u>Fall Semester Year II</u></b>		
<b>GAGR 6280</b>	Scientific Writing and Editing	2
<b>GAGR 6003</b>	Agricultural and Environmental Regulatory Practices Seminar	0
<b>GAGR 6V00</b>	Research Thesis	1
<b>GAGR 6386</b>	Geographical Information Systems (GIS)	3
<b>GAGR 5322</b>	Quantitative Risk Assessment: Probabilistic Methods	3
<b><u>Spring Semester Year II</u></b>		
<b>GAGR 6102</b>	Ethical Concepts	1
<b>GAGR 6101</b>	Agricultural and Environmental Regulatory Practices Seminar	1
<b>GAGR 6349</b>	Environmental Policy Analysis	3
<b>GAGR 6V00</b>	Research/Thesis	2
<b>Total</b>		<b>31</b>

**UNIVERSITY OF ARKANSAS AT PINE BLUFF**  
**School of Agriculture, Fisheries & Human Science**

**Master of Science in Agricultural Regulations / Degree Plan (Thesis Option)**

<b>Name</b>				<b>I.D.#</b>	
<b>Address</b>		<b>City</b>		<b>Zip</b>	
<b>Telephone</b>					

	COURSE	HRS	TERM PASSED	GRADE	NOTES	
<b>CORE COURSES</b>  <b>13 Credits</b>	GAGRI 6101 Agricultural & Environmental Regulatory Practices Seminars	1				
	GAGRI 6102 Ethical Concepts	1				
	GAGRI 6280 Scientific Writing and Editing in Agriculture	2				
	GAGRI 6350 Agricultural Law and Regulatory Practices	3				
	GAGRI 6323 Statistics in Agriculture	3				
	GAGRI 6342 Risk Analysis	3				
	GAGRI 6001 Agri/Env/Reg/Prac/Sem	0				
	GAGRI 6002 Agri/Env/Reg/Prac/Sem	0				
	GAGRI 6003 Agri/Env/Reg/Prac/Sem	0				
<b>ELECTIVES</b>  <b>12 Credits</b>	GAGRI 6301 Environmental Soil Chemistry	3				
	GAGRI 5400 Molecular Biology	4				
	GAGRI 6313 Principles of Pest Management	3				
	GAGRI 6345 Ecological Economics	3				
	GAGRI 6398 Animal Health Issues and Epidemiology	3				
	GAGRI 6408 Post-harvest Physiology	4				
	GAGRI 6420 Food Microbiology	4				
	GCHM 5312 Advance Biochemistry	3				
	GAGRI 6320 Food Safety	3				
	GAGRI 5306 Geographic Information Systems & Watershed Management	3				
	GAGRI 6369 Environmental Policy Analysis	3				
	<b>RESEARCH</b>  <b>THESIS CREDIT</b>  <b>6 credits (Core)</b>	GAGRI 6100 Research/Thesis	1			
		GAGRI 6103 Research/Thesis	1			
GAGRI 6104 Research/Thesis		1				
GAGRI 6105 Research/Thesis		1				
GAGRI 6106 Research/Thesis		1				
GAGRI 6107 Research/Thesis		1				
GAGRI 6200 Research/Thesis		2				
GAGRI 6201 Research/Thesis		2				
GAGRI 6202 Research/Thesis		2				
*Minimum Hours Required For Graduation		31				
Transfer Hours						

Student \_\_\_\_\_

Advisor \_\_\_\_\_

Graduate Coordinator \_\_\_\_\_

Chair \_\_\_\_\_

## **Graduate Student Load**

A full-time graduate student course load at UAPB is six credit hours during the fall and spring semesters and two credit hours during the summer term. A full-time graduate student's course load may not exceed 15 credit hours during the spring and fall semesters and eight credit hours during the summer term. Students must be enrolled full-time to be eligible for assistantships. Students who are not on assistantships and are finishing their thesis projects may maintain their graduate status by registering for one credit hour.

## **Auditing**

An auditor is a student attending class as a non-participant. Auditors are not required to submit papers, take examinations, or meet other requirements for credit auditing. Auditors pay the regular student fee (no academic credit is awarded). Students registering for 'Audit' must indicate so during the registration period.

