Louisiana Tech University
Program Review

College: Applied and Natural Sciences
Academic Program: Environmental Science

1 March 2004
1. Relationship of the Academic Unit to the College and University Mission

Evaluate the program's contributions to the College and to the University. Tie the program to the College and University missions. Here is the University Mission Statement:

MISSION
Louisiana Tech University
Louisiana Tech University is a comprehensive public university committed to quality in teaching, in research and creative activity, and in public service. A selective admissions university, it offers a broad range of fully accredited undergraduate degrees to qualified students in Louisiana, as well as from the region, the nation, and foreign countries. Integral to the purpose of the University is its expanding commitment to graduate-level education in its areas of strength; Louisiana Tech offers master's degrees in a variety of areas and doctoral programs in areas of specified expertise.

Louisiana Tech maintains, as its highest priority, the education of its students. To that end, it recruits a faculty committed to teaching and advising, a student-oriented faculty dedicated to preparing students to achieve their goals in a rapidly changing economic and civic environment. The University provides, in a challenging, yet safe and supportive environment, extra-curricular and athletic programs that foster and enrich the development of its students. In addition, it provides opportunities for interaction between students and the larger business and civic community. The University encourages its students to regard learning as a lifelong process.

Recognizing that research and service are fundamental to its mission, Louisiana Tech recruits and retains a faculty who see research and teaching as intertwined and complementary and who, through both theoretical and applied research and creative activities, contribute to the development of new knowledge, new art, and new technology.

Louisiana Tech University understands its community and civic obligations. Through on-campus learning, through its off-campus presence, through outreach programs and continuing education, the University will continue to enhance the quality of life and the economic development of the region, state, and nation.

As a university with a rich engineering heritage, Louisiana Tech has a special responsibility to integrate advanced technology into teaching and learning. At Tech, advanced technology supports quality teaching, research, administration, and service. The University is committed to providing its students with the advanced technological skills that will help to ensure their success both in the internal environment of the University and in the wider surrounding community.

In this section, include the following information:

1. Give the College mission statement, tying it to the above University Mission Statement.
VISION
To be recognized for preparing students who excel in the applied and natural sciences.

VALUES
Provision of quality service to students and other stakeholders
Recognition that well-being of the College depends upon contributions of individuals
Inclusive culture that
  Promotes atmosphere of trust and collegiality
  Encourages each employee to reach his/her potential
Development of open communication
Equitable and fair treatment of all employees

MISSION
Through excellence in teaching, research, and service, the College of Applied and Natural Sciences prepares students for careers in agriculture, biological sciences, forestry, healthcare, and human ecology. Graduates are expected to be committed to life long learning, to environmental awareness, and to improving their profession and community.

EXPANDED MISSION STATEMENT
The College of Applied and Natural Sciences is committed to the development, integration, transfer and application of knowledge in the fields of agriculture, biological sciences, forestry, healthcare, and human ecology.

We believe that the education of students is our highest priority and have the mission of promoting excellence and innovation in teaching supported by experimental learning and integration of technology. Graduates recognize that lifelong, learning is necessary for informed decision making and remaining current in their profession.

The research and service missions complement instruction. Faculty supported by graduate students and selected undergraduate students engage in both theoretical and applied research designed to address the needs of industry, the environment, and society. Classes offered by faculty performing research ensure that students learn the most current paradigms and research techniques.

The importance of service to the community and society is recognized. Faculty and students engage in service activities both on the campus and beyond the university community. Through instructional and experimental activities, students become aware of their obligations to maintain their environment and to improve their profession and community.

Academic programs offered in the College of Applied and Natural Sciences include the following:

Associate of Science
Health Information Technology • Nursing
Bachelor of Science
Agricultural Business • Animal Science • Biology • Environmental Science • Family and Child Studies • Familey and Consumer Sciences Education • Forestry • Health Information Administration • Medical Technology • Nutrition and Dietetics • Plant Science • Wildlife Conservation
Post Baccalaureate
Dietetic Internship
Master of Science
Biology • Family and Consumer Science • Nutrition and Dietetics

2. Give the mission of your unit, tying it to both the University mission statement and the College mission statement.

The Environmental Science program provides a multidisciplinary, science-based curriculum to produce graduates with the skills and knowledge necessary to diagnose and analyze environmental problems, and to develop and implement solutions to these problems. The wide range of job opportunities and environmental issues facing our graduates necessitate a broad core curriculum in science, math, social sciences, humanities and environmental studies. Students acquire depth and specialized knowledge by obtaining a minor in an environmental field of their choice.

The Environmental Science program addresses the educational, research and service missions of the College of Applied and Natural Sciences and Louisiana Tech University. Education of students is the top priority of the Program by providing a solid science background for all environmental science graduates. The program also integrates many of the courses in the social and natural sciences, and humanities undertaken within the curriculum. This integration is particularly important for students because study of the environment involves living and non-living components as well as social, economic and regulatory considerations. In addition, the curriculum requirement of an internship or research experience ensures that students obtain experiential education. Lastly, the completion of a minor by students provides a mechanism for students to self direct, in part, their curriculum. This results in graduates who are well educated in the area of environmental science that most interests them and tailored for particular environmental science careers.

Research is addressed by faculty who perform research relating to environmental issues including remediation and restoration, global climate change, sensing plant stress and plant/fungal interaction. Many undergraduates participate in this research or discuss this research in class. Moreover, involvement in the interdisciplinary program promotes collaboration between faculty in participating units.

Further the mission of the Environmental Science Program addresses the College’s goal of instilling environmental awareness in students and the University’s mission of community and civic responsibilities. This is accomplished in several ways. First, the program
integrates the importance of a sustainable environment throughout the curriculum. Secondly, two environmental science courses (Introduction to Environmental Science and Conservation and Management of Natural Resources), cross-listed as Biological Sciences, can be taken by non-science majors to fulfill the GER requirement for a natural science series. These courses provide a framework for citizen’s to make choices concerning a sustainable environment. Lastly, projects undertaken by students in the Environmental Science Program communicated through posters and newspaper articles promote knowledge of the environment to the student body and community.

II. Relationship to Other Programs

1. Describe the links between this program and others within the department, the college and the university. Include such issues as shared requirements, interdisciplinary activities, and so on.

The Environmental Science program is an ideal example of an interdisciplinary program. The core curriculum consists of courses from a wide array of units, requiring 16 semester credit hours in the Biological Sciences, 15 hours in Chemistry, 20 hours in Environmental Science, five hours in Geographic Information Sciences, four hours in Geology, and three hours in statistics. Of the 20 required hours in Environmental Science, only 7 hours are not cross-listed with another unit. The large number of courses in each unit allows students to easily obtain minors in Biology, Chemistry, or Geographic Information Sciences. In addition, GER requirements specifically list three hours in Geography, three hours in Political Science and nine hours in Mathematics. Thus, the degree requirements involve three units within the College of Applied and Natural Sciences, the School of Biological Sciences, School of Forestry, and Department of Agricultural Sciences, three areas (Chemistry, Geosciences, and Mathematics and Statistics) within the College of Engineering and Science and one unit (Department of Social Sciences: Geography and Political Science) within the College of Liberal Arts. The College of Administration and Business is also incorporated into the program if an Environmental Science student selects a minor from one of the units within CAB.

2. Discuss the relationship between your unit and other units which may require courses from your unit - for instance, for minors and for content course for teacher training.

The two course sequence, Introduction to Environmental Science and Conservation and Management of Natural Resources (cross-listed as Biological Sciences) fulfill the natural science sequence necessary for the General Education Requirements. The advantages of this sequence for non-science majors is that it provides students with a broad, integrated approach to a variety of disciplines (e.g., biology, chemistry, geosciences, geography and natural resources). Additionally, Introduction to Environmental Science is required in the Middle School Education – Science Grades 4-8, the Biology Education - Grades 7-12, the Chemistry Education Grades 7-12, and the Earth Science Education – Grades 7-12 curricula. The Earth Science Education curriculum also requires two additional Environmental Science courses, Ecology and Environmental Law. Lastly, the Environmental Science program offers a minor open to all University students. The minor includes Environmental Science and Geology.
courses and three additional hours in the Biological Sciences, Chemistry, Environmental Science, Forestry, Geology or Plant Science.

3. Discuss the extent to which students from other disciplines take courses in your field to satisfy GER requirements and how you think these courses are suitable for that purpose.

As noted in Section II.2, Introduction to Environmental Science and Conservation and Management of Natural Resources, cross-listed courses in the Biological Sciences, satisfy the GER natural sciences sequence requirement. These courses are particularly suitable as an alternative to the biological science, chemistry, or geosciences sequences because these courses integrate material from each of these disciplines. Introduction to Environmental Science, for example, encompasses topics such as climate, populations, communities, ecosystems, resource management, energy, water, minerals, pollution, toxicology, and hazardous waste. Conservation and Management of Natural Resources expands topics to include economics, ethics, fisheries, rangelands, forests, wildlife and environmental issues within Louisiana. Thus, this sequence unites a broad range of science disciplines and is extremely applicable to students’ everyday lives.

III. Student Demographics

For each academic program you offer, describe the students in the program.

1. Describe the quality of their academic preparation for the degree.

Louisiana Tech University’s selective admissions ensures that students entering the Environmental Science Program have a high school grade point average of 2.2/4.0 or rank in the upper 35% of their graduation class or have a composite ACT of 22 or a SAT of 1010 (requirements for non-resident students and home-schooled students vary).

Secondly, the Program requires that students complete the Environmental Science requirements (Biological Sciences, Chemistry, Environmental Science, Geographic Information Sciences, Geology, Statistics and Directed Electives) with a minimum grade of “C”. Consequently, graduates possess a strong science background.

The general education requirements contribute to graduates with a breadth of training in Environmental Science by including:

- 3 semester credit hours of Arts
- 6 hours of English composition
- 12 hours of Humanities (technical writing and speech are specified)
- 9 hours of Mathematics
- 9 hours of Social Sciences (Geography and Political Science are specified)

Breadth, specifically in the sciences, is obtained with:

- 16 semester credit hours of Biological Sciences
- 15 hours of Chemistry
- 20 hours of Environmental Science (an internship or research experience is included for
experiential learning)
5 hours of Geographic Information Sciences
4 hours of Geology
3 hours of Statistics

Depth in an area of environmental science is obtained via:
21 semester credit hours of directed electives (with which students are expected to obtain a minor in an area of their choice; if a student does not choose a minor, then directed electives are selected from: Animal Science, Biological Science, Forestry, Geography, Geology, Physics, or Plant Science)

2. What is the student demand for the program?

Student enrollment in the Program has remained steady (Section III.4). Nevertheless, the need for environmental scientists and technicians (and related fields) continues to grow. The occupational employment projections to 2010 (Monthly Labor Review, November 2001) indicate growth in demand for the personnel listed below. The majority of the occupations listed are projected to increase in employment significantly above the projection of 15.2% for overall employment.

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Percent employment change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Scientists</td>
<td>22.3</td>
</tr>
<tr>
<td>Environmental Technicians</td>
<td>24.5</td>
</tr>
<tr>
<td>Environmental Engineers</td>
<td>26.0</td>
</tr>
<tr>
<td>Environmental Engineering Technicians</td>
<td>29.1</td>
</tr>
<tr>
<td>Biological Scientists</td>
<td>21.0</td>
</tr>
<tr>
<td>Biological Technicians</td>
<td>26.4</td>
</tr>
<tr>
<td>Chemists</td>
<td>19.1</td>
</tr>
<tr>
<td>Chemical technicians</td>
<td>15.0</td>
</tr>
<tr>
<td>Natural Sciences Managers</td>
<td>7.6</td>
</tr>
<tr>
<td>Conservation Scientists</td>
<td>8.3</td>
</tr>
<tr>
<td>Forestry and Conservation Technicians</td>
<td>3.2</td>
</tr>
</tbody>
</table>

3. How is the information on students made available to faculty and used in planning the curriculum?

Student information and program assessment is provided to faculty in meetings. The entire Environmental Science faculty meet to discuss and vote on changes in the curriculum.
Specific information on students is available through the Louisiana Tech on-line student system (BOSS). This system provides:

<table>
<thead>
<tr>
<th>Student information</th>
<th>Student admission information</th>
<th>Course information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic program summary</td>
<td>Admission requirements</td>
<td>Class rosters</td>
</tr>
<tr>
<td>Academic statistics</td>
<td>Admission status</td>
<td>Course inventory maintenance</td>
</tr>
<tr>
<td>Deans’ list/honors</td>
<td>Degree objective/ matriculation</td>
<td>Course inventory scan</td>
</tr>
<tr>
<td>Degrees awarded</td>
<td>Other institutions attended</td>
<td>Course sections scan</td>
</tr>
<tr>
<td>Graduation expected</td>
<td>Test scores</td>
<td>Days/times offered</td>
</tr>
<tr>
<td>Major/degree objective</td>
<td>Matriculation history</td>
<td>Enrollment limits and statistics</td>
</tr>
<tr>
<td>Schedule of classes</td>
<td></td>
<td>Registration controls</td>
</tr>
<tr>
<td>Transcript display</td>
<td></td>
<td>Schedule maintenance</td>
</tr>
<tr>
<td>Transfer credit</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4. Provide five-year enrollment and graduation figures.

<table>
<thead>
<tr>
<th>Fall of Year</th>
<th>Enrollment</th>
<th>Academic Year</th>
<th>No. of Graduates</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999</td>
<td>19</td>
<td>1999-2000</td>
<td>10</td>
</tr>
<tr>
<td>2000</td>
<td>29</td>
<td>2000-2001</td>
<td>3</td>
</tr>
<tr>
<td>2001</td>
<td>36</td>
<td>2001-2002</td>
<td>8</td>
</tr>
<tr>
<td>2002</td>
<td>37</td>
<td>2002-2003</td>
<td>6</td>
</tr>
</tbody>
</table>

IV. Program Goals and Curriculum

1. List the goals, expectations, or desired learning outcomes of the program, telling what students are expected to know and what skills they are expected to demonstrate. For reference, Expected Outcomes for All Tech Graduates are included on the Curricula Effectiveness Survey as part of Appendix A.

The Louisiana Tech University GER courses address the Board of Regents skill requirements for all students. In addition to these GER courses, the Environmental Science Program reinforces many of these skills in core courses. The following skills are further enhanced by the Environmental Science curriculum:
The table below shows the courses required for each skill.

<table>
<thead>
<tr>
<th>Skill</th>
<th>Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Critical thinking</td>
<td>Introduction to Environmental Science; Ecology, Biological Principles; Biological Diversity; Plant Biology</td>
</tr>
<tr>
<td>Communication</td>
<td>Introduction to Environmental Science; Ecology, Biological Principles; Biological Diversity; Plant Biology; Microbiology; Environmental Microbiology; Environmental Science Seminar</td>
</tr>
<tr>
<td>Technology</td>
<td>Ecology; Plant Biology; Biological Principles; Microbiology; Environmental Microbiology; Soil Science; Analytical Chemistry; Introduction to Geospatial Technologies; Introduction to GIS</td>
</tr>
<tr>
<td>Research</td>
<td>Ecology, Biological Principles; Plant Biology; Microbiology; Environmental Microbiology</td>
</tr>
<tr>
<td>Statistical analysis</td>
<td>Ecology, Biological Principles; Plant Biology; Statistics</td>
</tr>
<tr>
<td>Computer</td>
<td>Ecology, Biological Principles; Biological Diversity; Plant Biology; Statistics; Introduction to GIS</td>
</tr>
</tbody>
</table>

Beyond the Board of Regents skill requirements, Environmental Science students are expected to possess the following areas of knowledge:

<table>
<thead>
<tr>
<th>Knowledge base</th>
<th>Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental problems</td>
<td>Introduction to Environmental Science; Ecology</td>
</tr>
<tr>
<td>Sustainability/sustainable development</td>
<td>Introduction to Environmental Science; Ecology</td>
</tr>
<tr>
<td>Scientific method/Experimental design</td>
<td>Introduction to Environmental Science; Ecology, Biological Principles; Plant Biology; Statistics</td>
</tr>
<tr>
<td>Degradation of xenobiotic compounds</td>
<td>Soil science; Chemistry; Microbiology; Environmental Microbiology</td>
</tr>
<tr>
<td>Interactions between organisms</td>
<td>Ecology, Biological Principles; Biological Diversity; Plant Biology; Microbiology; Environmental Microbiology</td>
</tr>
<tr>
<td>Interactions between organisms and the nonliving portion of the environment</td>
<td>Ecology, Biological Principles; Biological Diversity; Plant Biology; Microbiology; Environmental Microbiology</td>
</tr>
<tr>
<td>Soil characteristics and function</td>
<td>Soil Science; Geology; Chemistry</td>
</tr>
<tr>
<td>Environmental regulations</td>
<td>Political Science/Environmental Law</td>
</tr>
<tr>
<td>Geography/Geographic Information Science</td>
<td>Geography; Introduction to Geospatial Technologies; Introduction to GIS</td>
</tr>
</tbody>
</table>

A. Describe how the above goals are communicated to faculty and students - Indicate how faculty are involved in the development of these outcomes and how these outcomes are communicated to faculty and students through courses, presentations, organizations, etc. If external stakeholders are involved in the development process, please describe.
Development of program goals and the subsequent curriculum was a multi-step process. The Environmental Science faculty met as a whole to determine desired learning outcomes and which classes would address these outcomes. The resulting curriculum was then discussed with an advisory panel. The panel consisted of employers, environmental lawyers, outside faculty and state and federal personnel. Modifications presented by the panel were discussed among the faculty and a final curriculum was determined. Changes in the curriculum have occurred since its inception. These changes were the result of employers’ needs, student input and faculty discussions.

3. For each academic program you offer, explain how the curriculum reflects program goals. In your description, focus on the structure of the curriculum, which may include the following items:

• Explain how the major is organized: Are there core courses that all majors take? Does the curriculum have options within it?

All Environmental Science students are required to enroll in a variety of basic science courses, providing breadth to the curriculum. These courses include, as noted in section III.1 and IV.1, Biological Sciences, Chemistry, Environmental Science, Geographic Information Sciences, Geology and a statistics course. In addition, within the General Education Requirement, Mathematics are required along with Geography and Political Science as Social Sciences. The remaining three hours in Social Sciences is selected by the student. To gain depth in a particular discipline of Environmental Science, the curriculum also includes 21 hours of directed electives. Students are expected to complete a minor using these hours. Thus, students can design a curriculum around the portion of environmental science that most interests them or which is applicable for a particular career. For example, many students obtain minors in biology or chemistry. Some students, however, minor in political science to apply towards a future degree in environmental law or marketing to apply towards obtaining a position in an environmental firm.

• Explain how major-area courses at various levels - freshman, sophomore, junior, and senior - are designed to build on each other and how the content and difficulty of the courses differs at the four levels. If there are prerequisites for courses, explain the rationale for those prerequisites.

Many of the core courses encompass material that is integrated with other classes, therefore prerequisites are in place to provide students with the knowledge necessary to succeed at the particular level of content. For example during their freshmen year, Environmental Science students complete the Introductory Biology series and the Introductory Chemistry series. This allows students to enroll in Plant Biology, Analytical Chemistry and Introduction to Organic Chemistry and Biochemistry in their sophomore year. For Plant Biology, students will already have been taught about biomolecules, cells, metabolism, genetics, evolution and ecology in the introductory series. In the chemistry classes, the students will have learned the fundamentals of inorganic compounds, stoichiometry and molecular structure in introductory chemistry. This knowledge is applied and expanded in students’ junior year when they take Ecology (requires introductory biology), Microbiology (requires both inorganic chemistry and
introductory biology), and Soil Science (requires inorganic chemistry). In their senior year, students enroll in Environmental Microbiology, which requires and builds on general microbiology.

• Explain the extent to which students in the program share learning experiences in their major fields. Explain how the program is designed to allow or enable the students to learn together.

Shared learning experiences are difficult to incorporate into an interdisciplinary program as courses are distributed across a number of units. Each unit naturally gives priority to scheduling courses based on the needs of their own students. Secondly, the number of Environmental Science students enrolled in a particular course is not sufficiently large to offer a separate section specifically for Environmental Science students. Consequently, environmental science students do not move through courses as an intact cohort. However, Introduction to Environmental Science has been redesigned to place greater emphasis on group discussion and group projects. Generally, all Environmental Science freshmen take this course together in their first quarter. Thus, students begin learning together at the start of their University experience. In addition, most of the laboratory exercises in science courses are completed in groups of three or four students, so shared learning is continued in the curriculum. Further, as greater than 50% of students intend to attend graduate school, the students enroll in independent research rather than internship. In many cases, the research projects are completed in groups and or work with graduate students. Lastly, the Environmental Science student organization will be re-initiated to provide greater student interaction.

Additional mechanisms to ensure group learning will be instituted as enrollment increases. For example, the faculty have discussed forming an integrated curriculum with the sciences, math and chemistry. Secondly, a separate University Seminar section could be formed when student numbers are sufficient.

• Explain which courses in the major that are designed specifically to address writing skills and knowledge of technology.

Student writing skills are addressed in several courses including both biological and environmental science courses. Students as freshmen are required to write a stylized laboratory report for each exercise completed in Biological Principles Laboratory and Biological Diversity Laboratory. The Plant Biology and Ecology Laboratories also require documentation of laboratory exercises in the format of a scientific publication. Preparation of these papers requires the use of scientific terminology, scientific literature, library and internet assignments, access and utilization of national/international databases, experimental design, as well as the interpretation, presentation, and discussion of research results. Further, writing skills are specifically addressed in the required technical writing course.

Technology is incorporated into Introduction to GeoSpatial Technology and Introduction to Geographic Information Systems. In these courses, students learn about global positioning systems, remote sensing, aerial photo interpretation, and geographic information systems.
Microbiology, Environmental Microbiology, Analytical Chemistry and Soil Science also incorporate biotechnology or technology associated with sampling and analysis of chemical and environmental parameters. Plant Biology includes technologies associated with tissue culture and biocontrol. Lastly, the Biological Principles series and Ecology use Excel (spreadsheet software) and JMP IN (SAS statistical software) to analyze experimental results.

• Does the curriculum have a culminating experience such as a capstone course, comprehensive exam, research project, or dissertation? If so, what is the content and focus?

At this time, the Environmental Science curriculum does not have a culminating experience. The School of Biological Sciences is developing such an experience for biology majors. Students in the Environmental Science Program may be able to participate in the biology course as appropriate.

IV. Documentation

1. Describe the process used to regularly monitor and assess the quality of the program relative to the overall goals of the program and the learning outcomes. Identify the stakeholders and how and when they are consulted.

Regular monitoring and assessment of the Program occurs through an exit survey, exit exam and exit interview. The results of these assessment activities are presented to the faculty each year at meetings. Further, employers of interns assess student performance. An advisory panel consisting of industry, government and academic representatives also reviews the curriculum. The information from these assessments is summarized in an annual program review for the University as well as periodic review for the Southern Association of Colleges and Schools.

2. Present evidence of the extent to which the curriculum/program/major field goals are being met. List the sources of evidence, both quantitative and qualitative. Suggested measures for evaluating academic programs include the following: (NOTE: All may not be applicable to your academic unit):

   • senior projects or theses for undergraduate programs N/A
   • standardized tests N/A
   • comprehensive oral and written examinations

As part of the exit interview and graduating survey, students are expected to complete a written examination. The examination is used to assess whether student learning goals, in terms of core knowledge in the environmental sciences, have been achieved. The 2002/2003 assessment indicated that 100% of graduating seniors achieved ≥ 70% on the comprehensive exam. The exam further assesses
whether students demonstrate an understanding of global and environmental concerns. In the 2002/2003 assessment again, only 55.5% of graduating students demonstrated an understanding of global and environmental concerns. Therefore, Introduction to Environmental Sciences was redesigned. Further, integration of global ecological concepts in Introduction to Environmental Sciences and Ecology was improved. Integration of course material will ensure that students are capable of assimilating global and environmental concerns. The question of whether students understand global environmental issues was also assessed by quantifying the proportion of graduating environmental science seniors that achieved 70% or better on applicable questions on Environmental Science 313 (Ecology) final examinations. One hundred percent of students achieved > 70% on questions related to global environmental issues on the final examination in the 2002/2003 assessment period. Lastly, effective oral communication skills are evaluated by determining the proportion of students achieving 70% or better on their evaluation form in Environmental Science 400 (Seminar). The 2002/2003 assessment period indicated that 93.75% achieved 80% or better on the evaluation of communication.