## **Advisory Committee**

Advisory committees of graduate students enrolled in the Graduate Agricultural Regulations Program must consist of at least three UAPB faculty members with graduate faculty status and be chaired or co-chaired by a UAPB faculty member with graduate faculty status. Committee members participating above this number are considered additional committee members. Committee membership must be approved by the Graduate Coordinator, Center Director, and SAFHS Dean. Retired and/or emeritus UAPB faculty who have an association with the Agriculture Department or Regulatory Science Center may serve on advisory committees, upon expressed approval by the Graduate Coordinator, Center Director, and SAFHS Dean.

Faculty from other universities and professionals outside of the university system who are not employed by UAPB may serve as additional committee members and co-advisors with the expressed approval of the Graduate Coordinator, Center Director, and SAFHS Dean. They may not serve as the chair of an advisory committee but may serve as the co-chair. A copy of their CV should be submitted to the graduate coordinator.

A student's graduate advisor may be changed within the first two years of study with the permission of the current advisor, the prospective advisor, the Graduate Coordinator, and the Center Director. Changes (additions and deletions) to a graduate committee must be approved. Make-up of the graduate committee must maintain at least three UAPB faculty members with graduate faculty status and be chaired or co-chaired by a UAPB faculty member with graduate faculty status.

## **Program of Study**

The program of study is a list of courses and research that constitutes the essential conditions for obtaining a master's degree in Agricultural Regulations. Each student, in consultation with their

advisory committee, formulates a program of study based on the guidelines established by the UAPB Graduate Catalog and recommendations from their advisory committee. All the courses listed on the program of study must be completed to graduate and obtain a master's degree. The master's degree in Agricultural Regulations consists of 31 semester hours (twenty-four (24) credits in coursework and six (6) credits in research and thesis). All requirements for the degree must be completed within six (6) years.

The student will complete a core of regulatory science courses (19 credits) and select, with the approval of his/her graduate committee, other graduate courses that meet the student's career goals.

### **Committee Meetings**

Students are required to have a program of study committee meeting before the end of their first semester. Students are strongly encouraged to schedule at least one or more committee meetings during their enrolment in the program.

### **Grades**

Grades of A, B, C, D, F, I, P, R, W, and AUD are used in the grading system and possess the following meanings and grade points per hour: A – Excellent (4), B – Good (3), C – Fair (2), D – Failure and Poor (1), F – Failure and Extremely Poor (0), I – Incomplete, P – Pass, R – Repeat, W – Withdraw, and AUD – Audit. Except in the case of Thesis Research, an incomplete grade not removed within one semester will be recorded as an 'F'. A summer session counts as a semester. Grade points per hour along with the number of completed credit hours are used to calculate the student's cumulative grade point average.

A student who drops an individual course will receive a grade of W in the course. The final date for dropping individual courses is listed in the course schedule booklet each semester. A student withdrawing from a course must have the written permission of the Graduate Advisor and the Center Director.

### **Academic Progress, Probation, and Dismissal**

The student must maintain a grade point average of 3.0 on a 4.0 grade scale during their academic tenure in the Graduate Agricultural Regulations Program. If the student's grade point average falls below 3.0, the student will be placed on academic probation during the following semester. If at the end of the following probationary semester, the student's grade point average is still below 3.0 they will be dismissed from the Graduate Agricultural Regulations Program. The dismissal may be appealed to the advisory committee, the Graduate Coordinator, and the Center Director.

## **Academic Grievance Procedure**

### **Disputed Grades**

A student's grade should represent the instructor's good faith judgment of the student's performance in the course based on the informed use of appropriate measurement and evaluation instruments. If a student disagrees with a grade he/she has received, the following procedure should be followed until the problem is resolved. These steps must be followed in order and appropriate documentation of each step (including notation of the date, time, location, length, content, and outcome of the discussion) must be provided to proceed to the next step.

1. The student should discuss the disputed grade with the instructor of the course. This should normally take place during the instructor's posted office hours.
2. If the dispute is not resolved in step one, the student should request a meeting with the Center Director. The instructor of the course will also attend this meeting.
3. If the dispute is not resolved in step two, the student should request a meeting with the dean of the school offering the course. The instructor of the course and the Center Director will also be present.
4. If the dispute is not resolved in step three, the student should request a meeting with the Vice-Chancellor for Academic Affairs. The instructor of the course, the Center Director, and the Dean of the school offering the course will also be present. The decision of the Vice Chancellor for Academic Affairs is final and no further appeal is possible.

### **Other Academic Grievances**

A student may have a grievance against an instructor that goes beyond a dispute over the grades received in a course. Such grievances might involve allegations that the instructor is harassing students, practicing extortion, not meeting his/her classes, or is generally incompetent. For such non-grade-oriented grievances, the following procedure should be followed until the problem is resolved. These steps must be followed in order and appropriate documentation of each step (including notation of the date, time, location, length, content, and the outcome of the discussion) must be provided to proceed to the next step.

1. The student should make the grievance known to his/her Instructor.
2. If the grievance is not resolved in step one, the student should request a meeting with the center director. The instructor will not be present at this meeting, but a follow-up meeting will be scheduled with the instructor and the Center Director.

3. If the grievance is not resolved in step two, the student should request a meeting with the dean of the school offering the course. The instructor of the course and the center director will also be present at this meeting.
4. If the grievance is not resolved in step three, the student should request a meeting with the Vice-Chancellor for Academic Affairs. The dean of the school offering the course will also be present at this meeting. The Vice-Chancellor for Academic Affairs will schedule a follow-up meeting with the instructor, the Center Director, and the Dean of the school offering the course.
5. If the grievance is not resolved in step four, the student should request a meeting with the Chancellor. The Vice-Chancellor for Academic Affairs will also attend this meeting. The Chancellor will schedule a follow-up meeting with the instructor, the center director, the instructor's dean, and the Vice-Chancellor for Academic Affairs. The Chancellor also has the option of empowering a panel of professors (preferably with graduate teaching status) to review the allegations made by the student, render a judgment, and recommend an action for the Chancellor to implement. The decision of the Chancellor will be final.

### **Thesis Proposal**

All students enrolled in the Graduate Agricultural Regulations Program are required to prepare a thesis involving original research during their tenure in the program. A thesis proposal should be developed before the initiation of thesis research and submitted to their committee members for approval before the end of their second full semester of enrollment. The proposal must include an Introduction, Literature Review, Methods, Results, Discussion, Conclusion/Recommendation, and References section (*Format of the Thesis*). The style of the thesis proposal will follow the 'manuscript preparation' guidelines for the Journal of Soil and Water Conservation, the Journal of Food, Agriculture & Environment, HortScience, the Plant Physiology, the Journal of the Society of Wetland Scientists, the Journal of Environmental Economics and Management or similar agreed upon the journal. For further information contact the Regulatory Science Director.

### **Petition to Graduate**

Students should petition for graduation with the registrar at the beginning of the semester they intend to graduate. Students and their advisors should ensure that all the courses listed in programs of study have been taken and, if necessary, submit substitution forms if changes need to be made. During the final semester, students must take final examinations early (see the schedule for graduating seniors prepared by the registrar's office) and instructors must submit final grades according to the same schedule. A minimum of 31 credit hours is required in a six (6) year time period. The student must have at least a 3.0 cumulative grade point average to graduate.

## **Preparation of the Thesis**

Students will complete a research project under the supervision of their faculty. This work must be written as a master's thesis. There are specific deadlines each semester for 'Intent to Submit' the thesis and for 'Final Submission' of the thesis the latter of which usually occurs two weeks before the last day of the semester. Failure to meet the 'Final Submission' deadline will delay graduation by a semester. Check with your advisor for the date of the appropriate deadline. The student should follow the specified outline in the 'Agriculture Department Thesis Preparation Guidelines'. The style and format for the thesis must follow the 'manuscript preparation' guidelines for the Journal of Soil and Water Conservation, the Journal of Food, Agriculture & Environment, the HortScience, the Plant Physiology, the Journal of the Society of Wetland Scientists, the Journal of Environmental Economics and Management or similar agreed upon the journal. If the specified format is not covered by the manuscript preparation instructions, students must follow the style and conventions offered in the CBE Style Manual (Council of Biological Editors, Chicago).