Exit exams resulted in the following assessment of students’ specific knowledge areas:

<table>
<thead>
<tr>
<th>Knowledge base</th>
<th>Assessment (% students that answered correctly)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Most significant environmental problem</td>
<td>55.6</td>
</tr>
<tr>
<td>Sustainability/sustainable development</td>
<td>88.9</td>
</tr>
<tr>
<td>Scientific method/Experimental design</td>
<td>100.0</td>
</tr>
<tr>
<td>Degradation of xenobiotic compounds</td>
<td>66.7</td>
</tr>
<tr>
<td>Biotic interactions</td>
<td>94.4</td>
</tr>
<tr>
<td>Biotic/abiotic interactions</td>
<td>100.0</td>
</tr>
<tr>
<td>Soils</td>
<td>100.0</td>
</tr>
<tr>
<td>Environmental regulations</td>
<td>83.3</td>
</tr>
<tr>
<td>Geography/Geographic Information Science</td>
<td>New requirement, not yet assessed</td>
</tr>
</tbody>
</table>

- analyses of theses N/A
- portfolios N/A
- completion rates
- graduate school attendance rates

The use of a post-graduate survey on the Environmental Science Program web page did not provide data because of lack of responses. Exit interviews (during the last quarter enrolled) indicated however that 54.2% of graduating Environmental Science students planned to attend graduate school. Of those students, 22.7% had been accepted.
• external review of theses/dissertations N/A

• annual review of student progress, especially for graduate students

While no formal annual review of student progress is performed, students meet quarterly with their academic advisor for registration. This meeting provides an opportunity for students and faculty to assess student progress toward completion of the curriculum. The curriculum sheets (Appendix C) are used for this evaluation.

• exit interviews and graduating surveys

An exit interview and survey is used to assess student perception of the program, coursework, advising and benefits:

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Mean response on a scale with 6 as excellent, 4 good, and 1 very poor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introductory core courses</td>
<td>4.3</td>
</tr>
<tr>
<td>Advanced core courses</td>
<td>4.3</td>
</tr>
<tr>
<td>Elective course and requirements for minor</td>
<td>4.4</td>
</tr>
<tr>
<td>Advising and registration</td>
<td>3.4 (scale with 4 as maximum)</td>
</tr>
<tr>
<td>Benefits and gains</td>
<td>3.3 (scale with 4 as maximum)</td>
</tr>
</tbody>
</table>

• external awards and accomplishments and competitions N/A

• student satisfaction levels

Exit surveys indicate that students are satisfied with the Program:

<table>
<thead>
<tr>
<th>Satisfaction</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very satisfied</td>
<td>13.3%</td>
</tr>
<tr>
<td>Satisfied</td>
<td>53.3%</td>
</tr>
<tr>
<td>Slightly satisfied</td>
<td>33.3%</td>
</tr>
<tr>
<td>Slightly dissatisfied</td>
<td>0</td>
</tr>
<tr>
<td>Dissatisfied</td>
<td>0</td>
</tr>
<tr>
<td>Very dissatisfied</td>
<td>0</td>
</tr>
</tbody>
</table>

• job placement rates

The use of a post-graduate survey on the Environmental Science Program web page did not provide data because of lack of responses. Exit interviews indicated however that 91% of students received full- or part-time job offers, or were going to enroll in graduate school (n = 11; academic years 01/02 – 02/03).

• evaluations by employers, follow-up studies of alumni, assessment reports or minutes from advisory boards or other external review agencies such as previous SACS Assessments
The advisory panel met last in 1997. At that time, the changes in the curriculum were suggested by the panel and later implemented by the faculty. For example, the panel suggested requiring Geography and Political Science courses as Social Science disciplines rather than leaving the selection open. Further, the panel recommended including calculus as a required Mathematics course. Lastly, the panel suggested that the organic chemistry series be replaced by two courses. One course encompasses both organic and biochemistry. The second course focuses on analytical chemistry.

3. Critically analyze/review information and data collected about the curriculum. Identify strengths, weaknesses, and opportunities for this curriculum. Report strengths, weaknesses and opportunities identified. Present your analysis of this data in the text; include the specific evidence in the Appendix.

Strengths:

a) Participation by multiple units providing an interdisciplinary program: Section II.1 summarizes involvement by three units within the College of Applied and Natural Sciences, three areas within the College of Engineering and Science and one unit within the College of Liberal Arts.

b) Science-based program: Section III.1 lists the science core of the curriculum, which represents ca. 60 credit hours of science courses.

c) Student-designed curriculum: Students are expected to complete a minor providing a mechanism for individual student design of the curriculum (Section IV.1).

d) Core competencies generally achieved: Section IV.2 documents that 100% of graduating seniors achieved ≥ 70% on an exit exam testing base knowledge.

e) Successful student job placement or intent to attend graduate school: As noted in section IV.2, 91% of graduating students found or were offered full- or part-time employment or intended to attend graduate school.

Weakness:

a) Lack of free electives: While students select a minor, no additional hours are available to provide choice of free electives.

Opportunity:

a) Use of the NSF funded program, Integrated Science Curriculum (includes Biological Sciences, Math, Chemistry and Physics) as model for future integration of Environmental Science courses with math, chemistry and perhaps geographic information sciences.

VI. Prior Assessment and Development of the Program

1. Describe how assessment results have been used in the recent past to improve the program goals, learning outcomes, curriculum, faculty, or resources.

Primarily three changes have resulted from recent assessments. First, exit exams (Section
IV.2) indicated a weakness in student knowledge (or perhaps agreement) of the most significant global environmental problem. This weakness is being addressed in Ecology and in the Introduction to Environmental Science. The Introductory course, in particular, has been changed. It is no long team taught, simplifying integration with Ecology and emphasis on learning competencies.

Secondly, exit surveys revealed that students received insufficient opportunities for group learning and activities. Again, revision of the Introductory course addressed this weakness by including more group discussion and group projects.

Lastly, the application of natural resource management and sustainability involves a spatial element. Therefore, the curriculum was altered to include two Geographic Information Sciences courses. These courses were added with only an additional hour of total credit hours by removing one hour for directed electives and removing the introduction to microcomputers requirement. Information and computer literacy, and technology are well covered in Ecology, Geographic Information Sciences and Biological Sciences courses.

2. Report the implications of the findings, particularly as they relate to needed changes in the curriculum.

Changes were implemented as discussed above (Section IV.1). The consequences of these changes will include improved learning competencies by the students. Further two of these competencies, teamwork and learning and spatial information, will improve employability of graduates. The NACE Job Outlook 2002, for example, which summarizes employer surveys, indicates that teamwork is the third most desired skill or attribute of employees. Communications are ranked first and interpersonal skills are ranked fourth. Improved communication and interpersonal skills are an additional outcome of teamwork, learning and projects. Familiarity with spatial analysis is also beneficial to employers as most environmental issues involve a spatial component.

3. Describe how you will use the information you have collected and analyzed, outlining changes to be made based on the evidence collected; such changes might include developing new courses, deleting courses, adding special topics, etc.

A remaining weakness (based on results from the exit exam, Section IV.2) that needs to be addressed is student knowledge concerning degradation of xenobiotic compounds. As a number of faculty conduct research on bioremediation, incorporating additional material in Soil Science, Ecology and Introduction to Environmental Science will not be difficult. An experiment addressing bioremediation of xenobiotic compounds may also be incorporated into Soil Sciences Laboratory.

One last change may be considered. Exit surveys have indicated an interest by several students in the economic aspects of environmental science. This is a logical extension of environmental science as many regulatory, manufacturing and restoration decisions incorporate scientific, political and economic factors. Consequently, consideration will be given to requiring economics as the third social science course required by students.
Currently, Geography and Political Science are required with a free additional three hours.

4. If your academic unit teaches courses used to satisfy the General Education Requirements at Louisiana Tech University, describe in adequate detail the measures your unit and/or the University are using to evaluate the skills and knowledge added by these courses. For this purpose, use Appendix B, Assessment of General Education Requirement Courses.

VII. Faculty

The intent of this section is to tie faculty to unit goals and discuss means of maintaining faculty expertise and quality.

1. List the major subject subdivisions in your program, listing the faculty who teach in those areas.

The following list includes those faculty that participate in the program and are cross-listed with environmental science and their home unit (CVs in Appendix D).

Biological Sciences
   Dr. William Campbell, full-time, Plant Physiology, Ph.D., University of Florida
   Dr. Wes Colgan, full-time, Ph.D., Forest Ecology, Oregon State University
   Dr. Ed Griswold, full-time, Ph.D., Biology, University of South Carolina
   Dr. Howard Hunt, full-time, Ph.D., Wildlife and Fisheries Sciences, Texas A&M University
   Dr. Paul Ramsey, full-time, Ph.D., Zoology-Ecology, University of Georgia
   Dr. James Spaulding, full-time, Ph.D., Zoology, University of Wisconsin
   Dr. Wendy Trzyna, full-time, Ph.D., Molecular Biology, University of Wyoming
   Dr. Milan Vavrek, full-time, Ph.D., Biology, West Virginia University
   Dr. John Wakeman, full-time, Ph.D., Zoology, University of Texas

Forestry
   Dr. James Dickson, full-time, Ph.D., Forestry, Louisiana State University
   Dr. James Dyer, full-time, Ph.D., Forestry, Louisiana State University
   Dr. William Patterson, full-time, Ph.D., Forestry, Louisiana State University
   Dr. Rayiz Sadiq, full-time, Ph.D., Forestry, University of Toronto

Agriculture and Plant Sciences
   Dr. Peter Gallagher, full-time, Ph.D., Landscape Horticulture, Ohio State University
   Dr. Jeff Hillard, full-time, Ph.D., Soil Science, Texas A&M University
   Dr. Susan Watson, full-time, Ph.D., Agricultural and Applied Economics, Texas Tech University
   Dr. Charles Winstead, full-time, Ph.D., Agronomy Crops, Turfgrass Management Mississippi State University

GeoSciences
   Dr. Maureen McCurdy, full-time, Ph.D., Land Resources, University of Wisconsin
For each faculty member listed above

- Indicate if faculty member is full time or part time

- List the highest degree attained, the name of the university awarding the degree, and the field in which the degree was awarded.

- If the faculty member teaching undergraduate courses does not have a masters degree with 18 graduate semester hours in the teaching field, briefly describe outstanding professional experience and demonstrated contributions to the teaching discipline.

2. Describe the mechanisms used in your unit to ensure that each faculty member is "providing quality instruction for all classes assigned" (Faculty and Staff Handbook). Such mechanisms would include unit level seminars and meetings devoted to teaching and curriculum development, attending faculty development activities presented by the Center for Faculty Excellence, attending subject area conferences, attending conferences and workshops focused on teaching, and competing for Summer Research Grants and Instructional Innovation Grants.

These mechanisms are performed at the unit level (i.e., the home unit in which faculty are awarded tenure). The mechanisms include, at minimum, an annual evaluation by the unit head, which includes review of student evaluations.

VIII. Faculty/Student Contact

1. Describe any activities which promote student-faculty interaction, such as organizations, formal meetings, and informal counseling and other contacts.

The College of Applied and Natural Sciences maintains on its website (www.ans.latech.edu) featured students in each of the academic units and programs. Students chosen post a brief statement about their experience at Louisiana Tech, including mention of a particular teacher who served as a mentor and role model to them during their academic experience.

Each Spring quarter, a College-wide ANS Day is observed. All ANS students are provided lunch, door prizes are drawn, and the featured students are publicly recognized before the entire College. A student poster contest associated with the ANS Research Symposium held on the same day is also judged and prizes awarded. Faculty recipients of special awards for teaching and research are presented to the students.

The Environmental Science student organization will be re-formed in the near future. A faculty member has agreed to work with the students. Aside from advising each quarter and the activities mentioned above, two additional activities bring students and faculty together. First, the Environmental Science Program sponsors outside speakers for the Biological Sciences Seminar Series. Secondly, Environmental Science students are invited and attend the School of Biological Sciences Octoberfest. In the past, Environmental Science students
have also been included in the Agricultural Sciences awards dinner.

2. If faculty serve as advisors, describe how faculty are trained to be advisors in the program. If not, describe how advising occurs in the unit.

As Environmental Science is an interdisciplinary Program, advisor training occurs in the home unit and at the College level. New faculty are trained by the College at an orientation (Orientation Agenda attached as Appendix E) and provided with a copy of the College of Applied and Natural Sciences Advising Guidelines. The Guidelines are attached at Appendix F).

**IX. Facilities and Support**

1. Identify the facilities (classroom, laboratory, studio) and equipment available to the program.

No facilities and equipment are specific to Environmental Science. Rather as an interdisciplinary program, facilities are made available as required by participating units. Primarily facilities and equipment are provided by the units within the College of Applied and Natural Sciences and include the School of Biological Sciences (available facilities listed in program review of Biological Sciences), Department of Agricultural Sciences (program review of Plant Sciences) and School of Forestry (review of Wildlife Conservation). Facilities reviewed for Chemistry and Geology also are used in the core courses of the Program.

3. Report all financial support for the program, including operating funds, travel funds, equipment funds, support from student fees, funds for assistantships and fellowships, funds for student workers, and grant/gift income. Provide a three-year summary and a projection for the coming year:

<table>
<thead>
<tr>
<th>Year</th>
<th>Student fee assessment</th>
<th>Coop Ed Work Experience</th>
<th>Gift</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000-2001</td>
<td>$ 741</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2001-2002</td>
<td>$ 707</td>
<td>$ 478</td>
<td></td>
</tr>
<tr>
<td>2002-2003</td>
<td>$ 798</td>
<td>$ 316</td>
<td></td>
</tr>
<tr>
<td>2003-2004</td>
<td>$ 798</td>
<td>$ 637</td>
<td>$ 45</td>
</tr>
</tbody>
</table>

**X. Program Strengths and Weaknesses**

Considering all of the above sections on students, program goals and organization, and faculty expertise, assess the program strengths and weaknesses.

1. Identify areas of particular strength in program make-up, students, and faculty. Refer to
Strength of the program repeats, in part, strengths in the curriculum:

a) Participation by multiple units providing an interdisciplinary program: Section II.1 summarizes involvement by three units within the College of Applied and Natural Sciences, three areas within the College of Engineering and Science and one unit within the College of Liberal Arts.

b) Science-based program: Section III.1 lists the science core of the curriculum, which represents ca. 60 credit hours of science courses.

c) Student-designed curriculum: Students are expected to complete a minor providing a mechanism for individual student design of the curriculum (Section IV.1).

d) Core competencies generally achieved: Section IV.2 documents that 100% of graduating seniors achieved ≥ 70% on an exit exam testing base knowledge.

e) Successful student job placement or intent to attend graduate school: As noted in section IV.2, 91% of graduating students found or were offered full- or part-time employment or intended to attend graduate school.

f) Program governance that functions well (Governance attached as Appendix G).

Additional strengths include:

a) Support by the School of Biological Sciences: The School of Biological Sciences strongly supports the Program and has hired a new faculty member as an Environmental Biologist to help strengthen the Program.

b) Inclusion of environmental awareness in College mission statement

2. Identify areas that need improvement, again with specific reference to information given/documented in this report.

a) Low enrollment:

b) Lack of student organization:

c) Insufficient program recognition: Lack of awareness of the Program relates to and reinforces the previous two weaknesses.

XI. Future Actions to Improve the Program

Project any contemplated changes over the next two years to improve the program. Any changes should be those which can be achieved by the present or realistically-projected additional resources; any improvement dependent on additional resources should have those resources fully explained. Such resources might include increased enrollment, realistic changes in faculty, expanded budgets, higher admission standards, university recruiting changes, and grants or other outside funding that might be received.

This section should be grounded on the analysis in the earlier sections of this document.

a) Increase enrollment: A recruiting plan has been developed to increase enrollment.

b) Reconstitute the Environmental Science student organization: A faculty member has agreed to assist with the organization.
c) Build program recognition:
   a. Expand class projects: The students Introduction to Environmental Science (Fall 2004) produced a poster on the importance of clean drinking water for the annual University health fair. The number of these projects will be expanded
   b. Conduct projects by the student organization: Projects performed by the students organization can provide publicity for the Program.
   c. Expand seminar presentations: The Program sponsored two seminars presented by outside speakers as part of the School of Biological Sciences Seminar Series. Further support of additional speakers will generate interest in the Program.
   d. Introduce non-majors to Environmental Science: The cross-listing of the Introductory Environmental Science course sequence with Biological Sciences provides an alternate science series for the GER, introducing non-majors to Environmental Science.
   e. Increase research collaborations among Environmental Science faculty: The strategic plan of the College of Applied and Natural Sciences includes building an area of excellence in environmental technology. This action will serve to increase research collaborations within the College and University, providing additional awareness of the program.
Appendix A Expected Outcomes for All Tech Graduates

This "inventory of skills expected to be taught in university courses" was compiled by the Curricula Effectiveness Council and approved by the Council of Academic Deans and Administrative and Planning Council. GER courses were surveyed in 1998 to determine the extent to which skills/outcomes were addressed. The survey instrument (copy attached) may be used in individual classes for assessment of achievement of expected skills/outcomes.

Survey (noting Expected Outcomes) is attached.
Appendix B Assessment of General Education Requirement Courses

The Board of Regents lists the following skills to be developed through the GER courses:

- to communicate effectively in oral and written English;
- to read with comprehension;
- to reason abstractly and think critically;
- to understand numerical data and statistics;
- to understand the scientific method;
- to be familiar with key technological applications of the basic sciences;
- to learn independently;
- to recognize and appreciate cultural diversity;
- to understand the nature and value of the fine and performing arts;
- to develop a personal value system while retaining a tolerance for those of others; and
- to understand the American political and economic system.

From that list, the Regents generated specific area requirements. From those area requirements, Louisiana developed its own version of the GER and the areas/courses to be used to satisfy those requirements:
<table>
<thead>
<tr>
<th><strong>Board of Regents' Minimum</strong></th>
<th><strong>Louisiana Tech University 2001-2002</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>English — 6 hours</strong></td>
<td><strong>English — 6 hours</strong></td>
</tr>
<tr>
<td><strong>6 hours composition</strong></td>
<td><strong>6 hours composition</strong></td>
</tr>
<tr>
<td><strong>Mathematics — 6 hours, beginning at a level no lower than college algebra</strong></td>
<td><strong>Mathematics — 6 hours 101 or above + 3 hours</strong></td>
</tr>
</tbody>
</table>
| **Natural Sciences — 9 hours** | **Natural Sciences — 9 hours**  
Must include both physical and biological sciences with at least 6 hours from a two-quarter sequence Physical: Chemistry  
Physics Geology Biological: Biological Sciences |
| **Arts — 3 hours** | **Arts — 3 hours**  
Art 290: Art Appreciation Music 290: Music Appreciation  
Speech 290: Theatre Appreciation HPE 280: Dance Appreciation |
| **Humanities — 9 hours (3 at sophomore or above)** | **Humanities —12 hours**  
History ** - any 3 hours Literature  
** - any 3 hour literature class  
Speech Communication **  
Three hours at the sophomore level or above from one of the following areas:  
Foreign Languages - 200 level or above Philosophy- any course English - 200 level or above |
| **Social Studies — 6 hours** | **Social Sciences — 9 hours**  
From a minimum of 2 disciplines: Anthropology, Economics, Geography, Political Science, Psychology, Sociology |
| **Computer Literacy —** | **Computer Literacy — Curriculum chosen by the student must provide basic instruction in and/or use of computer technology.** |
| **Requirements to be determined by each institution** | **Requirements to be determined by each institution** |
| **Total Hours: 39** | **Total Hours: 45** |
The Southern Association of Colleges and Schools (SACS) now requires that General Education courses be specifically evaluated as part of the SACS re-accreditation process. To satisfy this requirement, please submit the following information:

1. Give the Mission Statement for your academic unit, which must include a statement about the unit's teaching of GER courses.

2. List the courses in your academic unit that are typically used to satisfy a Louisiana Tech University GER requirement.

3. For these courses, individually or in groups (if they are used to satisfy the same GER requirement), list the Expected Outcomes, those skills the course is to develop. For those skills, use the Regents' list in Appendix B.

<table>
<thead>
<tr>
<th>Skill</th>
<th>Course content</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication</td>
<td>Developed in group projects, student presentations and written summaries of outside literature</td>
</tr>
<tr>
<td>Reading</td>
<td>Developed by a requirement for four summaries of outside literature involving environmental issues as well as required course readings</td>
</tr>
<tr>
<td>Critical thinking</td>
<td>Developed in group projects, students presentations, outside readings in-class writing exercises and class discussion</td>
</tr>
<tr>
<td>Understanding the scientific method</td>
<td>Developed through lecture</td>
</tr>
<tr>
<td>Familiarity with technology</td>
<td>Developed through lecture concerning measurement of environmental parameters</td>
</tr>
<tr>
<td>Independent learning</td>
<td>Developed in student presentations and outside readings</td>
</tr>
<tr>
<td>Appreciation of cultural diversity</td>
<td>Developed through films, for example, cultural diversity discussed as part of LA coastal systems; and discussions involving environmental ethics</td>
</tr>
<tr>
<td>Understanding political and economic systems</td>
<td>Development of public policy, environmental regulations and environmental economics are discussed in lecture</td>
</tr>
</tbody>
</table>

4. For these courses, tell how your academic unit determines that those skills are being taught in the courses (such items as syllabi that list-Expected Outcomes and Catalog
course descriptions).

<table>
<thead>
<tr>
<th>Skill</th>
<th>Syllabi statements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication</td>
<td>“Read an article that discusses environmental issues and write a short review on this article”</td>
</tr>
<tr>
<td>Reading</td>
<td>“Four exams, covering material presented in assigned readings and in lecture, will be given”</td>
</tr>
<tr>
<td>Critical thinking</td>
<td>“In class writing exercise: These will be short answer questions that will be worth 2 to 4 points each, and will be done at the end of every class period”</td>
</tr>
<tr>
<td>Understanding the scientific method</td>
<td>Lecture topic: “Introduction” [includes scientific method]</td>
</tr>
<tr>
<td>Familiarity with technology</td>
<td>Lecture topics “Air pollution; Water pollution” [includes assessment technology]</td>
</tr>
<tr>
<td>Independent learning</td>
<td>Individual and group assignments: “Biodiversity assignment; Restoration assignment”</td>
</tr>
<tr>
<td>Appreciation of cultural diversity</td>
<td>Lecture topic: “Economics and Ethics”; “Louisiana Environmental Issues” [includes coastal issues]</td>
</tr>
<tr>
<td>Understanding political and economic systems</td>
<td>Lecture topic: “Economics and Ethics; Environmental economics; Pollution control, toxicology and risk” [includes public policy and regulation]</td>
</tr>
</tbody>
</table>

5. For these courses, tell how your academic unit internally documents that these skills have been transmitted to the student (such evaluation methods as standardized tests, written essays, final portfolios, oral presentations, research papers, and other teacher and peer assessments methods, as would apply).

Evaluation of written summaries, oral presentations, group projects, writing exercises and examinations provides assessment of skills learned by students.

6. For these courses, tell how your academic unit externally documents that these skills have been transmitted to the student (such evaluation methods such as feedback from other academic units, standardized university-level testing, outside reviewers or other assessments methods, as would apply).

BISC 211 and 212 are new (2003/04 academic year) as a sequence to fulfill the natural science GER requirements. Therefore no external review has occurred to date. However previously, Introduction to Environmental Science has been specifically required in the
Middle School Education – Science Grades 4-8, the Biology Education - Grades 7-12, the Chemistry Education Grades 7-12, and the Earth Science Education – Grades 7-12 curricula indicating value of the course for particular curricula.

7. Tell how the assessment results discussed in #5 and #6 are used in the annual academic unit plan to improve the GER courses taught in the unit (such possible improvements as changes in course content, textbooks, etc.).

Again, as the sequence is new, the assessments above will be evaluated by the Coordinator of the Environmental Science Program and the Environmental Biology Workgroup as to whether competency goals are being met. Further, instructors of these courses will review the assessments along with student evaluations during annual faculty reviews with the Director of the School of Biological Sciences.
Appendix C Environmental Science Curriculum Check Sheet
ENVIRONMENTAL SCIENCE
NAME
SOCIAL SECURITY #
DATE ENTERED PROGRAM

GENERAL EDUCATION REQUIREMENTS

**Arts**
- ART 290; HPE 280;  
- MUGN 290; SPTH 290  3 (3)

**English**
- 100 or 101  3
- 102  3 (6)

**Humanities**
- English Literature  3
- English  303  3
- History  3
- Speech 110, 377, or Eng 463  3 (12)

**Mathematics**
- 100 or 101  3
- 112  3
- 220  3 (9)

**Natural Sciences** (see below)

**Social Sciences** *(minimum of two disciplines)*
- Geography  3
- Political Sci  3 (9)

ENVIRONMENTAL SCIENCE REQUIREMENTS

Individual courses for Environmental Science Requirements (BISC, CHEM, ENSC, GEOL, GISC, STAT, and Directed Electives) must be completed with a minimum grade of “C.”

**Biological Sciences (BISC)**
- 130  3  216  3
- 131  1  217  1
- 132  3  260  4 (16)
- 133  1

**Chemistry**
- 100  2  121  3
- 101  2  205  4 (15)
- 102  2
- 103  1
- 104  1

**Environmental Science (ENSC)**
- 211  3  40  1
- 310  3  444  3
- 311  1  458  3 (20)
- 313  3
- 477, 478, or 479  3

**Geographic Information Sciences**
- 255  2
- 355  3 (5)

**Geology**
- 111  3
- 121  1 (4)

**Statistics**
- 3 (3)

**Directed Electives***

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**TOTAL HOURS 123**

*Students are expected to obtain a minor in an area of their choice; if a student does not choose a minor, then directed electives are selected from: Animal Science, Biological Sciences, Chemical Engineering, Chemistry, Environmental Science, Forestry, Geography, Geology, Physics, or Plant Science.
Appendix D Environmental Science Faculty Curricula Vitae
William J. Campbell, Jr.

Associate Dean for Graduate Studies and Research  
Associate Professor of Biological Sciences

College of Applied and Natural Sciences  
P.O. Box 10197  
Louisiana Tech University  
Ruston, LA 71272

Telephone: (318) 257-4287  
Fax: (318) 257-5060  
Email: campbell@latech.edu

Education


M.S.  (1979) Agricultural Engineering, University of Florida, Gainesville, FL

B.A.  (1972) Zoology, University of South Florida, Tampa, FL

Professional Society Memberships

American Association for the Advancement of Science  
American Society of Plant Biologists  
Gamma Sigma Delta

Academic and Research Experience

2000-present  
Associate Dean for Graduate Studies and Research  
College of Applied and Natural Sciences  
Louisiana Tech University, Ruston, LA.

1999-2000  
Interim Associate Dean for Graduate Studies and Research  
College of Applied and Natural Sciences  
Louisiana Tech University, Ruston, LA.

1998 - present  
Associate Professor,  
School of Biological Sciences,  
Louisiana Tech University, Ruston, LA.

1992 - 1998  
Assistant Professor,  
School of Biological Sciences,  
Louisiana Tech University, Ruston, LA.

1990 - 1991  
Plant Physiologist,  
Photosynthesis Research Unit,  
United States Department of Agriculture,  
Agricultural Research Service,  
University of Illinois, Urbana, IL
1987 - 1990  Postdoctoral Research Associate,
Dr. William L. Ogren's Laboratory,
Department of Agronomy,
University of Illinois, Urbana, IL

1981 - 1986  Graduate Research Assistant/Associate,
Department of Agronomy,
University of Florida, Gainesville, FL

1980 - 1981  Graduate Research Assistant,
Agricultural Engineering Department,
University of Florida, Gainesville, FL

1973 - 1979  Laboratory Technologist,
Agricultural Engineering Department,
University of Florida, Gainesville, FL

1972 - 1973  Laboratory Technician,
Florida State Division of Health,
Orlando, FL

Awards
Recipient of Weathersby Professorship
College of Life Sciences/Applied and Natural Sciences

Outstanding Researcher Award
College of Applied and Natural Sciences
Louisiana Tech University, 1997

Grants Received and Cooperative Activities

"Nanoscale Biotechnology: Molecules, Methods, Devices, and Applications", Donald Haynie, Yuri Lvov, Michael McShane, John McKillip, David Mills, William J Campbell, PI's ($1,950,000.) Governor's Biotechnology Initiative, Baton Rouge, LA (2002-2007)


"Developmental and Genetic Variation of Rubisco Activase Polypeptides", ($840.) Summer Research Grant Award, Louisiana Tech University, (1998).

"Effects of Environmental Growth Conditions on the Levels of Rubisco Activase Polypeptides in Plants", ($1,000.) Summer Research Grant Award, Louisiana Tech University, (1996).

"Quantification of Photosynthetic Proteins in Plants Grown at Different Concentrations of CO2", ($1,000.) Summer Research Grant Award, Louisiana Tech University, (1995).

"Light Regulation of Rubisco Activity in Leaf Tissue", ($1,000.) Summer Research Grant Award, Louisiana Tech University, (1992).

"Analysis of a cytoskeleton-associated protein from cotton". ($1,000.). Cooperative agreement with U.S. Department of Agriculture, Agricultural Research Service, Southern

Publications


Campbell WJ, Ogren WL (1992) Light activation of rubisco by rubisco activase and thylakoid
membranes. Plant Cell Physiology 33:751-756


Published Abstracts


Li W, Campbell WJ (1996) Response of rubisco activase protein levels in two species
following growth at elevated CO2. Plant Physiology Supplement 111:94.


Graduate Student Research Theses Chaired (M.S. Biology)
McDiarmid, Royiaa (Master of Science, 2000) Response of Rubisco Activase Protein Expression to Heat Treatment. (Chair of graduate advisory committee)

Cummings, Karen (Master of Science, 2000) The Effects of a Stomwater Detention Basin on Pollutant Loads (Chair of graduate advisory committee)

Rogers, Susan (Master of Science, 1999) Rubisco Activase Polypeptide Levels During Plant Development (Chair of graduate advisory committee)

Jayaraman, Bhuvaneswari (Master of Science, 1998) Response of rubisco and rubisco activase protein levels in soybean during vegetative growth. (Chair of graduate advisory committee)

Higginbotham, Lawrence (Master of Science, November 1996) Assay of actin levels in developing cotton fibers. (Chair of graduate advisory committee)

Li, Wei (Master of Science, 1995) Effects of CO2 concentration on rubisco activase in leaves of two C3 species. (Chair of graduate advisory committee)

Selected Professional, University, College, and Department/School Service

Advisory Panel, Louisiana Applied Oil Spill Research and Development Program (2002-present)
University Intellectual Property Committee (2000-present)
University Research Council, 1999 - present
Chair, University Faculty and Staff Handbook Committee, 1997-present
University Graduate Council, 1997 - present
University Faculty Senate Executive Committee, 1996-1997
University Faculty Senate, 1995-1998
University Faculty and Staff Handbook Committee, 1995-present
University Graduate Faculty, 1992-present

Meeting Presentations

2003 WAC Academic Alliance, San Jose, CA

2003 American Society of Plant Biologists, Honolulu, HI
"Responses to elevated carbon dioxide by a regenerating pine ecosystem", W.J. Campbell, M.A. Osuna, and M.C. Vavrek

2002 American Society of Plant Biologists, Denver, CO
"Interaction of plants and microorganisms limits remediation of spilled oil", W.J. Campbell,
M.C. Vavrek, and W. Colgan III

2002 Southern Association of Agricultural Scientists, Orlando, FL “Plant-microbe interactions in remediation of petroleum”, W.J. Campbell, M.C. Vavrek, and W. Colgan, III


2001 Southern Association of Agricultural Scientists, Ft. Worth, TX “Environmental regulation of leaf photosynthetic protein accumulation”, W.J. Campbell, S.H. Rogers, and R.E. McDiarmid


American Society of Plant Physiologists, San Diego, CA “Response of rubisco activase protein in corn and wheat to high temperature”, W.J. Campbell and R.E. McDiarmid

2000 Louisiana OSRADP Research Symposium, Baton Rouge, LA "Phytoremediation of petroleum: identification of plant traits that enhance degradation", M.C. Vavrek and W.J. Campbell

1999 American Society of Plant Physiologists, Baltimore, MD "Vegetation recovery from spilled oil in a wetland community", W.J. Campbell and M.C. Vavrek

1999 XVI International Botanical Conference, St. Louis, MO "Alteration of rubisco activase protein levels in leaf tissue", W.J. Campbell and R.E. McDiarmid

1999 Ecological Society of America, Spokane, WA "Impact of oil spills on regeneration ecology of wetland plant communities", M.C. Vavrek and W.J. Campbell
1999    Arctic and Marine Oils Spill Program Technical Seminar, Calgary, Canada
"Use of seed banks for oil spill restoration",
M.C. Vavrek and W.J. Campbell

1999    Louisiana OSRADP Research Symposium, Baton Rouge, LA
"Development of a germination index of sensitivity to applied oil (Year 2)",
W.J. Campbell and M.C. Vavrek

1999    Louisiana OSRADP Research Symposium, Baton Rouge, LA
"Use of donor seed banks in terrestrial vegetation recovery after an oil spill",
M.C. Vavrek and W.J. Campbell

1998    American Society of Plant Physiologists, Madison, WI
"Variation in Polypeptide Composition of Rubisco Activase",
W.J. Campbell

1998    Clean Gulf’98 Conference, Biloxi, MS
"Use of donor seed banks in terrestrial vegetation recovery after an oil spill",
M.C. Vavrek and W.J. Campbell

1998    Louisiana OSRADP Research Symposium, Baton Rouge, LA
"Development of a germination index of sensitivity to applied oil",
M.C. Vavrek and W.J. Campbell

1998    Recent Research in Coastal Louisiana: Natural System Function and Response to
Human Influence, LUMCON, Lafayette, LA, "Impact of Oil on Germination from a Wetland
Seed Bank", J.M. Peel, M.C. Vavrek, and W.J. Campbell

1997    American Society of Plant Physiologists, Vancouver, Canada
"Intraspecific variation of rubisco and rubisco activase protein levels in
tomato leaves grown at elevated CO2 concentration", W.J. Campbell

1997    Clean Gulf’97 Conference, Kenner, LA
"Development of a germination index of sensitivity to applied oil (Year 1)",
M.C. Vavrek and W.J. Campbell

1996    American Society of Plant Physiologists, San Antonio, TX
"Response of rubisco activase protein levels in two species following
growth at elevated CO2", Wei Li and W.J. Campbell

1996    Beltwide Cotton Research Conferences, Nashville, TN
"Assay and quantification of actin in developing cotton fibers",
L. Higginbotham, B.A. Triplett, and W.J. Campbell
1992 American Society of Plant Physiologists, Pittsburgh, PA 
"Assay of rubisco activase activity in leaf tissue",
W.J. Campbell and W.L. Ogren

1991 American Society of Plant Physiologists, Albuquerque, NM 
"Light activation of rubisco by thylakoid membranes and rubisco activase",
W.J. Campbell and W.L. Ogren


1990 American Society of Plant Physiologists, Indianapolis, IN 
"Photosystem I electron transport is required for stimulation of rubisco light activation", W.J. Campbell and W.L. Ogren

1989 American Society of Plant Physiologists, Toronto, Canada 
Chaired session on "Photosynthesis: Carbon Metabolism"

1989 American Society of Plant Physiologists, Toronto, Canada 
"Non ATP-dependent light stimulation of rubisco activation",
W.J. Campbell and W.L. Ogren

1988 American Society of Plant Physiologists, Reno, NV 
"Inhibition of rubisco activation by glyoxylate in intact and lysed chloroplasts", W.J. Campbell and W.L. Ogren

1987 American Society of Plant Physiologists, St. Louis, MO 
"Effects of CO2 concentration on rubisco amount, activity, and photosynthesis in soybean leaves", W.J. Campbell, L.H. Allen Jr., and G. Bowes

1987 American Society of Plant Physiologists, St. Louis, MO 
"Effect of changes in light intensity on RuBP carboxylase activity modulated by the endogenous inhibitor of the enzyme in soybean leaves", G.P. Holbrook, W.J. Campbell, and G. Bowes


1985    Gordon Research Conference on Photosynthetic CO₂ Fixation
       In Green Plants, "Effects of carbon dioxide concentration
       on soybean photosynthesis and RuBP carboxylase activity"

1985    American Society of Plant Physiologists, Providence, RI
       "Soybean RuBPCase and photosynthesis at various CO₂ levels",

1985    American Society of Agronomy, Chicago, IL
       "Comparison of leaf and canopy photosynthesis in soybeans grown at two
       CO₂ concentrations", W.J. Campbell, P.H. Jones, L.H. Allen Jr., J.W. Jones

1985    Crop Science Society of America, Chicago, IL
       Chaired session on "Soybean Physiology"

1984    American Society of Agronomy, Las Vegas, NV
       "The response of leaf photosynthetic rates to CO₂",
       W.J. Campbell, L.H. Allen Jr., J.W. Jones, and J.W. Mishoe

       "Leaf biochemical model of photosynthetic responses to CO₂ enrichment",
       W.J. Campbell, P.H. Jones, L.H. Allen Jr., and K.J. Boote

       "Simulation of crop canopy responses to CO₂ concentration, temperature,
       and vapor pressure deficit", S.E. Beladi, L.H. Allen Jr., W.J. Campbell,
       and J.W. Jones

1982    Gordon Research Conference on Photosynthetic CO₂ Fixation
       In Green Plants, "Canopy, leaf and chloroplastic response to elevated
       CO₂: experimental work and model development", P.H. Jones, C.V. Vu,
1982 American Society of Agronomy, Anaheim, CA
Wesley Colgan III

Personal Information
Born: 02/05/1969, Santa Rosa, California
SSN: 548-45-6167
Citizenship: United States
Home address: 2016 Alexander Ave, Ruston LA 71270
Phone: (318) 513-1051
Email: wcolgan@latech.edu

Education
1992 - 1997
Oregon State University
Department of Forest Science
Corvallis, OR, 97330
Ph. D. Forest Ecology
1990 - 1992
Sonoma State University
Department of Biology
Rohnert Park, CA, 94928
B.A. Biology
1986 - 1990
Santa Rosa Junior College
1501 Mendocino Ave
Santa Rosa, CA 95401
Undergraduate core courses

Professional Experience
9/99- Present Assistant Professor (Tenure track)
School of Biological Sciences
Louisiana Tech University, Ruston LA
Courses Taught:
BISC 102 Fundamentals of Biology II (non majors)
BISC 130 Biological Principles
BISC 310 Genetics (coordinator for team taught course)
BISC 444/544 Environmental Microbiology
BISC 421/521 Mycology
BISC 454/554 Microbial Ecology
BISC 424/525 Medical Mycology
BISC 535 Current Topics: Symbiosis
BISC 535 Current Topics: Coevolution
BISC 535 Current Topics: Evolutionary Analysis
Faculty Coordinator BISC 131 Biological Principles Lab
BISC 133 Biological Diversity Lab
Guest Lectures in BISC 450/516 PCR Methods and Applications
BISC 502 Research Methods
9/97- 12/98 Adjunct Professor
Department of Biology
Fort Lewis College, Durango CO.
Courses taught:  Biology 111 Biology of the Cell
                 Biology 300B Plants and Human Affairs
                 Biology 111L Biology of the Cell Laboratory
                 Biology 100L Survey of Life Sciences Laboratory
Faculty Advisor:  Epsilon Upsilon Chapter, Tri-Beta Biological Honor Society

9/98- 12/98 Instructor
Pueblo Community College
Southwest Center, Durango CO.
Courses taught:  Biology 201 Human Anatomy and Physiology

1/93-12/96 Graduate Research Assistant
Department of Forest Science
Oregon State University
Project included 3 years of field sampling for ectomycorrhizal fungi, and included instruction and supervision of volunteers from all walks of life. Also participated in surveys for small mammals and plant diversity, and in dietary analysis of mammal populations.

9/96-12/96 Teaching Assistant
Introductory Mycology
Teaching Advisor:  Joseph W Spatafora
Department of Botany and Plant Pathology
Oregon State University
Included laboratory and lecture

Additional Professional Activities
Invited Presentations (Since 1997, of 16):

2/1/00  “Evolution of truffle-like fungi” Sigma XI, Current research lectures, Louisiana Tech University lecture series, Ruston.


6/8/99  “Ideas on the evolution of truffle like fungi” Monthly meeting of the Mycological Society of San Francisco, San Francisco, CA

3/9/99  "Truffles around the world” presented at the monthly meeting of the Sonoma County Mycological Society. Santa Rosa, CA

10/23/97  “Biodiversity Beneath Your Feet: Fungi In Forest Ecosystems”. Presented at the
Fort Lewis College Biology Department seminar series. Durango, CO


7/10/96 “Fungal Biodiversity In A Managed Forest” presented at the monthly meeting of the Oregon Coast Mycological Society, Depot Bay OR

5/8/96 “Fungal Biodiversity In A Managed Forest” presented at the monthly meeting of the North American Truffling Society, Corvallis OR.

4/17/96 “Fungal biodiversity in a managed forests around the world” presented at the monthly meeting of the Sonoma County Mycological Society. Santa Rosa, CA

4/16/96 “Mycorrhizal Fungi: Our Plants Cant Live Without Them” Presented to the monthly meeting of the California Native Plant society, Milo Baker Chapter, Santa Rosa, CA

Submitted Presentations (since 1997 of 22):

10/24/02 W. Colgan III, M.C. Vavrek, and J. Bolton. Re-vegetation of an Oil/Brine Spill: Interaction Between Plants and Mycorrhizal Fungi. 9th annual International Petroleum Environmental Conference. Albuquerque NM (Talk, Published proceedings available online ipec.utulsa.edu/ipec/conf2002/tech_sessions.html#PHY)

8/1/02 Vavrek, M.C. and W. Colgan III. Restoration of oil brine spill site. Presented at the annual meeting of the ecological society of America Tucson AZ. (Talk, Published abstract)

8/3-7/02 Campbell, W.J. M.C. Vavrek, and W. Colgan III. Interactions of plants and microorganisms limits remediation of spilled oil. Presented at the annual meeting of the American society of plant biologists meeting, Denver CO. (Poster, published abstract)

6/20-25/02 Amanda Brimer, Shelby R. Kenney, Kentaro Hosaka, Jim Trappe, Michael A. Castellano, Joey Spatafora, and Wes Colgan III. Monophyly of the Mesopelleiaceae. Presented at the annual meeting of the Mycological Society of America; Corvallis Oregon. (Poster, published abstract)

6/20-25/02 Nicholas B. Simpson, Kentaro Hosaka, Joseph Spatafora and Wes Colgan III "The use of mtATP-6, mtSSU and nucLSU genes in phylogenetic analyses of the order Phallales Presented at the annual meeting of the Mycological Society of America; Corvallis Oregon. (Poster, published abstract)

2/4/02 Campbell, W.J. M.C. Vavrek, and W. Colgan III. Plant and microbe interactions in the remediation of petroleum. Presented at the annual meeting of the southern association of agricultural scientists meeting, Orlando FL. (Talk, published abstract)
9/25-29/01 Hosaka, K. W. Colgan III, M. Castellano, and J. W. Spatafora. “Molecular phylogenetics of the genus Hysterangium”. Presented at the annual meeting of the Mycological Society of America; Salt Lake City, Utah (Talk, published abstract)

8/3-7/97 Colgan III, W., M. Castellano, and J. W. Spatafora. “Systematics of the Hysterangiaceae”. Presented at the annual meeting of the Mycological Society of America; Palais des Congress de Montreal, Montreal, Canada. (Talk, published abstract)

Collaborative Research Activities
5/6-93, 5/6-96, 5-6/01 5-6/03 Biodiversity of truffle like fungi of southeastern mainland Australia. Claridge, AW, Trappe, J.M, Lebell T., Jumpponnen, A.M., Claridge D.L “Diversity and productivity of truffle like fungi of Southeastern mainland Australia.” Bi-annual survey of field sites through New South Wales and Victoria, Australia. Funded by the Australian Biological Resource Service, and the National Science Foundation, next trip planned for 5-6/05

6/96-present Molecular phylogenetic research on the higher basidiomycetes with: Hosaka, K. M. Castellano J.M Trappe and J. W. Spatafora at Oregon State University.

University Service and Committee Activities
Departmental
Chair, Environmental Biologist Search Committee
Chair, Introductory Biology work group
Undergraduate Studies work group
Microbiology work group
Field biology work group
College
Classroom Technology coordinator, (resource person for the School of Biological sciences and other departments, nominated by Dean Shirley Reagan)

University
Graduate student teaching assistant training committee (College of Applied and Natural Sciences Representative)

Publications


Campbell, W.C., M.C. Vavrek, and W. Colgan III, 2002. Plant microbe interactions in
remediation of petroleum. SAAS Bulletin: Biochemistry and Biotechnology 15:1-7


Manuscripts In Progress
Vavrek, M., W. Campbell, and W. Colgan III, Phytoremediation of Petroleum: a review of plant traits that enhance degradation of oil. (submitted)


Hosaka, K., J.W. Spatafora, M.A. Castellano and W Colgan III
Molecular systematics of truffles and false-truffles: I. Ordinal classification of the genus Hysterangium. (In Ed.)


funded proposals
2003, W. Colgan III and, M. Vavrek, Louisiana Oil Spill Research and Development Program "Field applications of AM fungi for restoration of Oil Brine spill sites" $46,425.
2003, M. Vavrek, W. Colgan III D. Vavrek, and H. Hunt Louisiana Oil Spill Research and Development Program "Oil brine spill site recovery: A literature review" $13,475.
2002, W. Colgan III and, M. Vavrek, Louisiana Oil Spill Research and Development Program "Strain selection of AM fungi for restoration of Oil Brine spill sites" $38,975.
2002, M. Vavrek, and W. Colgan III, Louisiana Oil Spill Research and Development Program "Phytoremediation of an Oil spill site: Hydroseeding" $34,000.
2001, M. Vavrek, W. Colgan III, and W. Campbell, Louisiana Oil Spill Research and Development Program "Plant fungal interactions in re-vegetation of Oil Brine spill sites" $56,000.
2000, W. Colgan III, J.D. White, and H. Hunt, Establishment of an ecosystem processes
demonstration Garden. College of Applied and Natural Sciences mini grant program $1200
2000, M. Vavrek, W. Campbell, and W. Colgan III, Louisiana Oil Spill Research and
Development Program "Roll of Plants, Fungi and Bacteria in the Phytoremediation of Upland
Oil Spills" $64,000.
1999, L. Ramsey, D.K. Mills, M, Vavrek, and W. Colgan III, The Virtual Biology Smart Lab,
Enhancing Scientific Literacy Through Technology. Louisiana Board of Regents Teaching
Innovation Program $74,000
1999, W. Colgan III, Evolution of spore dispersal strategies within the Phallales. College of
Applied and Natural Sciences mini grant program $1100
1999, W. Colgan III, Establishment of a Mycological herbarium at Louisiana Tech . College
of Applied and Natural sciences mini grant program $500

Technical Expertise
Scanning and transmission electron microscopy, sample fixation, embedding, ultra-thin
sectioning, staining.
DNA extraction, purification, and amplification using the polymerase chain reaction, and
sequencing for phylogenetic analysis
General histology of plant and animal tissues, including fixation, paraffin embedding, thin-
sectioning and staining.
Light microscopy, including epifluorescence vital staining, phase interference and differential
interference contrast (Nomarski optics) microscopy, photo microscopy and digital image
techniques.