## **Thesis Seminar Presentation, Defense, and Submission**

All students planning to defend their thesis will have an advisory committee meeting to determine if the research is sufficient, all courses on the plan of study have been taken, and the thesis draft is in satisfactory condition for defense. The advisory committee also shall serve as the thesis defense committee. The entire advisory committee must be given sufficient time to review and approve the thesis for the defense before scheduling the defense. The thesis will be proofread by each advisory committee member. The thesis will be presented to the public in a seminar format with the aid of visuals such as Microsoft PowerPoint. The thesis seminar and defense must be scheduled and advertised **two weeks** before the intended presentation date. The student will give a 30-minute overview of their research and results followed by audience questions. The seminar (presentation and questions) will last no longer than one hour. Immediately following the seminar, the student and advisory committee will meet for the thesis defense. Upon completion of the thesis defense, the student will be excused while the advisory committee determines the outcome of the defense (Pass or Fail). Passing the thesis defense requires a unanimous committee agreement. The advisory committee may elect to pass a student with conditions such as recommending minor changes to their thesis. The student will be notified immediately following the thesis defense of their success or failure and the changes that must be made before the thesis will be given final written approval by the committee. The chair of the student's advisory committee will provide written notification of the defense outcome to the student and the Graduate Coordinator. If the student fails the thesis defense, the student may elect to defend a second and final time at least 30 days after the initial thesis defense. If the student fails the second defense, the student will be dismissed from the program.

Signatures of the advisory committee, the Graduate Coordinator, and the Center Director are required on the signature page of the thesis. These signatures indicate that all proposed research is satisfactory and all suggested changes have been satisfied and that the thesis is complete.

Copies of the thesis must be prepared on 25% cotton bond paper and submitted to the main campus library no later than two weeks before graduation. The library will ensure that the paper is the correct bond, and the photographs are attached properly, and will submit the copies to the binder. One bound copy is for the student, one copy each for the advisor and other committee members, two copies are for the library and two copies are for the center. The cost of thesis reproduction is the responsibility of the student. The cost of binding is the responsibility of the library. A PDF copy of the thesis must also be deposited with the Graduate Coordinator.

### **Registration Status of Students**

Students who receive assistantships should be enrolled (registered full-time) until all of the requirements of the program of study are fulfilled or until graduation (whichever occurs first). When a student completes all course requirements listed on the program of study but has yet to complete the thesis requirement, the student may register for at least one credit hour (research and thesis or any other graduate-level course). If the student is not registered at any time during the regular semesters (fall, spring, summer), the student will be considered to have withdrawn from the program and cannot graduate until readmitted (see ‘Withdrawal’ and ‘Readmission’ sections).

### **Withdrawal**

Students who fail to enroll (register) for any of the regular semesters (fall, spring, summer) will be considered to have withdrawn from the program. Students who fail to attend classes without submitting a written notice of withdrawal will automatically receive a ‘W’ in all courses in which they are enrolled.

Students may voluntarily withdraw from the Graduate Agricultural Regulations Program by submitting written notice to both the Center Director and the University at least two weeks before the start of final examinations for any of the regular semesters. The student must also:

1. Secure a withdrawal slip from the Admissions and Academic Records Office
2. Secure approval from the center director, dean of the college, and the Vice Chancellor for Academic Affairs (all should sign the withdrawal slip)
3. Secure clearance from the Student Accounts Office
4. Return the approved slip to the Admissions and Academic Records Office

### **Academic Dishonesty**

Academic dishonesty involves acts that may subvert or compromise the integrity of the educational process at the University of Arkansas at Pine Bluff. For details on academic dishonesty in graduate programs, please refer to Section II (2.6) of the Graduate Handbook.

**[Necessary Forms are available from the UAPB Graduate School’s webpage.](#)**