Professional Memberships
2000-Present Cooperator, Deep Hypha Fungal phylogeny research network.
1995-Present Member of the Mycological Society of America

Volunteer Experience
1999-Present Consultant for Northern Louisiana Poison Control Center, Monroe, LA.
Primary Contact for reported mushroom poisonings
Volunteer for The Nature Conservancy, Fairfield Osbourne Preserve, Marjorie Osbourne
Environmental education Center, Rohnert Park CA.
Kenneth E. Griswold, Jr.
200 Burgessville Road
Ruston LA 71272
318-251-0172
E-Mail: egriswold@gans.latech.edu

EDUCATION:

1965     B. S., Zoology, Louisiana Tech University, Ruston, Louisiana
1967     M. S., Zoology, Louisiana Tech University, Ruston, Louisiana
1971     Ph.D., University of South Carolina, Columbia, South Carolina

PROFESSIONAL EXPERIENCE:

2001- Present    Indoor Air Quality Officer, Division of Administration, Louisiana Tech University

1997- Present    Professor and Director of Medical Technology and pre-Professional Allied Health Sciences, School of Biological Sciences, Ruston, LA

1990 - 1997    Professor and Head, Department of Clinical Laboratory Science and Bacteriology, Louisiana Tech University, Ruston, Louisiana; Graduate Faculty

1994-1995    Interim Dean, College of Life Sciences, Louisiana Tech University, Ruston, LA

1993 - 1994    Interim Associate Dean, College of Life Sciences, Louisiana Tech University, Ruston, LA

1985 - 1990    Associate Professor and Head, Department of Clinical Laboratory Science, Louisiana Tech University, Ruston, Louisiana; Graduate Faculty

1985 - Present    Educational consultant to and Clinical Faculty member at:

Lake Charles Memorial Medical Center, Lake Charles, LA;
Our Lady of the Lake Regional Medical Center, Baton Rouge, LA;
Rapides General Hospital, Alexandria, LA;
St. Francis Medical Center, Monroe, LA;
St. Patrick Hospital, Lake Charles, LA;
VA Medical Center, Shreveport, LA;
Wadley Medical Center, Texarkana, TX;
St. Elizabeth Medical Center, Beaumont, TX

1983 - 1985    Assistant Professor and Associate Director, Department of Clinical Laboratory Science, Louisiana Tech University, Ruston, LA; Graduate Faculty

1978 - Present    Technical Consultant for Bossier Parish Coroner's Office, Bossier, LA

1973 - 1983    Assistant Professor of Biochemistry and Molecular Biology, Assistant Professor
of Pathology                           LSU School of Medicine, Shreveport, LA, Graduate Faculty

1973 - 1983 Program Director, VA School of Medical Technology, Shreveport, LA

1971 - 1983 Director, Clinical Chemistry and Toxicology Division; VA Medical Center, Shreveport, LA

1971 - 1974 Director, Clinical Chemistry Division and Associate Director of School of Medical Technology Confederate Memorial Medical Center, Shreveport, LA

1971 - 1973 Instructor of Pathology and Instructor of Biochemistry, LSU Medical School, Shreveport, LA

1969 - 1971 Instructor, College of General Studies-Nursing, University of South Carolina, Columbia, SC; and Orangeburg Regional Hospital, Orangeburg, SC

SCIENTIFIC SOCIETIES AND HONORS:

Clinical Scientist, American Society of Clinical Pathologists
Fellow, National Academy of Clinical Biochemistry
Sigma Xi
Beta Beta Beta
Who's Who in American Colleges and Universities
American Men and Women of Science
American Association for Clinical Chemistry
Who's Who in the South and Southwest
Superior Performance Commendation, Veterans Administration
Fellow, Association of Clinical Scientists

BOARDS:

Louisiana Board of Medical Examiners- Licensed Clinical Laboratory Specialist
Board Certified as a Clinical Scientist by the American Society of Clinical Pathologists
American Board of Clinical Chemistry - Fellow Equivalent

PUBLICATIONS:

The n-terminal amino acids of hemoglobin from nine geographic populations of Peromyscus maniculatus, M.S. Thesis, Louisiana Tech University, 1967

The relationships of blood proteins to the systematics of the old-field mouse, Peromyscus polionotus, in Western Florida; Ph.D. Dissertation, University of South Carolina, 1971, Dissertation Abstracts XXXII (2), 1971


**ABSTRACTS:**


Griswold, Kenneth E., Jr., Serum protein patterns in closely related groups of the beach mouse, ASB Bulletin, 17:45, 1970

**PROFESSIONAL PRESENTATION: (Available on Request)**

**RESEARCH/GRADUATE EDUCATION ACTIVITIES:**

A. Research Interests:

Occupational Health and Safety; Higher Education Administration; Methods Development and Evaluation in Clinical Chemistry, Forensic Medicine

B. Research Activities:

1. Research-Oriented Offices/Assignments:

   a. Membership Chairman and Executive Committee Member, Therapeutic Drug Monitoring and
Clinical Toxicology Research Division of American Association for Clinical Chemistry - 1990-1996

b. Louisiana Tech University Liaison for Research, National Center for Toxicological Research - 1990-Present

c. Member of the Board of Directors, Louisiana Center Forensic Sciences, 1994-present
   d. Member, Louisiana Tech Radiation Safety Committee - 1991-Present
   e. Past President, Louisiana Tech Chapter - Sigma Xi

f. Liaison for Research with Alton Oschner Foundation Medical Center - 1980-1996
   g. Member, Louisiana Tech University Graduate Studies Committee, 1992, 1996
   i. Research Advisor to U. S. Fish and Wildlife Service on population genetics - 1983 - 1986

   k. Chair, VA Research and Development Grants Review Subcommittee on Radioisotopes, Shreveport, L.A. 1978-82

l. Member, National Steering Committee on Quality Assurance in Clinical Chemistry - 1975-1980

2. Participating Research


b. Principle Investigator - "Serological and Biochemical tests to assess performance in the thoroughbred horse and in beef cattle." 1988 - present


e. Co-investigator on project to assess amelioration of cardiotoxic effects of alcohol by Vitamin E - Principle investigator, H. E. Redetek - 1980 - 1983


h. Principle investigator, "The Use of Biochemical Markers as Taxonomic Criteria in Peromyscus" 1971

C. Graduate Education Activities

1. Member, Graduate Faculty, Louisiana Tech University- 1972 - 2000

2. Member, Graduate Faculty - Louisiana State University Medical Center - 1973 - 1983

ELECTED OFFICES AND APPOINTMENTS:

A. PROFESSIONAL:

Member, Board of Directors, TX Section, American Association for Clinical Chemistry- 1999-present

Secretary- Treasurer, TX Section, American Association for Clinical Chemistry- 1999-2001

Science Fair Coordinator for the American Association for Clinical Chemistry for the State of Louisiana- 1996-present

Member, Board of Directors, Lincoln Parish Farm Bureau - 1996- present

Selected Topics Co-Chair, National Meeting of the American Association for Clinical Chemistry - 1994

Member, Executive Committee, TDM/Clinical Toxicology Division, American Association for Clinical Chemistry- 1990-94

Member, National Governmental Affairs Committee, National Academy of Clinical Biochemistry - 1987 - Present

Member, National Committee on Governmental Relations, American Association for Clinical Chemistry, 1977 - 1984

Chairman, National Subcommittee of Federally-Employed Clinical Chemists, American Association for Clinical Chemistry, 1976 - 1984
Chairman, VA Clinical Chemist Association, 1976 - 1984

President, Texas Section, American Association for Clinical Chemistry, 1979 - 1980

Program Chairman, Texas Section, American Association for Clinical Chemistry, 1978 - 1979

Legislative Liaison, Texas Section, American Association for Clinical Chemistry, 1979 - 1996

Texas Section representative to Governing Council of American Association for Clinical Chemistry, 1980 - 1981

EDUCATIONAL ACTIVITIES:

Teaching Interest and Expertise:

Clinical Biochemistry, Toxicology/Pharmacology; Bioinstrumentation, Clinical Pathology, Occupational Health and Safety, Hematology, Educational Techniques, General Biology

Administrative Activities in Education:

Member, Administrative Council, La. Tech College of Applied and Natural Sciences, 1997

Member, Administrative Council, La. Tech College of Life Sciences, 1989-97

Member, La. Tech Dean’s Committee and University Administrative and Planning Council, 1994-95

Member, Administrative Council, La. Tech College of Arts and Sciences, 1985-89

Chairman of Curriculum Committee of the Council of Medical Technology Educators of Louisiana, 1983 - Present

Member, Louisiana Tech Strategic Planning Committee, 1995-1996

Department Chairman and Academic Advisor to majors in 8 Allied Health Disciplines, 1983 - 1997

Inspection Team Captain for programs in Medical Technology, National Accrediting Agency for the Clinical Laboratory Sciences, 1980 - Present

Chair, Environmental Science Curriculum Committee, 1992-present
Member and Chairman - LA Tech Medical Records Evaluation Committee, 1988 - 1991
Member, Pre-medical/Pre-dental Advisory Committee, LA Tech University, 1988 - Present

Member, Curriculum Committee, Library Committee, Grievance Committee (for faculty), Student Grade Appeals Committee, Animal Inventory and Feed Committee - College of Life Sciences, 1989 - 1996

Organizer and Chairman of Symposium on Drug Testing in the Workplace - LA/MS Societies of Medical Technology Annual Meeting - 1990

Program Chairman of Tri-State CDC Conference on Microbiology, 1989

Program Chairman of Southern Regional Symposium on Drugs in Athletics, 1986

U. S. Office of Education, Financial Aid Officer, VA Medical Center, Shreveport, LA, 1979 - 1984

Clinical Coordinator, Louisiana Tech University Graduate Program in Clinical Chemistry, Ruston, LA, 1971 - 1983

Program Coordinator, Southern Regional Medical Education Center (SRMEC) continuing education programs, Veterans Administration, 1977 - 1983


Organizer and Chairman of AACC Texas Section Symposia:"Pediatric Clinical Chemistry", 1977; "Steroid - Receptors";1979; "Immunochernistry", 1982

Faculty of SRMEC Workshop "Clinical Toxicology and Pharmacology", 1979

C. CONSULTANT:

American Society of Clinical Pathology Medical Technology Recruitment Network, 1989 - Present

Laboratory Management and Allied Health Education Consultant, Pathology Services, VA Central Office, Washington, DC, 1978 - 1983

Toxicology and Chemistry Consultant - Bossier Parish Coroner's Office, Bossier City, LA, 1978 - Present; Caddo Parish Coroner's Office, Shreveport, LA, 1983 - Present

Quality Control Consultant, Hyland Division, Travenol Labs, Costa Mesa, CA, 1975 - 1980

Quality Control Consultant and Field Evaluator, General Diagnostic Division, Warner-Lambert Co.,

Field Evaluator for Methods, Simmler, Inc., St. Louis, MO, 1981 - 1985

CONTINUING EDUCATION ACTIVITIES; (Available on Request)
Howard E. Hunt

Louisiana Tech University
School of Biological Sciences
P.O. Box 3179, Ruston, LA 71272
(318) 257-4141 e-mail: HHunt@LaTech.edu

Home address:
2765 Highway 544
Ruston, LA  71270
(318) 247-5710

EDUCATION

Postdoctorate, 1989. Department of Zoology, University of Arkansas, Fayetteville, AR
Research Topic: Habitat use by northern bobwhite.

Ph.D. Wildlife and Fisheries Sciences, 1988. Texas A&M University, College Station, TX
Dissertation: The effects of burning and grazing on habitat use by whooping and
sandhill cranes at Aransas National Wildlife Refuge.

M.S. Wildlife Management, 1979. Humboldt State University, Arcata, CA
Thesis: Behavioral patterns of breeding peregrine falcons.

B.S. Natural Resource Management, 1977. Humboldt State University, CA
Emphasis: Environmental design/planning.

B.S. Wildlife Management, 1976. Humboldt State University, Arcata, CA

A.S. Biological Sciences, 1969. Rio Hondo Junior College, Whittier, CA

PUBLICATIONS

abundance and habitat features associated with use between an old-growth and second
growth bottom hardwood forest. In Hamel, P, Foty, T. (eds.) Bottomland Hardwoods of
the Mississippi Alluvial Valley: characteristics and management of natural function,
structure, and composition. Gen. Tech. Rept. SRS-42. Asheville, NC: U.S. Department of

Jones, C, and H. Hunt, 1996. Foraging habitat of the Red-cockaded woodpecker on the


**WORK EXPERIENCE**

**Associate Professor** (9/97 – present) **Assistant Professor** (9/89 – 9/97) School of Biological Sciences, Louisiana Tech University, Ruston, LA


**Research Associate** (10/88 - 9/89) Department of Zoology, University of Arkansas, Fayetteville, AR

As co-principal investigator of a $43,000 contract with Arkansas Game & Fish Department, I assessed the status and habitat requirements of northern bobwhite on the Fort Chaffee Wildlife Management Area. A geographic information system (GRASS) was employed to relate bird locations obtained via radio-telemetry to soil, vegetation, topographic, and habitat variables.

**Technical Coordinator** (6/88 - 9/88) Department of Wildlife and Fisheries Sciences, Texas A&M University, College Station, TX

I assisted in the development and implementation of 3-week Wildlife Management Techniques training course for National Park Service personnel. I taught a lab and lecture section on food habits
analysis and coordinated presentations by other lecturers.

**Visiting Assistant Professor** (9/87 - 6/88) Department of Wildlife and Fisheries Sciences, Texas A&M University, College Station, TX

Primary responsibilities included teaching three large undergraduate courses in Ecology, Natural History of the Vertebrates, and Environmental Science.

**Teaching Assistant** (1/86 - 1/87) Texas A&M University.

- General Ecology Laboratory (RENR 215): I had a primary role in developing lecture/lab material and leading local field trips emphasizing plant and animal sampling methods.
- Career Development (WFSC 381): Lectured on professionalism, graded student papers and contributed to discussions on job hunting skills, resume writing, and career goal setting.

**Research Assistant** (10/82 - 12/85) Texas A&M University.

- Designed and conducted research of the effects of burning and grazing treatments on upland vegetation and habitat use patterns of whooping and sandhill cranes on the Aransas National Wildlife Refuge, Texas.

**Biologists** (4/85 - 5/85) U.S. Fish & Wildlife Service

- Participated in radio-tracking whooping cranes from Texas to northern Canada. I collected behavioral data and characterized crane roosting and foraging habitat used during migration.


- I provided technical advice to the state director on wildlife issues, served as liaison to Wyoming Game and Fish Department and U.S. Fish and Wildlife Service on state wildlife policy, and participated in the annual budget process. My specific responsibilities were grouped into four major areas.
  1. **Endangered Species** - I wrote and administered contracts with the U.S. Fish & Wildlife Service to conduct inventories/research on peregrine falcon distribution, bald eagle roosting behavior, black-footed ferret distribution and behavior, and humpback chub occurrence. I also provided direction and training to Bureau biologists on the legal requirements of the Endangered Species Act.
  2. **Technical Training** - I assisted in training 30 district and area biologists in songbird, mammal, reptile, and habitat inventory techniques. Training was accomplished on an individual basis and through annual statewide workshops.
  3. **Coal Leasing Program** - I provided direction and training to biologists evaluating the impact of coal strip mining on wildlife resources.
  4. **Research Coordinator** - I served as state coordinator for interdisciplinary Bureau research. I wrote proposals to study the impacts of oil development on sage grouse and bat populations and reviewed research proposals by other specialists.

**Biological Technician Positions:**
U.S. Fish and Wildlife Service:
- (5/78 - 8/78) Hawaiian endangered forest bird survey
- (5/77 - 7/77) California peregrine falcon habitat study

U.S. Forest and Range Experiment Station, Tempe, AZ:
- (1/78 - 4/78) Wintering bald eagle essential habitat study

U.S. Bureau of Land Management:
- (7/77 - 9/77) Wildlife inventory (bird, small mammal, reptile census) of two 20,000-acre parcels in California
- (3/76 - 9/76) Peregrine falcon and raptor inventory, wildlife inventory, vegetation mapping in northern California
- (6/75 - 9/75) Survey of potential salmon spawning streams in northern California

California Game and Fish Department:
- (6/71 - 9/71) Steelhead (creel) census - Russian River

RESEARCH GRANTS

   Grant Amount: $6,000       Grant Period: 7/02 - 7/04

10. Tech Faculty Development Grant to fence the Ecology Demonstration Garden adjacent to Carson Taylor Hall, with J. White and W. Colgan.
    Grant Amount: $450       Grant Period: 1/01 - 1/02

9. Tech Faculty Development Grant to establish an Ecology Demonstration Garden adjacent to Carson Taylor Hall, with W. Colgan and J. White.
    Grant Amount: $900       Grant Period: 1/00 - 1/01

8. Louisiana Applied Oil Spill and Development Grant entitled “Arthropod Indicators of Onshore Oil Spill Severity”.
    Grant Amount: $78,000     Grant Period: 7/00 - 7/02 (renewed annually)

7. Tech Faculty Development Grant to use a CD-Writer to develop plant and animal identification keys.

6. 8G Grant: Development of computer and GIS laboratory in Environmental Sciences.
    Grant Amount: $20,000     Grant Period: 1/96 - 12/96

5. Tech Faculty Development Grant to establish invertebrate culture chambers for proposed oil contamination research.
4. Tech Faculty Development Grant to conduct a mist-net census of breeding songbirds in bottomland hardwood forests of southern AR.
   Grant Amount: $1,000     Grant Period: 6/92 - 9/92

3. U.S. Fish & Wildlife Service / U.S. Army grant to conduct graduate research on the effects of timber harvest on neotropical migrant songbirds in northern Louisiana.
   Grant Amount: $61,775     Grant Period: 4/93 - 3/96

2. U.S. Fish & Wildlife Service grant to conduct graduate research on food abundance and use of agricultural fields by waterfowl in the Mississippi Alluvial Valley.
   Grant Amount: $49,000     Grant Period: 9/91 - 6/94

1. U.S. Forest Service grant to conduct graduate research on neotropical migrant songbird use of bottomland hardwood forests of south Arkansas.
   Grant Amount: $38,000     Grant Period: 3/91 - 9/93

UNFUNDED GRADUATE RESEARCH


UNFUNDED PROPOSALS

LA Coastal Research and Restoration Grant: The Use of Fiber-roles to reduce coastal wetland erosion, with M. Vavrek. - $45,000 (2002)

Board of Regents Grant: Establishment of a Spatial Data Analysis Laboratory at Louisiana Tech University - $240,000 (1998)

LEQSF Grant: Establishment of a Spatial Data Analysis Laboratory at Louisiana Tech University - $240,000 (1997)


Effects of Forest Die-Off on Neotropical Migrant Landbirds of the D'Arbonne NWR.


Secondary Teacher Environmental Science Enhancement Program. Proposal to the Board of Regents - $44,564 - secondary investigator - (1990)

PROFESSIONAL PRESENTATIONS

Arthropod indicators of onshore oil spill severity - 10/2000 Clean Gulf Symposium, Baton Rouge, LA - poster presentation

Arthropod indicators of onshore oil spill severity - 3/2000 LASCO Proposal Review Board, Barton Rouge, LA.


Winter habitat use by northern bobwhite in western Arkansas. 1991. Louisiana Academy of Sciences, Shreveport, LA, by H. Hunt


**Topic** - Whooping crane response to burning and grazing treatments:
- The Wildlife Society, Kingsville, TX 1986
- Texas Academy of Sciences, Kingsville, TX 1986
- Whooping crane recovery team meeting, Albuquerque, NM 1987
- Zoology seminar, Univ. of Arkansas, Fayetteville, 1989


Whooping crane habitat use patterns. 1983. Department Seminar, Texas A&M University, College Station, TX, by H. Hunt.

- Proposed sensitive species program for Wyoming.
- State-wide standardization of wildlife policy.
- Natural history of the black-footed ferret.
- Bald eagle winter roost site fidelity in Wyoming.


**AWARDS AND HONORS**

Outstanding Upper Division Instructor. School of Applied & Nat. Sci., LA Tech, 1998
Researcher of the Year. College of Life Sciences, LA Tech, 1993
Researcher of the Year. College of Life Sciences, LA Tech, 1992
Quality Increase Award. Bureau of Land Management, 1981
Special Achievement Award. U.S. Fish and Wildlife Service, 1978

**INFORMAL PRESENTATIONS** (service)

Natural History of Borneo: Bird Study Group, LSUS, 1995
    N. LA Birding Club, Monroe, 1995
    Cedar Creek School, 1994, 1998
Optimists Club of Ruston, 1997

Raptors of the U.S.: Audubon Society, Arcata, CA. 1977
Audubon Society, Cheyenne, WY. 1980

Non-game wildlife values: Employee Meeting, BLM, Cheyenne, 1981

Natural history of the Hawaiian Islands:
- TWS Student Chapter, Arcata, CA. 1978
- Audubon Society, Cheyenne, WY. 1980
- BLM Employee Meeting, Cheyenne, 1980

Black-footed ferret: Kiwanis Club, Worland, WY. 1981
- Texas A&M Graduate Assoc., 1982
- Audubon Society, College St., TX. 1982

The peregrine falcon: Audubon Society, Arcata, CA. 1978

Natural history of the Galapagos Islands:
- Audubon Society, Cheyenne, WY 1980
- Audubon Soc., College Station, 1984

Darwin's finches: Audubon Soc., College Station, 1987

- Sigma Xi Banquet Speaker, Tech. 1992
- N. LA Birding Club, Monroe, LA. 1995

UNIVERSITY SERVICE

Faculty Senator - College Of Applied & Natural Science, 1998 - present
Faculty Advisor - Student Chapter of The Wildlife Society, 1989-1995
Faculty Co-advisor - Student Racquetball Association, Tech, 1989 - 1994
Curator - Department of Biological Science's Vertebrate Museum, 1991 - 1999
Cooperator with LA Dept. Parks & Recreation - Interpretative Design for D'Arbonne State Park, LA

COMMITTEES

Louisiana Tech University:
Member: - SBS Tenure & Promotion Committee, 1997-present
- Environmental Scientists Search Committee, 01-04
  – School Director Search Committee, 1997-8, 00-01
- Wildlife Program Review Committee, 1997-8
  – Internship Program Committee, 1997-present
Chairman: - Microbiologists Search Committee, 2002
- Graduate Program Working Group, 1999-present
- Tenure & Promotion Committee, 1999
- Taxonomists/Modeler Search Committee, 1996
- Fisheries Biologists Search Committee, 1995
- Ecological Modeler Search Committee, 1994
Graduate Student Committees
- Major Advisor - 5 thesis graduate committees, 1989-present
- Major Advisor - 2 non-thesis committees
- Member - 7 thesis & non-thesis graduate committees, 1989-present

Committees: (other)
Curriculum Committee, Texas A&M Univ. (1986-1987)

MEMBERSHIPS
The Wildlife Society                                   American Ornithologists Union
Society for Cons. Biology                              Natural Resources Defense Council
Amer. Society of Mammalogists                          Audubon Society

MILITARY EXPERIENCE
Fire Control Specialists. U.S. Army (8/72 - 6/74) Tevern, Germany. I supervised the NATO operator of a nuclear missile launch control computer.


ADDITIONAL TRAINING AND SKILLS

Training:
Photoshop 7.0 - Art Department - Louisiana Tech University (4/00)
Geographic Information Systems - School of Forestry - (3/99)
Microsoft Excel 97 & PowerPoint 97 - Louisiana Tech. University
Word Perfect 5.1 - Northeastern State Univ. - 1994
Ecology of the Okefenookoe Swamp, Waycross, Georgia. 1993. - Univ. of Texas Short Course
Federal Contract Administration (pre- and post-award) 1981
Natural History of the Galapagos Islands - U.C. Berkeley Extension Course - 1980

Educational Workshops:
Interactive Learning in Large Lectures, Louisiana Tech - (2/99)
Technology in the Classroom, Louisiana Tech Univ. - (4/98)

Skills & Hobbies:
PAUL ROGER RAMSEY

Born: Lake Charles, Louisiana U.S.A. (27 July 1945)

Positions: Professor of Biological Sciences

Assistant Professor, Presbyterian College, Clinton, South Carolina; 1973-1975.
Research Associate, Gulf South Research Institute, New Iberia, Louisiana; summer 1976.
Adjunct Assistant Professor of Biology, Florida Institute of Technology & Research Associate,
Medical Research Institute in Melbourne, Florida, summer 1978.
Assistant Professor, Louisiana Tech University, 1975-1978.
Associate Professor, Louisiana Tech University, 1978-1984.
Professor, Louisiana Tech University, 1984-present.

Marvin T. Green Professor for Pre-medicine
Research Scholar, Fulbright Program, Livestock Research Institute, Novi Sad, Yugoslavia,
September 1989-June 1990

Address: School of Biological Sciences, Louisiana Tech University, Ruston, LA 71272 U.S.A.

Telephone: (318) 257-4573    Telefax: (318) 257-4574    E-mail: prramsey@latech.edu

Degrees:
B.S. Texas Tech University, 1967 (Major in Zoology; Minor in Chemistry)
M.S. Texas Tech University, 1969 (Major in Zoology; Minor in Botany)
Ph.D. University of Georgia, 1974 (Zoology-Ecology)
B.A. Louisiana Tech University, 1989 (Technical Writing)

Recent Professional Activities:


Director, Louisiana Junior Science and Humanities Symposium (1993-2000; funded by U.S. Army,
Navy, and Air Force research offices to the Acad. of Appl. Sci., Concord NH)

Director, Research & Engineering Apprenticeship Program at La Tech (funded by U.S. Army,
Navy, and Air Force Research Office to AAS, Concord, NH).

Organizer and Panel Chair, La Tech Symposium Panel (8 faculty and staff) to SVU2002 (21st
Congress, Czechoslovak Society of Arts and Sciences, Plzen, CZ (June 2002)
Awards and Grants:

Grant-in-Aid: Department of Biology, Texas Tech University, 1969.
Division of Nuclear Education Trainee; Savannah River Ecology Laboratory, 1969.
National Institutes of Health Predoctoral Fellowship, 1970.
Sigma Xi Grant-in-Aid of Research, 1970.
Oak Ridge Graduate Fellowship, 1971.
Baruch Research Institute Grant, 1975: "Population densities, feeding activity, and food habits of red-cockaded and associated woodpeckers in Hobcaw Forest" -- $1,500.
Life Sciences-Division of Research Grant, Louisiana Tech University, 1975: "Population biology and genetics of the Indian meal moth Plodia interpunctella. I. Comparative karyology of pesticide-resistant and susceptible strains" -- $600
Instructional Scientific Equipment Grant, National Science Foundation, 1976: "Improvement of the two-course sequence in genetics at Louisiana Tech University" -- $15,800.
American Heart Association - Louisiana, Inc. Grant, 1976: "Electrophoretic variation and serum levels of myocardial enzymes in sunfish and rats exposed to kraft papermill effluent" -- $980.
Louisiana Department of Wildlife and Fisheries, 1 June 1979: "Nutritional plane in nutria and bobcat populations as determined from blood parameters" -- $3,500.
HEW Public Health Service, 1 July 1979-30 June 1982: "Comparative susceptibility of armadillos to leprosy" -- Co-principal Investigator (with E. E. Storrs, Medical Research Institute; Melbourne, Florida) for collateral study determining genetic diversity in armadillos from Florida, Louisiana, Texas and Venezuela -- $175,280
Louisiana Department of Wildlife and Fisheries, 1982-83: "Nutrition and genetics of nutria" -- $8,000.
Board of Regents Research & Development Program, 1982-83: "A demographic and genetic survey of Louisiana coastal populations of red drum (Sciaenops ocellatus) and spotted seatrout (Cynoscion nebulosus (Cuvier))" -- $41,933.
Louisiana Department of Wildlife and Fisheries, 1985-86: "An experimental reintroduction of nutria and subsequent assessment of changes in population parameters" -- $8,000.
Louisiana Department of Wildlife and Fisheries, 1988-89: "Experimental releases of Louisiana feral nutria: Dietary influences on pelt quality in reestablished populations" -- $10,000.
Louisiana Tech University, 1988: Faculty Research Grant, "X-ray microanalysis of scales" (with G. Zumwalt) -- $1,000.
Louisiana Tech University, 1988: Faculty Development Grant, "Attending the short course the mammalian and experimental genetics" -- $1,200.
Louisiana Department of Wildlife and Fisheries, 1989-90: "Experimental releases of Louisiana feral nutria: Dietary influences on pelt quality in reestablished and captive populations" -- $10,000.

Council for International Exchange of Scholars-Fulbright Program, 1989-90: Senior Researcher, Faculty of Agriculture, Novi Sad, Yugoslavia.


Board of Regents (LaSIP/NSF-SSI), 1992-93: "Project LIFE (Laboratory Investigations and Field Experiences): Year-2 of Inservice Hands-on in Life Science"--$166,000.

Board of Regents (LaSIP/NSF-SSI), 1992-93: "Advanced Leadership Training for Year-1 Participants in Project LIFE"--$22,000.

Academy of Applied Science (U.S. Army), 1995-96 "Research and Engineering Apprenticeship Program"--$5,000.


Academy of Applied Science (JSHS-U.S. Army/Navy/Air Force), 1993-00: "The Louisiana Junior Science and Humanities Symposium"--$87,000.

Board of Regents (LaSIP), 2000-01: “Students and Teachers Engaged in Environmental Research (Project STEER): A Program to Foster Careers in Science Teaching”--$80,000.

Publications:


**Papers Presented:**


1970 The pattern of dispersal for animal populations: the role of the individual. Society for the Study of Evolution; Austin, Texas.

1970 Effects of immigrants on the spatial structure of a small-mammal community. American Society of Mammalogists; College Station, Texas.


1972 Biochemical genetics of mature and expanding white-tailed deer populations. American Society of Mammalogists; Tampa, Florida.

1973 Dispersion of biochemical and pelage phenotypes in populations of *Peromyscus polionotus* (Mammalia: Rodentia). Association of Southeastern Biologists; Bowling Green, Kentucky.

1973 Ecological genetics and population structure of *Peromyscus polionotus*. American Society of Mammalogists; Pacific Grove, California.

1974 Genetic structure of insular and mainland populations of *Peromyscus polionotus* (Rodentia). Association of Southeastern Biologists; Savannah, Georgia.

1974 Breeding structure and gene frequency in populations of *Peromyscus polionotus*. 
American Society of Mammalogists; Binghamton, New York.

1975 Mating time and fecundity of pesticide-resistant and susceptible strains of the Indian meal moth, Plodia interpunctella (Lepidoptera: Phycitidae). Association of Southeastern Biologists; Blacksburg, West Virginia.

1977 Biochemical variation in bluegill sunfish subjected to kraft papermill effluent. Louisiana Academy of Sciences; Shreveport.

1978 Biochemical heterogeneity in bluegill populations with variable exposure to kraft papermill effluent. Southwestern Association of Naturalists; Albuquerque, New Mexico.

1978 Dietary analysis and blood chemistry in wild and colony populations of the nine-banded armadillo. American Society of Mammalogists; Athens, Georgia.

1979 Physiological and biochemical differences in wild and captive armadillos. Louisiana Academy of Sciences; Ruston.

Blood chemistry and hematological parameters for wild and captive armadillos. Southwestern Association of Naturalists; Sherman, Texas.


Factors influencing blood chemistry in nutria. Worldwide Furbearer Conference; Frostburg, Maryland; August 3-11.


1982 Protein polymorphisms in feral populations of nutria (Myocastor coypus). Third International Theriological Congress; Helsinki, Finland; August 15-21.

1984 Genetic variation and population structure in spotted seatrout and red drum. Gulf Estuarine Research Society; Texas A & M University - Galveston, October 15-17.


Measurement of pelt quality for nutria from coastal marshes of Louisiana (Gulf of Mexico;
U.S.A.). NUTRIJA'87; Novi Sad, Yugoslavia; June 24-27; (invited paper).


1990 Current status of nutria and muskrat in the United States. Zrzeszenie Hodoowcow Nutrii (Nutria Breeders' Association), Poznan, Poland; presented at the Agricultural University of Poznan.


James G. Spaulding  Professor
School of Biological Sciences
Louisiana Tech University
Ruston, LA 71272

Born:    January 23, 1941     SS# 369-42-5227

Telephone:  318-257-4573     FAX:  318-257-4574

E-Mail:   jgspauld@latech.edu

Education:

Undergraduate:
Kalamazoo College, Kalamazoo, Michigan (1959-1963)
    Degree:  Bachelor of Arts, Biology, 1963

Graduate:
University of Wisconsin, Madison, Wisconsin (1963-70)
    Specialty:  Invertebrate Zoology
    Degrees:  M.A., Zoology, 1966
    Ph.D., Zoology, 1970

University of Washington, Friday Harbor Labs, Friday Harbor, Washington; summers 1966, 1967 Areas of study:  Invertebrate Zoology, Advanced Invertebrate Zoology and research

Post Doctoral:
University of Washington, Friday Harbor Labs, Friday Harbor, Washington; Research Associate, February 1970-July 1972

Michigan State University, East Lansing, Michigan, Department of Pathology; Visiting Associate Professor, 1978-1979

Teaching Experience:

Assistant Professor, University of Washington, Friday Harbor, Washington; Spring 1970
Course taught:  Marine Invertebrate Zoology

Professor of Biology, Edinboro State College, Edinboro, Pennsylvania; 1972-75

Associate Professor of Biology, Edinboro State College, Edinboro, Pennsylvania; 1975-80
Courses taught:  Principles of Biology, Zoology, Cytology, Histology, Human Anatomy and Physiology, Human Biology, Electron Microscopy, Graduate Seminar

Associate Professor of Zoology, Louisiana Tech University, Ruston, Louisiana; 1980-1986
Professor of Zoology, Louisiana Tech University, Ruston, Louisiana; 1986 to Present
Courses taught: Principles of Biology (majors), Principles of Biology I and II (non-majors),
Human Anatomy and Physiology, Comparative Anatomy, Microscopy: Theory and
Application, Developmental Biology, Principles of Electron Microscopy (an Inter
Institutional Cooperative Program course at Grambling State University)

**Academic Administrative Experience:**

1975-78, Assistant Department Head, Department of Biology, Edinboro State College,
Edinboro, Pennsylvania

1988-Present, Director of the Animal Care Facility, Louisiana Tech University

9/1990-8/98, Head: Department of Biological Sciences, Louisiana Tech University

**Committees and Offices:**

Louisiana Tech University:

2002 – Present, Electron Microscope Committee. Evaluated, recommended machine to
purchase, supervising installation, and will be the main operator.

1987 - Present, Institutional Animal Care and Use Committee
Chairman, 2000 – present

1987-90, Faculty Development Committee, Chair 1989. Solicited applications, evaluated and
awarded grants totaling about $40,000 each year.

1988, Administrative Structure Subcommittee, Strategic Planning

1993-94. Steering Committee for the Louisiana Tech Self Study of the Southern Association
of Colleges and Schools (SACS). Oversaw the writing of the Physical Facilities section of the
report

1995, Financial Resources Subcommittee, Strategic Planning

1995 - Present, General Education Committee

1982 - Present, Premedical/Predental Advising Committee

1997 - Present, Behavioral Standards Committee

1998 - 2000, Patents and Intellectual Property Committee

1998 - Present, Behavioral Standards Committee
1999 - Space Utilization Committee for the School

1991-92, Louisiana Academy of Sciences, President

1994-95, LaCEPT Statewide Subcommittee on Faculty Incentives and Rewards

**Fellowships and Grants:**

**Louisiana Tech University**
Louisiana Systemic Initiative Grant (LaSIP), 1989 to explore methods to produce threedimensional maps of the microvasculature of the mouse brain.

**Edinboro State College:**
Pennsylvania Science and Engineering Foundation Grant, 1977-79, for the development of a clinical test for Multiple Sclerosis

Inservice Training Grant for training in Histopathology, 1978-79

**University of Washington:**
National Science Foundation Fellowship, summers 1966, 1967
National Institute of Health Developmental Biology, Post Doctoral Grant, 1970-72

**University of Wisconsin:**
Teaching Assistantship, 1963-65
Wisconsin Alumni Foundation Research Assistantship, 1965-67
National Institute of Health Traineeship, 1967-70

**Research:**

Current
Mechanical and histological comparison of wound healing between control rats and those treated with an experimental medication which has been shown to increase healing speed and reduce scar formation, as a consultant for Milkhaus Laboratory, Delanson, N.Y. This work will result in one and possibly a second thesis. Working with Dr. Mukerjee, LSUS Medical School and Dr Steven Mamber, Milkhaus Laboratory. This work currently employs undergraduate students.

Structure and function of particles in blood observed with dark field illumination, as a consultant for Milkhaus Laboratory, Delanson N.Y. An undergraduate student will be involved with this project.

Past
Histology of the diabetic rat pancreas with respect to amyloid associated with the diabetic islets, as a consultant for Milkhaus Laboratory, Delanson, N.Y. Although the results were negative, this work resulted in a thesis for Lorin King.

Assessment of immunotherapeutic biologicals in controlling the growth of cancers in rats, as consultant for Milkhaus Laboratory, Delanson, N.Y. This work resulted in a thesis for Jennie Tanner. She went on to earn a Ph.D. from the University of Alabama.

Assessment of a potential immunotherapy for Diabetes Mellitus using spontaneously diabetic BB Wistar rats, as consultant for Milkhaus Laboratory, Delanson, N.Y. This work employed undergraduate students.

Analysis of the development and physiology of the spontaneous albinism in the clawed frog (Xenopus laevis).

Analysis of the development of microvasculature in the brain of rats using perfusion of fluorescent dyes and Confocal light microscopy.

Publications and Presentations:

Rogers, Charles, and James Spaulding. 2002. Analysis of Gene Activity in Cultured Keratinocytes After Treatment With Streptolysin O. Presented at the Annual Scientific Meeting of Milkhaus Laboratories, as consultants for Milkhaus Laboratory, Delanson, N.Y.

Spaulding, James and Charles Rogers. 2001. The Effect of Streptolysin O on Wound Healing Structural and Functional Studies. Presented at the Annual Scientific Meeting of Milkhaus Laboratories, as consultant for Milkhaus Laboratory, Delanson, N.Y.

Spaulding, James and Bristol Tony. 2000. The Effect of a Scar Reduction Medication on the Strength of Wounds. Presented at the Annual Scientific Meeting of Milkhaus Laboratories, as consultant for Milkhaus Laboratory, Delanson, N.Y. This Thesis Research was supported by supplies and materials provided by Milkhaus Laboratories.

Spaulding, James. 1999. Review of Microzime research and report of potential clinical applications. Presented at the Annual Scientific Meeting of Milkhaus Laboratories, as consultant for Milkhaus Laboratory, Delanson, N.Y.
Spaulding, James and Christy Anderson. 1998. The Structure and Possible Function of Particles Observed in Blood by the Use of Darkfield Microscopy. Presented at the Annual Scientific Meeting of Milkhaus Laboratories, as consultant for Milkhaus Laboratory, Delanson, N.Y.

Spaulding, James. 1997. Assessment of Amyloid Deposits in the pancreas of Rats with Diabetes Mellitus using spontaneously diabetic BB Wistar rats. Presented at the Annual Scientific Meeting of Milkhaus Laboratories, as consultant for Milkhaus Laboratory, Delanson, N.Y.

Spaulding, James. 1996. Assessment of a potential immunotherapy for Diabetes Mellitus using spontaneously diabetic BB Wistar rats. Presented at the Annual Scientific Meeting of Milkhaus Laboratories, as consultant for Milkhaus Laboratory, Delanson, N.Y.

Spaulding, James. 1995. Assessment of immunotherapeutic biologicals in controlling the growth of cancers in rats. Presented at the Annual Scientific Meeting of Milkhaus Laboratories, as consultant for Milkhaus Laboratory, Delanson, N.Y.


Wendy C. Trzyna, Ph.D.

Contact Information:

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Mail: Louisiana Tech University
School of Biological Sciences
P.O. Box 3179
1 Adams Blvd
Ruston, LA 71272

E-mail: wtrzyna@latech.edu

Education:

B.Sc. Illinois State University (1985)
Major: Biological Sciences
Minor: Chemistry

Ph.D. University of Wyoming (1993)
Area of concentration: Molecular Biology

Professional Affiliation: Member of the American Society for Microbiology (ASM).

Publications:


Publications, in preparation and GenBank submissions:


Abstracts, Conferences, Posters:


Service:

Departmental service/committee work:
Served as Chair of Microbiologist search committee (Spring 2004)
Served on Environmental Scientist search committee (2003-2004)
Other Departmental committees served on (2003-2004):
Microbiology workgroup (chair)
Cell/Molecular biology workgroup
Graduate studies workgroup
Research studies workgroup
College of Applied and Natural Sciences committees served on (2003-2004)
College research committee

Inter-institutional activities:
Participated in Research Symposium at Grambling State University, Grambling Louisiana; February 8-9, 2004.

Grants Information:

Co-PI on grant with Drs. Cheng Luo (PI), Jun-Ing Ker (Co-PI), and Yuri Lvov (Co-PI) (all at the Institute for Micromanufacturing, Louisiana Tech University). Submitted to NSF, 02/26/04. SST: Cost-effective Biosensing Technology for Rapid Detection of Five Foodborne Pathogens in a Parallel Manner.

Acanthamoeba BAC clone libraries as Genomic Resources. Currently preparing revision for resubmission to NSF.


Continuing Education:

Attended a workshop on the use of the Scanning Electron Microscope. September 2002, Department of Biology, at The University of Central Arkansas.

Recognition and Awards:

1989-1991 University of Wyoming
Graduate student representative for Molecular Biology department.
1991-1992 University of Wyoming
Senior Graduate Assistantship Award (2 year limit for award).
1993 University of Wyoming
Graduate Student travel award to attend Gordon Conference.

Academic Experience:

Assistant Professor – Louisiana Tech University
I am currently an assistant professor in the School of Biological Sciences at Louisiana Tech University. I have been teaching General Microbiology (BISC 260) and Molecular Biology (BISC 422/522) in addition to establishing an active research program involving undergraduate and graduate students.

My lab studies the single-celled eukaryotic microbe, Acanthamoeba castellanii. Projects are focused on understanding at the molecular level how this organism senses and responds to changes in its environment. I have cloned and sequenced a gene for Metacaspase appears to be involved in the encystment. Encystment in Acanthamoeba is a cellular differentiation event triggered by various environmental stresses. The cyst is a cellulose-containing structure which surrounds a dormant form of the cell. Projects in the lab involve characterization of the metacaspase and its function in stress responses and encystment.

**Visiting Assistant Professor – The University of Central Arkansas:**
Appointment: July 2002 – August 2003
Department of Biology
Department Chairperson: Dr. Paul V. Hamilton

As a visiting assistant professor in the Biology department at the University of Central Arkansas, my primary responsibilities included teaching Microbiology to non-majors (mainly allied health professionals) and establishing a research program involving undergraduates.

Research projects involve the investigation of the molecular mechanisms of stress responses in the free-living protozoan, Acanthamoeba castellanii. Acanthamoeba undergo encystment in response to a variety of “stressful” environmental stimuli. I am interested in the signal transduction events involved in the encystment process as a model for understanding stress responses. I recently cloned a gene for the Acanthamoeba metacaspase, which our data suggests is involved in the signal transduction events leading to encystment. A separate statement of detailed research plans is included with this application.

Teaching responsibilities include 12 contact hours per semester. I teach 2 class sections of “Microbiology in Human Affairs” (BIOL 2411, 4 credit hour course) which is a non-majors course for the allied health professional students. This is a four credit hour course that also includes laboratory. I also plan all the laboratory experiments/exercises and oversee the preparations of laboratory materials. I have been preparing “laboratory notes” for the class as there was no standard manual in place when I began teaching the course. I serve about 100 students per semester through this course.

**Research Scientist – The University of Wyoming:**
Appointment: Research Scientist, Oct. 1999 – May 2002:
Department of Molecular Biology, University of Wyoming
Supervisor: Dr. Clarence L. Villemez, Professor of Biochemistry and Chemistry.

Stress Responses. We were investigating molecular aspects of stress responses in Acanthamoeba castellanii, an obligate single-celled protozoan found ubiquitously throughout the environment. Acanthamoebae live as trophozoites, the actively feeding form, or form cysts, which are dormant cells encased in a cellulose-containing cyst wall. Various environmental stressors, such as increased osmolarity or scarcity of nutrients, stimulate Acanthamoebae to encyst. The cyst remains effectively dormant and protected from the environment. When
conditions are deemed to be “favorable”, the cyst excysts and a fully active trophozoite emerges. This ability of Acanthamoeba to encyst ensures survival when potentially harmful conditions are encountered. How Acanthamoebae monitor their environment, the intracellular mechanisms for sensing changes, the nature and transmission of these signals, and the specific differentiation program that is subsequently initiated are the focal points of this research. A panel of monoclonal antibodies specific for antigenic determinants on the surface of Acanthamoebae was previously isolated in this laboratory. Upon binding, these monoclonals stimulate the amoebae to encyst. High osmolarity media (which also induces encystment) appears to act synergistically with these monoclonal antibodies to trigger encystment. This suggests that the antibodies may be recognizing molecules that are involved in environmental stress sensing and response pathways. Therefore, I used these monoclonal antibodies to screen Acanthamoeba cDNA expression libraries to identify clones relevant to these events. One of the cDNA clones we isolated shares significant sequence identity with metacaspases. Metacaspases are “caspase-like” molecules that are implicated in various stress responses, including the plant hypersensitivity response. They were recently described in yeast and plants. BLAST searches find matches with sequences from a variety of organisms. Sequence alignments reveal several highly conserved regions. Preliminary analysis of our Acanthamoeba metacaspase protein sequence reveals a putative transmembrane domain, a predicted extracellular domain, which is rich in serine and threonine for possible O-linked glycosylation sites, and potential phosphorylation consensus sequences. We are further characterizing this clone and beginning to identify other associated molecules in this stress response pathway. Caspases and caspase-like molecules are part of the apoptotic machinery of multi-cellular plants and animals. For an obligate single-celled organism, it is probably preferable to encyst rather than undergo cell death. Acanthamoeba encysts as a response to stress. It is an intriguing hypothesis that the molecular events leading to encystment in Acanthamoebae are homologous to the apoptosis pathway in higher eukaryotes. The metacaspase in Acanthamoeba may be involved in "shutting down" the cell to a state of suspended animation but without inducing cell death. Pathogenicity. Some strains of Acanthamoebae are opportunistic pathogens. They can cause a serious fulminating infection (amoebic encephalitis) in immuno-compromised individuals such as AIDS patients, transplant patients or people with diabetes. In otherwise healthy individuals, pathogenic amoebae can infect immuno-compromised sites of the body such as the eye. Such infections may lead to amoebic keratitis, a painful sight-threatening condition that currently has no satisfactory treatment short of repeated corneal transplants. Using another monoclonal antibody (that also recognizes surface determinants on Acanthamoeba and stimulates encystment), we isolated clone 59A4. This sequence is unique with no apparent similarity to other sequences of known function. We are expressing 59A4 recombinant protein for use as an immunotherapeutic vaccine against amoebic keratitis. If appropriate antibodies are elicited (in the host) that bind to specific epitopes on the surface of Acanthamoebae and stimulate the amoebae to encyst (in vivo), the infection will be terminated (or prevented).

University of Chicago:
Supervisor: Dr. Paul T. Schumacker, Professor of Medicine and Chair of the Committee on Comparative Medicine and Pathology.

Mechanisms for sensing hypoxia in cells. As a "Molecular Biology resources person" in Dr. Schumacker's lab, my express purpose was to introduce and teach modern molecular biology techniques to laboratory personnel and students. Research in Dr. Schumacker's lab addresses
physiological aspects of hypoxia sensing mechanisms in cells. I was brought on board to integrate modern molecular biology techniques into this research.

Specifically, research in Dr. Schumacker's lab focuses on understanding the sensing mechanisms in cells undergoing hypoxia. During hypoxia, cells begin to produce numerous factors to enhance cellular survival during times of depleted $O_2$. Reactive Oxygen Species (ROS), produced by the mitochondria, act as second messengers. ROS trigger a cascade of events that results in specific transcriptional events all aimed at cellular adaptation and survival during hypoxia. One of my tasks was to analyze specific changes in gene expression in cells during hypoxia and specifically as relates to the role of the mitochondria. In addition to experimentation, I instructed other members of the laboratory in molecular biology theory and experimental techniques and participated in and contributed to a variety of ongoing projects in the lab.

Additionally, I became involved in the development of a PCR-based molecular diagnostic assay for the detection of Mouse Hepatitis Virus. This project was in conjunction with members of the animal resources laboratory at the University of Chicago. (Dr. Schumacker is also the head of the Animal Resources Center at the University of Chicago).

**Thomas Jefferson University, Philadelphia, PA (Postdoctoral research).**

Dept. of Anatomy, Pathology and Cell Biology.
Supervisor: Dr. Kirk M. McHugh, Assoc. Professor

Transcriptional Regulation of Smooth Muscle Myogenesis. While at Thomas Jefferson University, I was awarded an NRSA grant from the NIH to fund my postdoctoral research in Dr. Kirk McHugh's laboratory. The study focused on the molecules and mechanisms directing the smooth muscle myogenic program. Alterations in smooth muscle phenotype have been reported in numerous diseases such as Hirschsprung’s disease, megacolon, Chron’s disease, pyloric stenosis, ulcerative colitis, interstitial cystitis, asthma, atherosclerosis, and smooth muscle neoplasms. In general, these alterations in SMC phenotype reflect a shift from the mature smooth muscle myocyte towards the smooth muscle myoblast, a phenotypic modulation of SMCs that plays a major role in the development and progression of pathogenesis. At that time little was known about the molecular program controlling smooth muscle cell development/differentiation.

To facilitate the study of these processes, we developed an in vitro model system of cultured rat intestinal smooth muscle cells that closely mimics the in vivo developmental phenotypes observed during smooth muscle myogenesis. Differential isoactin gene expression as molecular markers of differentiation confirms the distinct developmental phenotypes. RNAs from these developmentally distinct populations of cells were used for differential display analysis. Transcripts present in only one of the populations of cells were identified as potential regulatory candidates. Candidates were screened for interesting developmental patterns of expression on northern blots, and full-length cDNA clones were isolated from smooth muscle libraries I constructed.

Through this approach, I isolated a novel basic Helix-Loop-Helix (bHLH) transcription factor, sHAND, at the time the first identification of a bHLH molecule expressed in smooth muscle. sHAND is highly expressed in smooth muscle myocytes and at very low levels in smooth muscle myoblasts. These data, in conjunction with sHAND’s high sequence identity with other bHLH transcription factors suggests a role for sHAND in the de-differentiation/re-differentiation of smooth muscle cells. Other studies involved characterizing the functional role of sHAND in smooth muscle myogenesis, including 1) the identification of novel heterodimerization partners of sHAND (as all known class B bHLH transcription factors function in vivo as heterodimers with other bHLH proteins, 2) characterization of the
interaction of sHAND with the gamma-smooth muscle isoactin gene promoter (as the gamma-
smooth muscle isoactin gene is a key molecular marker of intestinal smooth muscle
differentiation, and 3) the ability of sHAND, in conjunction with other previously reported
transcription factors involved in myogenesis (MADS-box family of transcription factors,
homeobox genes) to modulate the smooth muscle phenotype.

These studies involved all aspects of modern molecular biology. Specifically, I am
experienced in all aspects of nucleic acid analysis (DNA/RNA), cDNA library construction
gene cloning, PCR, differential display, expression and purification of recombinant
proteins and western blotting. I am also experienced in tissue culture/sterile techniques,
eukaryotic cell transfections, animal handling and dissections.

The Neoplastic Transformation of Smooth Muscle Cells. In a related project, I developed a
molecular diagnostic assay for unambiguously distinguishing between benign and malignant
tumors of smooth muscle origin. Smooth muscle neoplasms (SMN) are the most frequent
tumors found in women (uterine tissue most commonly), and recent studies have also indicated
a rising incidence of SMN in patients infected with the human immunodeficiency virus. SMNs
range from benign leiomyomas to anaplastic leiomyosarcomas, a percentage of which are
classified as indeterminate variants. The histologic evaluation of such variants is problematic,
resulting in a subclass of SMNs of "uncertain malignant potential". As an adjunct to histologic
evaluation, our molecular diagnostic assay can unambiguously distinguish between
leiomyomas vs. leiomyosarcomas. In double blind studies carried out in our laboratory, RT-
PCR analysis demonstrated a 100% correlation between the lack of gamma-smooth muscle
isoactin gene expression and a pathologic diagnosis of sarcoma.

Our observation that the gamma-smooth muscle isoactin gene is highly expressed in
leiomyomas (benign smooth muscle tumors) but not in leiomyosarcomas (malignant) parallels
the observation that the gamma-smooth muscle isoactin gene is expressed in the smooth
muscle myocyte (a nonproliferative, contractile, mature state) but not in the smooth muscle
myoblast (a non-contractile, highly proliferative, migratory and synthetic cell). This suggested
to us that the gamma-smooth muscle isoactin gene might be a useful molecular marker for
distinguishing between benign and malignant smooth muscle tumors (benign= smooth muscle
myocyte; malignant= smooth muscle myoblast). The expression pattern of the gamma-smooth
muscle isoactin gene in these various tumor types suggests a tight linkage of this gene to
 cellular differentiation and withdrawal from the cell cycle. Molecules that bind the gamma
promoter for either activation or repression may be critical to the processes of neoplastic
transformation. We developed a molecular diagnostic assay based on the expression pattern of
the gamma-smooth muscle isoactin gene during smooth muscle differentiation/de-
differentiation (since the process of neoplastic transformation is closely tied to cellular
differentiation/de-differentiation).

The studies detailing our development of this diagnostic assay were published in Cancer (1997;
80:211-217). This publication generated tremendous interest in our molecular diagnostic test
and was covered extensively by various branches of the media (detailed below).

Media Recognition of the McHugh Lab:
 WTXF-TV (Philadelphia) medical report filmed for television
 WJBK-TV (Detroit) medical report filmed for television
 WAGA-TV (Atlanta) medical report filmed for television.
 WXIX-TV (Cincinnati) medical report filmed for television.
 WKDF-TV medical report filmed for television
 MED SOURCE, ABC/NBC/CBS medical report filmed for television
JeffNEWS, interview and article.
Hospital and Healthcare News, 9, S. Jersey newsletter, interview and article.
The Intelligencer, Wheeling West Virginia, newspaper interview and article.
Healthcare and Reproductive Newsletter, (Manning, Seluage and Lee), interview/article.
Cancer Weekly Plus, article.
Daily News, New York, New York, article.
Seasons Magazine, interview and article.
Living Fit Magazine, interview and article.
WRTI-FM (90.1, Philadelphia) live radio interview.
Publication of abstract in ASCB Press Book of Selected Biomedical Research Summaries, (one of 15 selected from 2662 abstracts submitted).

**University of Wyoming (Ph.D. thesis research):**
Department of Molecular Biology.

My Ph.D. thesis research focused on the analysis of the immune response to the major egg antigen, p40, of the human parasite Schistosoma mansoni. p40 is an unusual protein in that it is widely responded to by all mouse strains studied and the majority (>98%) of human patients. This is not the case for other protein antigens (Butterworth, et al. 1985 Trans.Roy.Soc.Trop.Med.Hyg. 79, 393-408). During infection, all mice appear to produce antibody to p40. However, when mice are hyperimmunized with pure recombinant p40, H-2b mice apparently fail to produce antibody to p40. Further investigation revealed that during infection H-2b mice did produce antibody but only of the IgM isotype, persistent throughout chronic infection. All other strains also produce a sustained IgM response to p40 during infection in addition to IgG. This enhanced IgM production to p40 during infection may be illustrative of a mechanism whereby IgM production is similarly enhanced to other proteins which are directly involved in the elicitation of "blocking antibodies", which are advantageous to the parasite's survival. I prepared a panel of recombinant deletion proteins covering the entire length of p40 in order to define the epitopes recognized by the humoral immune response in both mice and humans. Most of the antibody to p40 produced during infection is directed towards epitopes at the C-terminus. Hyperimmune sera recognize epitopes covering the majority of the molecule. The time course for the appearance of specific antibodies after hyperimmunization reveals that the antibodies to the C-terminus appear before those recognizing other epitopes. Further analysis of infection sera revealed that additional specificities begin to appear later in infection. These data suggest that the time course of development of the immune response during infection may resemble that after hyperimmunization but with slower progression.

The project involved a wide variety of techniques including preparation of deletion clones, expression and purification of recombinant proteins, DNA sequencing, gel electrophoresis, southern blotting, western blotting and ELISA's, in vitro translations and immunoprecipitations and mouse handling including immunizations and bleedings, Schistosoma infections and harvesting of parasite materials from mice.

As a graduate assistant in the Molecular Biology department, I gained valuable teaching experience. I had the opportunity to participate in teaching the General Microbiology course offered in this department. I also participated in teaching a laboratory course dealing with the use of radioisotopes in biological research.
MILAN C. VAVREK

Address  Louisiana Tech University
         School of Biological Sciences
         P.O. Box 3179
         Ruston, Louisiana  71272-0001
         Phone: (318) 257-4573

Education

1994    Ph.D.  Department of Biology (Environmental Plant Biology Program), West
         Virginia University, Morgantown, West Virginia.

1990    M.S.    Department of Biology, West Virginia University, Morgantown, West
         Virginia.

1978    B.S.    Botany, Kent State University, Kent, Ohio.

Experience

Associate Professor.  School of Biological Sciences, Louisiana Tech University.  Courses:
         Ecology, Advanced Ecology, Wetland Ecology, Plant Taxonomy (I and II), Genetics
         (population genetics portion), Research Methods in the Biological Sciences, Applied Methods
         in the Biological Sciences, Fundamentals of Biology (I and II), and University Seminar.

1996-2002  Assistant Professor.  School of Biological Sciences, Louisiana Tech University.

1994-1996  Visiting Assistant Professor.  Department of Biology, West Virginia University.
         Research: Wetland restoration; Courses: General Biology I and II.

         Sciences, West Virginia University.

1988-1994  Graduate Teaching Assistant.  Department of Biology, West Virginia University.
         Courses: Principles of Biology, Ecology and Evolution, Plant Ecology.  Acting Curator of the
         Herbarium.


Biological Aide.  Plant Science Branch, Benefits and Field Studies Division, Environmental
         Protection Agency, Washington, D.C.

Research
Publications


Selected Presentations


Colgan III, W., M.C. Vavrek and J. Bolton. Revegetation of an oil brine spill: interactions


Selected Grants funded


Colgan, W. and M.C. Vavrek. Strain selection of AM fungi for restoration of oil/brine spill
sites. LA Applied Oil Spill Research and Development Program. 2002.


Vavrek, M.C. Responses of Pre-industrial Age and Modern Plants to Elevated Carbon Dioxide. LA Tech University Summer Research Grant. 2001.


Vavrek, M.C. Regeneration of loblolly communities grown in elevated CO$_2$ and reduced precipitation. ANS Faculty Research Mini-Grant Program. 2000.


Campbell, W.J. and M.C. Vavrek. Development of a germination index of sensitivity to applied oil (Year 2). LA Oil Spill Research and Development Program. 1998.


**Awards and Honors**

Outstanding Researcher. 1999. College of Applied and Natural Sciences, Louisiana Tech University
Outstanding Teaching Assistant. 1994. Department of Biology, West Virginia University.
Honor Society of Phi Kappa Phi

**Organizations**

British Ecological Society Ecological Society of America
Botanical Society of America Sigma Xi, The Research Society
Society for Conservation Biology Society for the Study of Evolution
JOHN M. WAKEMAN

Personal:

Born: June 12, 1937; Melbourne, Victoria, Australia

Education:
Ph.D. University of Texas at Austin, 1978
M.S. University of Alabama, 1975
B.S. Southern Illinois University, 1973
A.A.S. Illinois Central College, 1971

Professional Experience:
1989 - Professor of Biological Sciences, Louisiana Tech University. Teaching courses in Cell Biology, Animal Physiology, Environmental Physiology, and Human Anatomy and Physiology.
1983-89 Associate Professor, Louisiana Tech University.
1978-83 Assistant Professor, Louisiana Tech University.
1978 Post-doctoral research (spawning, development and physiology of marine fishes).
1975 Teaching Assistant. University of Texas at Austin.

Society Membership:
American Society of Ichthyologists and Herpetologists American Fisheries Society Gulf Estuarine Research Society Phi Kappa Phi Honor Society Sigma Xi

Honors:

Liberal Arts and Science Honor Society Annual Award for outstanding scholastic achievement, Southern Illinois University. 1973.

Honorary membership in the Illinois Beta Society of Phi Beta Kappa. Graduated with highest Honors (highest grade point average in graduating class.)

University of Alabama Graduate Council Research Fellowship, 1974-75 University of Alabama Graham Prize, 1975 (Outstanding Graduate Student Award) University of Texas Graduate Studies Travel Awards, 1976, 1977, 1978

Associated Activities:

1984-85 Vice President of Gulf Estuarine Research Society 1987-89 President of Estuarine Research Society 19)

Grants and Contracts:

Louisiana Tech University Summer Grant. "Development of an on-line course on aquatic..."
biomonitoring" 1999. $1,000.


LA Catfish Research Board. "Biological Control of Selected Cyanobacteria that Causes Off-flavor in Catfish" (with H. L. Walker). 1993. $12,000.


Publications:


Abstracts and Reports:


SERVICE ON MASTER'S COMMITTEES

COMMITTEE CHAIRMAN:


THE STARTLE RESPONSE IN THE FATHEAD MINNOW (Pimephales promelas)

2. Banks, Michael Andrew (November 1988)

AGE-LINKED CHANGES IN THE SALINITY TOLERANCE OF SPOTTED SEATROUT (Cynoscion nebulosus) LARVAE

1. Brown, Charles Randall (May 1982)

SUBLETHAL EFFECTS OF TREATED KRAFT PAPER MILL EFFLUENT ON THE METABOLISM AND BEHAVIOR OF JUVENILE BLUEGILL

COMMITTEE MEMBER:

1. Swayze, Christopher Reed (August 1984) Non-Thesis
Dr. James Dickson

I. Personal Data
1. Address:
   Louisiana Tech University
   P.O. Box 10138
   Ruston, LA 71270
   (318) 257-4020 (O) (318) 513-1062 (H)
2. Birth: April 26, 1943
3. Family: Wife – Elizabeth; Children – John, Jamie

II. Academic Training
1. B.S., Forestry, University of the South, 1961-1965
2. M.S., Wildlife Management, University of Georgia, 1965-1967

III. Significant Professional Experience
1. 1965-67, 1972-74 Graduate Research Assistant
2. 1967-71 Line Officer, U.S. Navy
3. 1974-76 Assistant Professor, Louisiana Tech University, Ruston
4. 1976-1998 Research Wildlife Biologist or Supervisory, Research Wildlife Biologist (GM-14), Wildlife Habitat and Silviculture Laboratory, U.S. Forest Service, Southern Research Station, Nacogdoches, TX (concurrently Adjunct Professor, Stephen F. Austin State University, Texas A&M University, New Mexico State University).
5. 1998- Merritt Professor of Forestry, Coordinator of the Wildlife Program at Louisiana Tech University, Ruston

IV. Honors and Awards
1. Outstanding Forestry Major Award – University of the South, 1965
2. Special Letter of Commendation, Commanding Officer, U.S. Navy 1971
3. Xi Sigma Pi (Honorary Forestry Fraternity), President, La. State University Chapter, 1973
5. Publication Award, Southeast Section – The Wildlife Society, 1979
6. Certificate of Merit, USDA Forest Service (USFS), 1984
7. Certificate of Merit, USFS, 1985
8. Wildlife Conservationist of the Year, Sportsmen Conservationists of Texas, 1986
9. Unit Motor Vehicle Safety Award, USFS, 1987
11. Technology Transfer Award, USFS (Southern Forest Experiment Station) 1992
12. Chief’s Award and Technology Transfer Certificate of Achievement, USFS 1993
13. Safety and Health Award, USFS 1993
14. Publication Award, Southeast Section – The Wildlife Society, 1993
15. Publication Award, Texas Chapter – The Wildlife Society, 1994
16. Henry Mosby Award, National Wild Turkey Federation, 1994
17. Golden Tracks Award, Texas Chapter, National Wild Turkey Federation, 1994
18. Research Award, Texas Forestry Association, 1995
19. Publication Award, Southeast Section, The Wildlife Society 1996
22. Publication Award, Southeast Section, The Wildlife Society, 1997
25. Past Presidents’ Award, National Wild Turkey Federation, 1999
26. Frank Merritt Endowed Professorship, Louisiana Tech University, 1999
27. Scientist Emeritus, USFS, Southern Research Station, 1999
28. Special Letter of Commendation, Bobby Jindal, President, University of Louisiana System, 2000
29. Past Chairmen’s Award, National Wild Turkey Federation, 2001
30. Board of Directors, National Wild Turkey Federation; Elected 7 consecutive terms, and served in all officer positions.
31. Scholarly Activity Award, College of Applied and Natural Sciences, Louisiana Tech University, 2001
32. Forest Stewardship Advisory Council, Boise Corp., 2001
33. Outstanding Publication Award, Southeast Section, The Wildlife Society, 2002

V. Membership in Professional Organizations
1. The Wildlife Society
2. National Wild Turkey Federation
3. Louisiana Forestry Association

VI. Research
Dr. Dickson’s investigations have played a major role in defining wildlife relationships in southern forests. Dickson has published over 100 technical publications. Critical new information has been developed on breeding and wintering birds, wild turkeys, squirrels, terrestrial small mammals, white-tailed deer, and reptile and amphibian communities in bottomland hardwoods, streamside zones, and upland pine and pine-hardwood stands. The relationships of bird communities, their forest habitat, and Silvicultural practices were documented. Snag and cavity formation, and methods of producing cavities were developed.

VII. Technology Transfer Dickson played an early leading role in advancing management of a variety of vertebrate wildlife, for which little was known. Information has been transferred to users through a variety of media. Dickson has made over 250 presentations to professional and lay audiences. Information developed from his research has been presented in technical journals, books, symposia, and popular media. This information has helped form the basis for development of wildlife management guidelines on public land as well as in industrial forestry. His data on wildlife communities in bottomland hardwoods and streamside zones were instrumental in establishing management practices. Relationships defined by his work also have been used in developing wildlife habitat models nationwide. Dickson consults annually with landowners responsible for millions of acres of wildlife habitat. For example, he serves on Boise’s Forest Stewardship Advisory Council. He recently completed the award-winning wildlife book of the South: Wildlife of Southern Forests: Habitat and Management. And he was a founder and charter member of the Ark-La-Miss Wildlife Group; and program chairman and speaker for their first two symposia. He has had significant roles (made, invited, keynote, or plenary address) in major wildlife symposia:
1. Workshop – Management of Southern Forest for Nongame Birds
2. Symposium – Prescribed Fire and Wildlife in Southern Forests
3. Symposium – The Role of Insectivorous Birds in Forest Ecosystems
4. Symposium – Snag Habitat Management
5. Workshop on Management of Nongame Species and Ecological Communities
6. Fifth National Wild Turkey Symposium
Challenge
8. International Ornithological Congress Conference – Ottawa, Ontario, Canada – Wildlife Research of the USDA Forest Service
9. Interagency Workshop on Status and Ecology of Bottomland Hardwoods
11. Conference on management of upland game birds in Mexico Ecology and management of the wild turkey
12. Sixth National Wild Turkey Symposium
13. Workshop – Status and Management of Neotropical Migratory Birds
14. Conference – Aquatic Fauna in Peril: The Southeastern Perspective
15. Seventh National Wild Turkey Symposium
16. Ecology and Management of Bottomland Hardwood Forests
17. The Wildlife Society, Symposium – Fire and Nongame Wildlife
18. Eighth National Wild Turkey Symposium
19. Upland Oak Ecology; History, Current Conditions, and Sustainability – A Symposium

VIII. Wild Turkey
Dickson has played a significant role in the conservation of the wild turkey. Dickson has been a long-term Director, and has served as Chairman of the Board, President, Vice President, and Secretary of the 500,000+ member National Wild Turkey Federation (NWTF), which is a premier conservation organization. He has a long history of research defining wild turkey forest habitat relationships and has published scientific and popular articles. He coauthored the Summary of the Fifth National Wild Turkey Symposium, authored 2 papers in the Sixth, edited the award winning Seventh National Wild Turkey Symposium, and presented the Summary for the Eight. He has provided information which has advanced wild turkey restoration and management in America. Also, Dickson has helped establish research and develop management for the Goulds wild turkey in northern Mexico. Dickson compiled and edited the most comprehensive and award winning monograph, The Wild Turkey: Biology and Management, which is called the turkey bible. He has been featured on Turkey Country which aired on the Outdoor Channel, and he was featured and was the technical consultant for Turkey Secrets which aired on Animal Planet. Also, he is former 3 – time Texas Wild Turkey Calling Champion.

Publications


Dickson, J. G. (Author or coauthor) of chapters in Wildlife of Southern Forests: Introduction, Early History, Natural Resources- Into the 20th Century, Defining the Forest, Managing Forests for Wildlife, Wild Turkey, Wild Hogs, Birds, Small Terrestrial Mammals, Conclusions


NAME: James M. Dyer
ACADEMIC RANK: Professor of Forestry, Associate Dean Enrollment Management
SPECIALIZATION: Prescribed Fire, Wildlife Habitat, Global Positioning Systems
APPOINTMENT BASIS: 12 month

FORMAL EDUCATION:
Major field Date of Degree Institution of study attended Degree

TEACHING EXPERIENCE:
Total Academic
Institution Title Specialization Dates Years
La. St. Univ. Teaching Asst. Dendrology 1974-75 1
La. St. Univ. Instructor Silviculture 1976 1
La. St. Univ. Asst. Professor Silviculture/Fire 1976-77 1
La. Tech Univ. Professor Wildlife/Fire/GPS 1989-present 15
Dendrology
Univ. Montana Visiting Prof. Wildlife/GPS 1993-94 1

NON-ACADEMIC PROFESSIONAL AND RESEARCH/EXTENSION EXPERIENCE
Employer Title Nature of work Dates
U.S. Army Corps Ecologist Environmental Assessments 1969-71
U.S. Army Corps Leader, Environmental
of Engineers Assessment Unit Developing/Writing EIS 1975-76

DATES OF APPOINTMENT AND PROMOTIONS AT PRESENT INSTITUTION:
Title Date
Initial Appointment Assistant Professor 1977
Promoted to: Associate Professor 1982
Promoted to: Professor 1989
Promoted to: Associate Dean, Enrollment 1998
Management

ACADEMIC YEAR ASSIGNMENTS:
Teaching – 75%
Administration – 25%

COURSES TAUGHT LAST ACADEMIC YEAR:
Course Credit
Number Title Hours Quarter
For 202 (001) Forest Fire 2 Fall
US 100 (051) University Seminar 1 Fall
For 205 (001) Dendrology 2 Winter
For 205 (002) Dendrology 2 Winter
For 314 (001) Wildlife Habitat 3 Winter
For 206 (001) Dendrology 2 Spring
For 206 (002) Dendrology 2 Spring
For 324 (001) Global Pos. Systems 2 Spring
For 324 (001) Global Pos. Systems 2 Summer
For 324 (002) Global Pos. Systems 2 Summer

GRANTS (PAST 5 YEARS):
Shell Western E&P – Remediation of Brine Contaminated Oil Field Sites ($41,683.60)
State of Louisiana – Establishment of Geographic Information Systems (GIS) Lab
($71,250.00)

PUBLICATIONS (PAST 5 YEARS):

MEMBERSHIPS IN PROFESSIONAL ORGANIZATIONS:
Xi Sigma Pi
Sigma Xi
Society of American Foresters
The Wildlife Society
Louisiana Academy of Sciences
Black Bear Conservation Committee (Board of Directors)
Louisiana Forestry Association
Rocky Mountain Elk Foundation
WILLIAM BROWN PATTERSON  
School of Forestry 306 Northwood Place  
Louisiana Tech University Ruston, LA 71270  
P.O. Box 10138 (318) 255-4305  
Ruston, LA 71272  
(318) 257-2879  
wpatter@LANS.LaTech.edu  
Forest Soil and Water Resources Scientist

EDUCATION  
1990-1997 Louisiana State University, Baton Rouge. School of Forestry, Wildlife, Fisheries.  
Doctor of  
Philosophy in Forestry (Forest Soils and Ecology), December, 1997.  
Dissertation: "Vegetation, soil, and hydrology of Central Louisiana bottomland hardwood forest types"  
Master of Science, August 1989.  
Major in Ecology, Minor in Plant and Soil Science.  
Thesis: "Vegetation and Soils of the Sinking Pond Area, Coffee County, Tennessee."  
Bachelor of Arts, May 1983.  
Major in Sociology and Anthropology, unofficial minor in Biology.

MEMBERSHIPS  
Gamma Sigma Delta (Agriculture Honor Society)  
Xi Sigma Pi (Forestry Honor Society)  
American Society of Agronomy - Soil Science Society of America (Forest Soils, Wetland Soils, Pedology)  
Louisiana Association of Agronomists (Executive Committee, 2000-2001)  
Society of Wetland Scientists (South Central Chapter)  
Society of American Foresters (Soils, Water and Ecology Working Groups), North La. SAF;  
Chair, Science and Technology, LA SAF (2001-2003)  
Louisiana Forestry Association

CERTIFICATION  
Wetland Professional in Training (Society of Wetland Scientists)

EXPERIENCE  
Nov. 1997 Assistant Professor, School of Forestry, Louisiana Tech University, Ruston. Teach courses  
-present in forest soils, watershed management, soil and site evaluation, and wetland ecology.  
Research in bottomland hardwood forest restoration, wetland soil processes and soil hydrology, oil spill phytoremediation, forest site quality and productivity, and watershed hydrology.  
Dec. 1996 Student Worker (quarter time), Agronomy Department, Louisiana State University, Baton  
June 1996 Research Associate (full time, 6 month temporary), Agronomy Department,

Aug. 1990 Graduate Research Assistant (half time), School of Forestry, Wildlife and Fisheries,


June 1986 Graduate Research, University of Tennessee, Knoxville. Sampled forest vegetation and soils -July 1989 in swamp and adjacent uplands at Sinking Pond Natural Area and Natural National Landmark, Coffee County, Tennessee. Classified vegetation and performed ecological gradient analyses. Characterized the soil mapping units. Mapped forest vegetation communities and soils.


1983 U.S. Forest Service Volunteer, George Washington National Forest, Summer Staunton, Virginia. Worked 60 hours/week on timber cruise crew, trail crew, wildlife habitat improvement and recreation monitoring.

PUBLICATIONS

Journal articles and edited proceedings articles

Patterson, W.B. and J.C. Adams. 2003. Soil, hydroperiod, and bedding effects on restoring bottomland hardwoods on flood prone agricultural lands in north Louisiana, USA. Forestry 76(2): 181-188.


Published abstracts


Other presentations and abstracts


Loe, S., R.J. Patterson and W.B. Patterson. 2000. Windrow effects on hardwood competition and soil profile development. Poster and abstract. Research Symposium, College of Applied and


REPORTS

Hudnall, W.H. and W.B. Patterson. 1996. Sharkey Field Tour. Louisiana Guidebook. NRCS
Sharkey Field Tour, Louisiana, Mississippi, Arkansas, January 6-10, 1996. Agronomy Dept., Louisiana Agricultural Experiment Station, LSU Agricultural Center. 57 pp.


MANUSCRIPTS IN PROGRESS

Patterson, W.B. and J.C. Adams. Soil redox regimes and hydroperiods of a bedded Louisiana bottomland hardwood afforestation site. To be submitted to Soil Science Society of America Journal or Wetlands.

Patterson, W.B., M.A. Sword and S. Brooker. Response of soil physical properties to the application and intensity of prescribed fire in a young longleaf pine (Pinus palustris Mill.) stand. Paper in preparation for presentation at the Eleventh Biennial Southern Silvicultural Research Conference, February 24-28, 2003, Biloxi, MS.


Patterson, W.B., J.C. Chambers and W.H. Hudnall. Vegetation of central Louisiana clayey backswamp bottomland hardwood forests. To be submitted to Wetlands.

Patterson, W.B., W.H. Hudnall and J.C. Chambers. Soil water table and redox dynamics of central Louisiana clayey bottomland hardwood forest types. To be submitted to Wetlands.


Patterson, W.B. and H.R. DeSelm. Vegetation communities of Sinking Pond area, Tennessee. To be submitted to Castanea.

RIYAZ AHMED SADIQ
2206 Lily Drive, tel: (318) 257-2947 (Off.)
Ruston, LA 71270-2621
email: Rsadiq@rans.Latech.edu

  Thesis: An expert system for an indoor tree seedling nursery.
• Ph.D. (Doctor of Philosophy), Forest Biometrics with special emphasis on forest growth and yield modeling, UNIVERSITY OF TORONTO, Ontario, Canada, 1981.
  Dissertation: Evaluation of forest stand growth and yield models.
• M.Sc.F. (Master of Science in Forestry), Forest Biometrics with emphasis on forest stand simulation, UNIVERSITY OF TORONTO, Ontario, Canada, 1977.
  Thesis: Generating and testing of a hypothetical forest stand.
• A.I.F.C. (Associate of Indian Forest College), General Forestry and allied subjects, INDIAN FOREST COLLEGE, Forest Research Institute and Colleges, DehraDun, India, 1973.
• B.Sc. (Bachelor of Science), Mathematics, Physics, Chemistry and English UNIVERSITY OF KASHMIR, Srinagar, Kashmir, India, 1970.

PROFESSIONAL EXPERIENCE:
Aug. to Nov. 1998: Orange Technologies Inc. Gaithersburg, MD.
  Assisted in creation of network systems.
Jan. to Jun. 1997: Rocky Mountain Research Station, USDA Forest Service, Moscow, ID.
  As a programming specialist. Modified the developed software for "Most Similar Neighbor" procedure that is designed for ecosystem management and made it more efficient.
1994 to 1995: Associate Editor of AI Applications.
  Handled editing and correspondence issues related to publication of the journal.
  As State Silviculturist and DEPUTY CONSERVATOR OF FORESTS, headed the Forest Research Division. Principal research investigations: standardization of nursery and field planting techniques of coniferous and broad-leaved tree species; comparative study of grass species on barren hill slopes; optimum time of planting of conifers in broad-leaved nurse crops especially in degraded forest areas; grafting of poplars; provenance and varietal trials of poplars and willows; and delayed seed sowings of broad-leaved tree species. Established six broad-leaved and coniferous tree nurseries. Raised one million plants/seedlings for the state's Afforestation and Environment Improvement Program. Project leader "Green the Hills" campaign under which a half million saplings were planted on three degraded hillocks around Srinagar city. Coordinator of first aerial seeding trial in the state. Prepared afforestation schemes and their implementation plan. Member of the examination committee of the Kashmir Forest Training School.
1973 to 1975: Jammu and Kashmir Forest Department, Kashmir, India.
  Served as ASSISTANT CONSERVATOR OF FORESTS, in the Working Plan and Research Circle and Langet Forest Division. Duties included scrutiny of management plans and monitoring of annual cut from forest compartments earmarked for regeneration fellings; regeneration survey and stock mapping of willow plantations of wetland areas of Kashmir Valley; coordination of firewood extraction from fuelwood plantations; data compilation and preparation of control forms - a guide for monitoring annual cut from felling coupes; execution of major selection markings for regeneration fellings in fir forests; supervision of scaling and grading of logs in timber depots; scrutiny and restoration of demarcation lines of forest compartments; and technical appraisal and general annual inspection of fellings coupes and
high alpine pasture lands.

RESEARCH EXPERIENCE:
1993 to 1997: RESEARCH ASSISTANT, Department of Forest Resources, College of Forestry, Wildlife and Range Sciences, University of Idaho, Moscow, Idaho, USA. Developed an interactive management advisor for an indoor container tree seedling nursery.

TEACHING EXPERIENCE:
Mar. 1999 to date: ASSISTANT PROFESSOR, Louisiana Tech University, Ruston, Louisiana. School of Forestry. Teaching undergraduate-level course in Forest Measurements, Growth and Yield Modeling, and Microcomputer Applications. Duties include regular lectures, laboratory sessions, and consultations.
Department of Computer Science. Teaching undergraduate-level course: Overview of Computer Science. Duties include regular class lectures, consultations, setting up and evaluation of mid-term and final examinations.
Department of Computer Science. Taught undergraduate-level Introduction to Computers and Computer Programming Language Course (C++). Duties included regular class lectures, consultations, setting up and evaluation of mid-term and final examinations.
1975 to 1983: TEACHING ASSISTANT, University of Toronto, Ontario, Canada. Faculty of Forestry (1975 to 1981). Conducted tutorials and laboratory sessions in Forest Biometrics and Computer Programming using Fortran IV.
Department of Computer Science (1977 to 1983). Tutorial classes for a course in PL/c.

PUBLICATIONS:

ACADEMIC HONORS and AWARDS:
• Mary Beatty Fellowship, University of Toronto, 1979-1980, $6000.
• Doctoral Fellowship, University of Toronto, 1977-1979, $6000.
• Graduate Scholarship, University of Toronto, 1975-1977, $3000.
• Merit Certificate awarded by the University of Kashmir. Ranked first out of 2298 examinees in the University, 1970.
• Merit Certificate awarded by the University of Kashmir. Ranked fourth out of 5525 examinees in the University, 1968.
• Certificate of Merit awarded by the University of Jammu and Kashmir. Ranked first out of 5598 examinees in the University, 1967.
PETER W. GALLAGHER

WORK: Department of Agriculture Sciences
       Box 10198 Tech Station  e-mail: pgall@rans.latech.edu
       Louisiana Tech University (318) 257-3275 [Work]
       Ruston, Louisiana 71272-0045  (318) 257-4288 [FAX]

HOME:    1301 W. Barnett Springs Avenue  e-mail: gallagher@cox-internet.com
         Ruston, Louisiana 71270-4821  (318) 255-6535 [Home]

ACADEMIC PREPARATION
   1982  Ph.D.  Landscape Horticulture
         Department of Horticulture, The Ohio State University, Columbus, OH
         Dissertation: Genetic Variation and Growth Regulator Effects on
         Wound Response among Acer and Populus taxa
   1975  MS   Ornamental Horticulture
         Department of Horticulture, University of Wisconsin, Madison, WI
   1974  BS   Landscape Architecture
         Department of Landscape Architecture, University of Wisconsin,
         Madison, WI

PROFESSIONAL EXPERIENCE
   -  Linnie M. Leggett Endowed Professorship
      Louisiana Tech University, Ruston, LA (1999-2002)
      -  Professor, Louisiana Tech University, Ruston, LA (1988-present)
   -  Head, Department of Agricultural Sciences
      Louisiana Tech University, Ruston, LA (1989-1997)

Associate Professor
   Louisiana Tech University, Ruston, LA (1982-88)

Assistant Professor
   Louisiana Tech University, Ruston, LA (1976-82)
   -  Teaching Assistant, Horticulture Department, Ohio State University
      Columbus, OH (1979-1981)
   -  Research Associate, University of Wisconsin
      Madison, WI (1971-76)
   -  Summer Horticulture Extension Agent, University of Wisconsin
      Cooperative Extension Service - Appleton, WI (1975)

TEACHING RESPONSIBILITIES
Agricultural Science 201: Microcomputer Applications (0-3-3). Introduction to
microcomputers with specific applications in filing conventions, word processing,
spreadsheets, electronic communications, and other topics.
Environmental Science 458: Environmental Law (0-3-3). Preq. Biological Sciences 130, 131,
or approval of instructor. A review and analysis of state and federal laws, conventions, and
international treaties that influence natural resource management. (G)
Plant Science 284: Woody Plants (3-2-3). Identification of woody landscape plants; including
culture, propagation and use.
Plant Science 301: Landscape Design (3-2-3). Elements and principles of design as applied to
the home and other small properties.
Plant Science 303: Irrigation Principles and Practices. 3-2-3. Procedures of design and
installation of irrigation systems appropriate to turf, landscape, greenhouse, nursery and agricultural applications.


Plant Science 384: **Herbaceous Plants** (3-2-3). Identification of annual, perennial and tropical plants; including culture, propagation and use.

Plant Science 403: **Edible Horticultural Crops** (3-2-3). Methods and practices of home and commercial production of vegetable and fruit crops, with emphasis on those adapted to the South.


Plant Science 440: **Nursery Management** (0-3-3). Production, handling and sales practices in the nursery, greenhouse and garden center. (G)

Plant Science 441: **Landscape Contracting** (3-2-3). Landscape contracting operations; estimating and bidding, plant installation, care and maintenance, design considerations, use of structural elements and irrigation systems. (G)

**PUBLICATIONS**


Gallagher, Peter W. "Shrub Profile: Sweet Olive deserves a special place". Louisiana
McClure, Gloria, Peter W. Gallagher and John D. Griffin. 1989. The Effects of Sodium and Soluble Salts on Three Cultivars of Poinsettia. HortScience
Griffin, John D., Peter W. Gallagher and Susan Jennings. 1987. The Influence of Three Levels of BONZI and SUMAGIC on Three Cultivars of Poinsettia. HortScience
PROFESSIONAL PRESENTATIONS
Irrigation Strategies for Fruit & Vegetable Crops. LSUS - North Louisiana Fruit & Vegetable Growers Conference, 2003
Landscape Irrigation Techniques. Bloom Fest - Monroe, LA. 2002
Landscape Design Workshop. Shreveport Master Gardeners. 2002
Design Considerations with Landscape Irrigation. Landscape and Grounds Maintenance Workshop. 2000
Park Planning and Urban Design. Mississippi Federated Garden Clubs Symposium. 1998
Native Woody Plants for the Home Landscape. American Rose Center. 1998
Landscape Design School II. Federated Garden Clubs of Louisiana. 1996
Design for the Sustainable Landscape. Louisiana Recreation & Parks Association Annual Meeting. 1992
Master Plan Proposals for the American Rose Center. 1991

RESEARCH AND GRANT ACTIVITIES
Addressing Accessibility and Safety Concerns Affecting Further Development of Louisiana Tech’s Children’s Garden [Applied and Natural Sciences -Innovative Instruction in Undergraduate Courses Mini-Grant] $ 800.
2003 Evaluation of David Austin Rose Cultivars [American Rose Society Research Project] [not funded] $ 5,000.
2002 Reese Hall Computer Equipment Upgrade and Relocation from Second Floor to First Floor to Accommodate Students with Disabilities [Student Technology Fee Program] $26,007.
Linking Community-Based Food Businesses with Technology and Higher Education [Center of Entrepreneurship and Information Technology] $ 7,034.
5/01 Louisiana Tech University Farm Salesroom Enhancement [Louisiana Board of Regents Support Fund] $87,558.

12/99 Trail System for the John D. Griffin Horticultural Display Garden [Louisiana Recreational Trails Grant] $40,000.
10/97 Agriculture and Forestry Computer Equipment Enhancement [Louisiana Board of Regents Support Fund] $31,000.
[upgrading of existing computer laboratory and teaching facilities]

10/97 Real-time Access to LAIS Weather Information for Environmental Monitoring
Louisiana Board of Regents Support Fund [not funded] $126,944.
7/97 Summer Instructional Innovation Grant $ 1,000.

[hardware and software installation to provide access to multi-disk
CD-ROM teaching materials for student work stations]
- THE|QUEST Technology Workshop – Grant Participation
- Bedding Plant Irrigation and Growth Regulator Response
- Biological Control of Insects in Display Greenhouse
- Computer Enhancement
- Cooperative Education Program

[Louisiana Department of Natural Resources] $50,000.
- Greenhouse Media Trials
- Growth Regulator Effects on Poinsettias
- Innovative Teaching Techniques
- Irrigation Water Quality in North Louisiana
- National Poultry-Growers Survey & Economics Study

81-82 - Phenotypic Variation in Wound Response among Acer Cultivars $25,000.
- Poinsettia Cultural Practice for North Louisiana
- Sodium & Soluble Salts Effects on Poinsettia
- Urban Forestry [City of Ruston and Louisiana Tech University Campus]

Street Trees: inventory, planting, maintenance, air photo analysis,
and workshops

UNIVERSITY SERVICE
Annual FFA Contest coordination and test development
Campus Networking & Computer Services Committee
Design & Development of Horticultural Display Gardens
Design & Implementation of Horticultural Conservatory
Horticulture Club Advisor
Teacher Education Council
University Senate
University Strategic Planning Committee
ANS Strategic Planning Committee
ANS Graduate Council
NCATE Review Committee [Education]
NCATE Diversity Subcommittee
Departmental Scholarship Committee Chairman
SACS Assessment Plan
Tenure & Promotion Committee [Departmental and College]
Departmental Scholarship Committee [Chair]
ANS College Faculty Development Committee
Agriculture and Forestry Computer Laboratory Supervisor
Reese Hall Irrigation and Landscaping
Plant Science Unit Coordinator

PROFESSIONAL SERVICE
American Association for State Colleges of Agriculture and Renewable
Resources [ASSCARR] Board of Directors [1996-97]
American Rose Center (ARC)
Development Advisory Committee [1990-present]
American Society for Horticultural Sciences - Southern Region [SR-ASHS]
    undergraduate programs section [1996-1997]
    Plant ID & Judging Contests, Cooperative Education Panel @ SR-ASHS
Barnwell Horticultural Lecture Series
Woody Plants, History of Landscape Design & Landscaping Process
Biedenharn Gardens - Monroe, LA.
    [Consulting and Horticultural Lecture Series]
Landscape & Nursery Production Consulting
Louisiana Consortium of Public Agricultural Colleges
    [LCPAC], Chairman 1992-97
Louisiana Fruit and Vegetable Growers Conference
Louisiana Garden Club Federation - Landscape Design Schools/Workshops
Use of Computers in Landscape Design
Louisiana State University Cooperative Extension Service Home Grounds
    Advisory Committee
Louisiana Tech University Chapter Sigma Xi Research Society
Ouachita Parish Cooperative Extension Service
Landscape Design Seminar Series
Annual Poinsettia Show, Scholarship Auction and Sale
Forest Hill Nursery Growers Trade Show
Gulf States Horticultural Expo – Mobile, AL
International Irrigation Symposium and Trade Show
Annual Ag-Expo [Monroe, LA]
Team Ag-Ed Conference via compressed video
CAST awards
VISTA Landscape Lighting Seminar
Landscape Design Workshop
North Louisiana High School Rally
Texas Fruit Growers Conference and Tour
Low-maintenance Landscapes presentation
National Conference on Landscape Contracting Cooperative Education Programs [Portland, OR]
Irrigation for the Home Landscape presentation

COMMUNITY SERVICE
    - High School Science Fairs [Judging of Plant Science & Environmental Science]
    - Ruston Beautification Foundation [President 1987-1996]
    - Leadership in Ruston / Lincoln Perennial Society
    - St. Jude’s Home Landscape & Planning Committee [fund raising project]
    - Landscape Design Projects
        - Buckeye Elementary and Lawrence Middle Schools [Pineville, LA]
        - North Monroe Hospital [Monroe, LA]
    - Dubach Nature Trail
    - American Rose Center – Shreveport, LA
    - Arcadia Post Office
    - Lincoln Parish Museum
        - A.E. Phillips School
        - Ruston Civic Center
        - Railroad Park Renovation
        - The Idea Center Outdoor Classroom Design
- Caddo Magnet School Landscape Renovation – Vivian, LA
- Boy Scouts Advisory Board [Unit Committee Chairman]
- Religious Affiliations [Knights of Columbus, Men’s Club, Pastoral Council, Youth Director Advisory Committee]

PROFESSIONAL LICENSE / CERTIFICATION

Horticultural Service License # 04-0050
[Louisiana Department of Agriculture and Forestry]
Landscape Contractor License # 04-1823
[Louisiana Department of Agriculture and Forestry]
- CPR and First Aid

PROFESSIONAL AFFILIATIONS

American Nursery Landscape Association [ANLA]
American Rose Society [ARS]
American Rose Center Development Committee
American Society for Horticultural Sciences [ASHS]
Louisiana Native Plant Society
Louisiana Nursery and Landscape Association [LNLA]
Louisiana Gardener – Editorial Board Member
Louisiana Society for Horticultural Science [LSHS]

HONORS AND AWARDS

Louisiana Tech University Foundation Professorship Nominee
John D. Griffin Service Award [College of Applied & Natural Science]
FFA Service Award [Louisiana State FFA]
Gamma Sigma Delta [Agricultural Honor Society]
Century Member – Boy Scouts of America
Pi Alpha Xi [Honorary Horticultural Fraternity]
Honorary State FFA degree [Louisiana State FFA]
University Nominee for AAMACO Teaching Award [LA Tech Univ.]
University Fellow [Ohio State University]
Vilas Graduate Fellow [University of Wisconsin]
Jeff B. Hillard
Associate Professor of Plant and Environmental Science
Department of Agricultural Sciences
Louisiana Tech University

EDUCATION

Texas A&M University
College Station, Texas
Dissertation: Coastal bermudagrass and Marshall ryegrass response to surface-applied limestone and phosphorus on an acid, sandy East Texas soil.

M.S. Chemistry (1974)
University of Idaho
Moscow, Idaho

B.S. Chemistry (1973)
University of Idaho
Moscow, Idaho

EXPERIENCE

1997-Present Associate Professor of Plant and Environmental Science
1990-1997 Assistant Professor Plant Science
Department of Agricultural Sciences
Louisiana Tech University

Teach soil science, environmental science, statistical methods, and computer applications courses. Research activities include studies involving crude oil spill remediation and other soil and water quality issues.

Summer 1994 Visiting Scientist
Reclamation Engineering and Geosciences Section
Energy Systems Division
Argonne National Laboratory
Argonne, Illinois 60439

Assisted Argonne staff members with several environmental reclamation projects.

1989-1990 Postdoctoral Research Associate
Texas Agricultural Experiment Station
Overton, Texas 75684

Conducted research studies on sustainable agricultural production systems for blueberries and strawberries.

1985-1989 Graduate Research Assistant
Assistant Lecturer (Spring Semester, 1988)
Conducted soil fertility and soil chemistry studies on the interactive effects of limestone and phosphorus application on forage production. Taught introductory soils lab for two semesters.

1983-1984 Foreman
Kahili Farm
Kilauea, Hawaii  96754

Supervised the daily operation of a tropical fruit farm that produced papayas, bell peppers, and bananas for export.

1978-1982 Senior Chemist
Shaklee Corporation
Hayward, California  94545

Responsible for the formulation and efficacy testing of household cleaning products.

1974-1978 Research Chemist
Monsanto Company
St. Louis, Missouri  63166

Worked on projects that supported the alkylbenzene manufacturing process; devised and synthesized exploratory surfactants; synthesized surfactant biodegradation intermediates and $^{14}$C-labeled surfactants.

1972-1974 Teaching Assistant
Research Assistant (Summer, 1972)
Chemistry Department
University of Idaho
Moscow, Idaho  83843

Studied the Claisen rearrangement of 1- phenoxy, 4-anilino-but-2-ynes. Taught organic chemistry lab for two semesters.

PUBLICATIONS


Farrell, S., J. Hillard and M. McCurdy. 1999. Unassisted and enhanced remediation studies for onshore oil spills: Concept development. Louisiana Applied Oil Spill Research and


ACADEMIC PRESENTATIONS

Vavrek, M.C., H.E. Hunt, J.H Hillard, W. Colgen III, W.J. Campbell, J.L, McKillip, and M.


GRANTS

Hillard, J., W. Patterson, and M. McCurdy.  In Situ Burning and Phytoremediation Studies for Onshore Oil Spills. 1999. Submitted to Louisiana Applied Oil Spill Research and Development Program (OSRADP).  $74,000.  Funded


PROFESSIONAL MEMBERSHIPS

  Louisiana Academy of Sciences
  National Association of Environmental Professionals

SCHOLARSHIPS & AWARDS

  1972  National Science Foundation Undergraduate Research Participant
  1988  Texas-Louisiana Aglime & Fertilizer Association Scholarship
  1995 - present  Agricultural Endowed Professor
                  Louisiana Tech University
SUSAN (BONDURANT) WATSON
3007 Cuba Blvd.
Monroe, LA 71201
(318) 257-3275 (day)
(318) 325-8128 (evening)
swatson@latech.edu

EDUCATION
Doctorate of Philosophy in Agricultural and Applied Economics
Texas Tech University, Lubbock, TX
December 2002, overall GPR 3.8

Master of Science in Agricultural Education
Texas A&M University, College Station, TX
December 1999, Major GPR: 4.0, overall GPR 3.9

Bachelor of Science in Agricultural Economics
Texas A&M University, College Station, TX
December 1998, Major GPR: 3.9, overall GPR 3.4

WORK EXPERIENCE

Sept. 2003 – Present	Department of Agricultural Sciences, Louisiana Tech University
Assistant Professor / Agricultural Economist
Employer: Dr. Gary Kennedy (see references)
Taught AGBU 220 “Principles of Agricultural Economics”
Taught AGBU 310 “Agricultural Policy”
Taught AGBU 402 “Economics of Farm Management”
Taught AGBU 430 “Principles and Practices of Agricultural Marketing”
Taught AGBU 450 “Natural Resource Economics”
Research for USDA funded E-Commerce Grant

June 2003 – July 2003	Department of Agricultural Economics, Mississippi State University
Consultant (Grant Award)
Presented seminar on precision agriculture
Quantified differences in maximizing yields and profits

Aug. 2002 – May 2003	Department of Agriculture, The University of Louisiana at Monroe
Assistant Professor / Agricultural Economist
Employer: Dr. Willy Hoefler
Taught AGEC 201 “Introductory Agricultural Economics”
Taught AGEC 203 “Agricultural Marketing”
Taught AGEC 305 “Farm Business Records”
Taught AGEC 307 “Advanced Agricultural Marketing”
Taught AGEC 310 “Agricultural Finance”
Taught AGEC 423 “Farm and Agribusiness Management”
Taught AGEC 461 “Agricultural Policy and Farm Law”
Academic Advisor to ULM Chapter of the Block and Bridle Student Organization
Academic Advisor to the ULM Chapter of the American Agricultural Economics Association
Trained 1st place SAEA Quiz Bowl Team in 2002
Served on ULM Homecoming Committee 2003

Department of Agriculture and Applied Economics, Texas Tech University
Graduate Researcher / Instructor
Employer: Dr. Eduardo Segarra (see references)
Developed statistical and optimization models for the economic evaluation of precision
farming practices
Published research reports and presented findings to professional audiences
Taught AAEC 4302 “Statistical Methods in Agricultural Research”
Taught AAEC 2305 “Fundamentals of Agricultural and Applied Economics”

Jan. 1999-Dec.1999 Instructional Materials Service, Department of Agricultural
Education, Texas A&M University
Graduate Researcher
Employer: Dr. John Dillingham, Address: Instructional Materials Service, Texas A&M
University, 2588 TAMUS, College Station, TX 77843-2588, Phone #: (979) 845-6601
Developed course curriculum for Agribusiness, Honors Agribusiness and Entrepreneur classes
Developed study materials for state FFA Farm Business Management competition

Private Investment Property, College Station
Manager
Employer: Dr. David Bondurant, Address: 1709 Armstrong, Gladewater, TX 75467, Phone #:
(903) 845-6047
Located renters and assisted in check-in and check-out procedures
Collected rent
Supervised maintenance

COMMITTEES
Agricultural and Natural Resources Research Committee 2003-05
North Louisiana Agri-Business Council Scholarship Committee 2003-04
North Louisiana Agri-Business Council Grant Committee 2003-04
North Louisiana Agri-Business Council Publicity Committee 2003-04

HONORS
Dean’s List – 4 years
College of Agriculture and Life Sciences Distinguished Student – 6 Semesters
Houston Livestock Show and Rodeo Scholarship
Longview Harvest Festival Scholarship
Gladewater Rodeo Scholarship
Gladewater First Service Bank Scholarship
Sujit Roy Memorial Scholarship Endowment – 2 years
Gamma Sigma Delta Honor Society
Gamma Sigma Delta Graduate Student of the Year - 2002
Agricultural and Applied Economics Outstanding Ph.D. Student of the Year (Texas Tech
University) – 2001
Graduate Faculty Member (Louisiana Tech University) 2003-2004

ACTIVITIES
North Louisiana Agri-Business Council member 2002-04
Publicity Committee for AgExpo 2004
Worked as FFA public speaking judge Jan. 5, 2004
United Way Department Representative
Worked booth at AGEXPO on Jan. 17-18, 2003
Dept. of Ag. Sciences Scholarship Cattle Sale, Oct. 11, 2003
Served as scholarship judge for Louisiana High School Rodeo Association, June 19, 2003
Judged FFA Speech Contest, Dec. 16, 2002
Agricultural Economics and Agribusiness Association
Agricultural Economics Graduate Student Association Vice President – 2 years
Aggie Buddy Volunteer at Rock Prairie Elementary
Angel Tree Volunteer – Christmas Service Project
Habitat for Humanity
Arbor Day Tree Planting

PUBLICATIONS


Bondurant, Susan. 1999. Production and Financial Leases. Instructional Materials Service, Department of Agricultural Education, Texas A&M University, College Station. 8065-C.

Bondurant, Susan. 1999. Insurance Management. Instructional Materials Service, Department of Agricultural Education, Texas A&M University, College Station. 8066-C.
Bondurant, Susan. 1999. Land as a Factor of Production. Instructional Materials Service, Department of Agricultural Education, Texas A&M University, College Station. 8067-A.

Bondurant, Susan. 1999. Economic Systems. Instructional Materials Service, Department of Agricultural Education, Texas A&M University, College Station. 8062-A.

Bondurant, Susan. 1999. Labor as a Factor of Production. Instructional Materials Service, Department of Agricultural Education, Texas A&M University, College Station. 8067-C.

Bondurant, Susan. 1999. Machinery as a Factor of Production. Instructional Materials Service, Department of Agricultural Education, Texas A&M University, College Station. 8067-B.

Bondurant, Susan. 1999. Introduction to Risk Management. Instructional Materials Service, Department of Agricultural Education, Texas A&M University, College Station. 8067-B.

Bondurant, Susan. 1999. Environmental Risk. Instructional Materials Service, Department of Agricultural Education, Texas A&M University, College Station. 8066-A.

Bondurant, Susan. 1999. Market Price and Equilibrium. Instructional Materials Service, Department of Agricultural Education, Texas A&M University, College Station. 8062-D.

Bondurant, Susan. 1999. Production Economic Principles. Instructional Materials Service, Department of Agricultural Education, Texas A&M University, College Station. 8062-E.

Bondurant, Susan. 1999. Consumer Demand. Instructional Materials Service, Department of Agricultural Education, Texas A&M University, College Station. 8062-B.

Bondurant, Susan. 1999. Producer Supply. Instructional Materials Service, Department of Agricultural Education, Texas A&M University, College Station. 8062-C.

PRESENTATIONS


Watson, S. E. 2003. The Economics of Precision Farming in Corn and Cotton Production. Presented to Mississippi State University, May 20, Starkville, MS.


Charles W. Winstead  
Professor of Plant Sciences  
Department of Agricultural Sciences  
Louisiana Tech University  
Ruston, Louisiana 71272  
318-257-3275

PERSONAL DATA

Home Address: 1410 Atkins Rd.  
Ruston, Louisiana 71270  
Home Telephone: 318-255-9270  
Office Telephone: 318-257-3275  
E-mail Address: winstead@rans.latech.edu  
Date of Birth: January 21, 1942  
Marital Status: Married (Jon Anne)  
Children: Three (Chuck, Scott, Craig)

EDUCATION

Mississippi State University, State College, Mississippi  
1973, Ph.D., Agronomy Crops, Turfgrass Management  
Minor in Weed Science

Mississippi State University, State College, Mississippi  
1969, M.S., Agronomy Crops, Turfgrass Management  
Minor in Horticulture

Mississippi State University, State College Mississippi  
1967, B.S., Agronomy Crops, Turfgrass Management

Holmes Junior College, Goodman, Mississippi  
1965, A.S., General Agriculture

PROFESSIONAL EXPERIENCE

September 1989 – Present  
Professor of Agronomy, Louisiana Tech University.

1994-1997  
Ruston Golf Club  
Consulting Superintendent

February, 1989 – 1996  
ASCS - Tensas & Caddo Parish  
Crop Reporter - Crop Land Measurements.

Summers, 1986 – 1996  
Consulting, Young & Young Consulting Service, Wisner, LA. Agronomic consulting for crop  
& pest management – Tensas Parish.
July 1982 – August 1989
Associate Professor of Agronomy, Louisiana Tech University.

September 1978 – June 1982
Assistant Professor of Agronomy, Louisiana Tech University.

August 1977 – August 1978
Horticulturist, Turf and Home Grounds, Alabama Cooperative Extension Service, Auburn, Alabama
State specialist for turf (home, athletic, golf) and ornamentals in home landscape.

July 1973 – July 1977
Professor and Head, Department of Agronomy, Horticulture and Agriculture Business, Louisiana Tech University.
Budget preparation and administration
Farm production and sales
Capital improvements proposals
  (Plant Sciences Complex – now Lomax Hall)
Inventory responsibility
Curriculum offerings
Faculty and student recruitment

September 1970 – June 1973
National Science Foundation, Trainee, Mississippi State University Research and Graduate Teaching Assistant.
Taught Turfgrass Management Lab. Research on shade tolerance in turfgrass.

Agronomist, Turfgrass Production and Planting, Mississippi Grass Nurseries, Hattiesburg, Mississippi – Produced turfgrasses (sod and sprigs) for retail market and planted golf courses, athletic fields and home lawns throughout the Southeast.

Research and Teaching Assistant, Mississippi State University – Taught turfgrass management lab during Masters work. Research dealt with use of herbicides on major turfgrasses.

OTHER EXPERIENCE

February 1963 – August 1963
Service Apprentice, National Cash Register Company, Jackson, Mississippi – Repaired cash registers, adding machines, and bookkeeping equipment.

July 1959 – January 1963
  Electronics Technician 2nd Class/Qualified in Submarines, United States Navy (Electronics Technician School, San Francisco, CA.; Submarine School, New London, CN.)
Major responsibility in maintaining radar and communication equipment.

CONSULTING (Selected)
Robert E. Shadoin, Attorney At Law, Ruston, LA.
Ruston Golf Club, Ruston, LA.
Eastridge Country Club, Shreveport, LA.
Wilkinson, Carmody and Gilliam, Attorneys and
Counselors At Law, Shreveport, LA.
Spight Contractors, Inc., New Orleans, LA.
Brunson and Baker, Law Offices, Jonesboro, LA.
Andrew S. Shealy, Attorney At Law, Ruston, LA.
Panola Company, Newellton, LA.
Doublegate Country Club, Albany, GA.

HONORARY SOCIETY MEMBERSHIPS

Phi Kappa Phi
Alpha Zeta
Gamma Sigma Delta
Phi Theta Kappa

SOCIAL FRATERNITY

Farmhouse

AWARDS/RECOGNITION

Agriculture Endowed Professorship
National Science Foundation Trainee
GCSAA Scholarship
Outstanding Teacher Award (voted by Alpha Zeta)
LA Tech University

PROFESSIONAL MEMBERSHIPS

Louisiana Association of Agronomists
Louisiana Turfgrass Association

GRANTS, PRINCIPAL OR CO-INVESTIGATOR

Nursery Production Systems Evaluation, $700.+ all materials 2003
Dolet Hills Mining Venture, $7,000. – 1991
PABCO Corporation, $2,434. – 1985
Phillips Coal Company, $22,952. - 1982-83
Phillips Coal Company, $15,078. - 1981-82
Minnesota Mining and Manufacturing Company, $1,000. - 1981
Minnesota Mining and Manufacturing Company, $1,000. - 1981
Freeport Sulfur, $1,000. - 1981

RESEARCH

Bermudagrass Variety Trials (Forage) 1999 – Present.
Ryegrass Variety Trials (Forage) 1999 – Present.
Agronomy Demonstration Plots.
Use of Mefluidide (MBR 12325) to Enhance the Quality of Coastal Bermudagrass. 1981-1982.

PUBLICATIONS


OTHER PUBLICATIONS


Turf Tips for Fall and Winter. 1998. LA Gardener.


GARDENING TABLOID (released to newspapers in Alabama). Renovating the Old Homestead, Cold Damage, Bulbs for Beauty, Plan Before Planting. 1978.

Other articles by staff writers after Winstead include: Ferns, Turfgrass or Ground Cover, House Plants are Special, Container Gardening, Rock Gardens, Landscaping Tips, Pruning Shrubs, Planting Dahlias, Use Plants for Heating and Cooling, and Layering Shrubs. 1978.

PRESENTATIONS


“Physiological and Morphological Changes in Southern Turfgrasses Due to Shade.” Southern Agricultural Workers Meeting. Atlanta, Georgia. 1973.


PROFESSIONAL DEVELOPMENT

Fall Academy on Excellence in Teaching and Learning. Fall 2003.
North Louisiana Turfgrass Meeting.
Irrigation Design Workshop. Hot Springs, Arkansas
Chemical Company Seminars.
Crop Science Society of America Meetings.
American Society of Agronomy Meetings.
Alabama and Southern Turfgrass Association Meeting.
Cotton Forum, Monroe, Louisiana.
Louisiana Association of Agronomists Meetings.
Louisiana and Southern Turfgrass Association Meeting.
Five States Forage Conference.
LACTA Meeting.
Host for Regional Conclave, 1983.
Alpha Zeta Biennial Conclave, 1982, 1985
Chaired Session on College Internships, 1982

COMMITTEE AND PROFESSIONAL SERVICE ACTIVITIES

Advisor, Louisiana Tech Agronomy Club.
Advisor, Louisiana Tech Gamma Chapter of Alpha Zeta.
Assisted in high school Literary Rallies.
Assisted in Areas I and II FFA Judging Contests.
Assisted in State FFA Judging Contests.
Coach, Agronomy Crops Judging Teams.
President, Secretary-Treasurer, Louisiana Collegiate Crops, Soils And Speech. 1982-86
Assisted in 4-H Plant Science Contest and Pre-Short Course.
Graduate Faculty.
Served on Committee for Graduate Students.
Student Recruitment.
Chairman, Planting, Soil Testing and Land Use Committee.
Faculty Senate President Screening Committee.
Faculty Senate Calendar Review Committee.
Life Science Research Committee.
Faculty Search Committee (Departmental).
Life Sciences Forage Committee.
Life Sciences Building Planning Committee, Lomax Hall.
Turfgrass Consulting, Ruston Dixie Baseball Association,
     Louisiana Tech University, Ruston City Parks and Recreation
     Department, and Individuals.
Forage Consulting, Individuals. Continuous.
Coordinator, Agricultural Experiential Education.
Director, 6th Grade Sunday School.
Royal Ambassador Leader, Basketball Coach.
Church Training Teacher.
Director, Middle Adult III Sunday School Department.
Co-Chair Experiential Education Guidelines Committee.
ANS Tenure and Promotions Guideline Committee.
Undergraduate Program Council.
Faculty Advisory to Dean.
Curriculum Committee.
Farm Practices Coordinating Committee.
SACS Committee.
Scholarship Committee.
Tenure and Promotions Committee.
Grade Appeals Committee.
Boll Weevil Eradication Program.

COURSES TAUGHT

PLSC 101 – Crop Science
PLSC 211 – Forage Crops and Pasture Management
PLSC 215 – Soil Surveying & Drainage
PLSC 309 – Field Crops
PLSC 312 – Turfgrass Management
PLSC 409 – Plant Breeding (G)
PLSC 412 – Golf and Sports Turf Management
PLSC 421 – Weed Science (G)
PLSC 422 – Pest Management I (Pathology) (G)
PLSC 423 – Pest Management II (Entomology) (G)
Life Sciences 456 - Environmental Pollution
Life Sciences 101 – Life Sciences Orientation
Agronomy 315 – Soil Fertility and Fertilizers
ENVS 300 – Agricultural Pollution
McCurdy, Dr. Maureen
Associate Professor of Geosciences

Degrees
**PhD-Land Resources**: University of Wisconsin - 1990
**MS-Geology**: University of Southwestern Louisiana - 1986
**BA-Geology**: University of Southwestern Louisiana - 1981

Areas of Specialization
Environmental Geology
Hydrogeology

Research Areas/Interests
Baseline Experimental Studies for Onshore Oil Spills (funded through 1997)

Publications

Appendix E Agenda for orientation for new faculty

ORIENTATION FOR NEW FACULTY
College of Applied and Natural Sciences
Tuesday, September 2, 2003
10:00 a.m. – 2:00 p.m.
Reese Hall Conference Room

AGENDA
10:00 a.m. Welcome
   Goals of Orientation Session

10:05 a.m. Louisiana Tech University (General)
   Organization Chart
   Bulletin
   University Calendar
   College of Applied and Natural Sciences
   Organization Chart
   Faculty Directory
   Strategic Plan
   ANS Dates for 2003-2004
   Web Page
   Faculty Activity Survey and Request for Reassignment

10:50 a.m. Break
11:00 a.m. Policies/Procedures
   Louisiana Tech Net Home Page (Web entrance for Polices and
   Procedures Manual and downloadable Forms)
   Review of Selected Policies and Procedures
   Reminder: Recent Revisions
   Fund Raising

11:30 a.m. Undergraduate Issues – Dr. Ray Newbold, Interim Associate Dean for
   Undergraduate Studies
   Advising, Class Schedule, Recruiting, etc.
   Web Page

12:15 p.m. GIS Lab and Tech Farm Sales Room

12:20 p.m. Lunch and Networking

12:45 p.m. Graduate and Research Issues – Dr. Bill Campbell, Associate Dean for
   Graduate Studies and Research

1:45 p.m. Self-Appraisal
   Tenure and Promotion

2:00 p.m. Adjourn
Appendix F Advising guidelines provided to faculty within College of Applied and Natural Sciences

ADVISING GUIDELINES
COLLEGE OF APPLIED & NATURAL SCIENCES

Advisors should be familiar with the Louisiana Tech University homepage (http://www.latech.edu/), the College homepage (http://ans.latech.edu/), and the mainframe based student information system (SIS). One needs a userID and password (obtained from the Computing Center WT 116) to access the student information system through the mainframe. See page 11 for commonly used SIS screens.

The Registrar publishes the Schedule of Classes quarterly (the Racing Form); it also can be found at the University’s web site: http://www.latech.edu/tech/enrollment-services/registrar/racing_form/ and through BOSS (Bulldog On-Line Student System): https://boss.latech.edu/ The Schedule of Classes includes BOSS web registration critical dates, quarter calendar, admission requirements, registration information, the registration process, general information, a directory, and the schedule of classes. Another useful tool is future course offerings found at http://www.latech.edu/tech/enrollment-services/registrar/course-availability/

Louisiana Tech University uses BOSS for early web registration, web schedule adjustment (drop/add) and fee payment; see the Schedule of Classes for the dates and times that BOSS is available for students to register/schedule adjust. In addition to BOSS, students can register and adjust their schedules in the Registration Center (WT 318) and in the Registrar’s office (KH 207).

Advising occurs twice each quarter. Early advising, web registration, web schedule adjustment, and fee payment begins Monday of week nine (9) of the quarter and continues to the last day of classes. General registration and fee payment are available for the first two (2) days of the quarter for new and continuing students who did not complete early registration and fee payment. Web schedule adjustment (Drop/Add and ”No Grade” drops) continue through the first three (3) days of each quarter.
1. The Registration Process

Advisees – Your advisees are listed on-line at https://boss.latech.edu/. Use Faculty BOSS login, Web for Faculty (you will need Faculty ID and PIN), Term, and Advisor Services to list your advisees. After selecting an advisee you can update registration access numbers, see the student’s schedule, view institutional transcripts, transfer transcripts, and the student’s address information. Knowledge of the mainframe based student information system is required to advise students who are not your advisees.

Course Loads - A full-time undergraduate student course load consists of eight to twelve hours. The College of Applied & Natural Sciences adheres to the guidelines stated on page 10 of the 2003 – 2004 Louisiana Tech University Catalog and allows students to enroll in more than 12 hours only with justifiable, extenuating circumstances. This policy also applies to students enrolled through the Inter-Institutional Cooperative Program (ICP) with Grambling State University, Internet courses, and correspondence courses. Because of the overlap of the quarter and semester calendar, concurrent enrollment for Fall, Winter and Spring quarters will overlap two semesters.

Overload Approval – A degree candidate or a student with a “B” average (3.0), both overall and in the preceding quarter, will be permitted to enroll in a maximum of 14 semester hours during a quarter. The following actions are required for all overload approvals:

- 13 or 14 hours and meet criteria listed above – bring advising form or drop/add form to Dean’s office, for signature and approval stamp,

- 13 or 14 hours and do not meet criteria – bring form and strong written recommendation/justification including a statement of extenuating circumstances from the ADVISOR AND UNIT HEAD to the Dean’s office, for signature and approval stamp,

- Students enrolled in University Seminar 100, and not required to take a developmental class (099), will be given automatic approval for 13 hours during their first quarter.

- Students who are required to take developmental classes are limited in the number of hours they can take: one developmental class, 11 hour maximum (including University Seminar), two developmental classes, 10 hour maximum (including University Seminar).
• The Vice President of Academic Affairs must approve student requests of 15 hours or more; these requests require a memorandum from the advisor, unit head and dean to the vice president.

Adding a seat in a closed Applied & Natural Science class:

• The student’s advising form or add form must be stamped (OK to add one seat – ANS) in the special permission section, and signed by the instructor/unit head of the unit that offers the course.

• Stamps to add one seat are available in all Applied & Natural Sciences offices.

Course Prerequisites:

• Students should be told during advising and also sometime during the first three days of class each quarter whether a course has prerequisites.

• Prerequisites should be stated clearly on the syllabus for each course.

Practica/Cooperative Education Courses

• The programs are managed through each academic unit.

• Each academic unit has an academic coordinator who oversees application and enrollment in Experiential Education.

• Students are required to complete applications and be approved for enrollment prior to registering for Experiential Education courses.

Financial Aid – Students receiving financial aid must be enrolled as full time students (at least 8 semester hours). All paperwork must be completed with the financial aid office before the beginning of the quarter for which aid is requested. It is the student’s responsibility to be informed of their loan status. NOTE: Students receiving TOPS scholarships must earn 24 hours of credit each year or the number needed to complete their undergraduate degree; make satisfactory progress (GPA); be full-time students; and be continuously enrolled. Summer sessions do not count, and credit exams count neither as hours earned nor hours carried in determining full-time status.
Developmental Education – Revised placement and testing requirements are effective Fall 2000. All new freshmen entering Louisiana Tech in the fall quarter will be required to meet the new guidelines. Continuing students who have not met Math and/or English requirements prior to fall 2000 also follow the revised guidelines. In addition, transfer students have placement guidelines. The test scores and placements are listed below.

Placement & Testing Requirements for Beginning Freshman

<table>
<thead>
<tr>
<th>Subject</th>
<th>Test Scores</th>
<th>Placement</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>English ACT less than or equal to 16, or verbal SAT score less than or equal to 420</td>
<td>English 099</td>
</tr>
<tr>
<td>English</td>
<td>English ACT 17 – 18 inclusive, or Verbal SAT 430 – 450 inclusive, or successful completion of English 099</td>
<td>English 100*</td>
</tr>
<tr>
<td>English</td>
<td>English ACT greater than or equal to 19, or Verbal SAT score greater than or equal to 460</td>
<td>English 101</td>
</tr>
</tbody>
</table>

* English 100 serves as a substitute for English 101 for students required to enroll in English 100.
# UNIVERSITY SEMINAR

<table>
<thead>
<tr>
<th>Subject</th>
<th>Test Scores</th>
<th>Placement</th>
</tr>
</thead>
<tbody>
<tr>
<td>University Seminar</td>
<td>Reading ACT less than or equal to 17, or Verbal + Math SAT score less than or equal to 850</td>
<td>Placement in University Seminar 101 (3 credit hours)</td>
</tr>
<tr>
<td>University Seminar</td>
<td>Reading ACT greater than or equal to 18, or Verbal + Math SAT score greater than or equal to 860</td>
<td>Placement in University Seminar 100 (1 credit hour)</td>
</tr>
</tbody>
</table>
### MATH

<table>
<thead>
<tr>
<th>Subject</th>
<th>Test Scores</th>
<th>Placement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Math</td>
<td>Math ACT less than or equal to 15, or Math SAT score less than or equal to 370</td>
<td>Placement in Math 099; not eligible for Math Placement Exam.</td>
</tr>
<tr>
<td>Math</td>
<td>Math ACT 16 – 17 inclusive, or Math SAT score 380 – 420 inclusive</td>
<td>Placement in Math 099 or take and pass Math Placement Exam A to place in Math 100*.</td>
</tr>
<tr>
<td>Math</td>
<td>Math ACT 18 – 21 inclusive, or Math SAT 430 - 510 inclusive</td>
<td>Placement in Math 100* No placement exam is available for bypassing Math 100.</td>
</tr>
<tr>
<td>Math</td>
<td>Math ACT 24 – 25 inclusive, or Math SAT 560 – 580 inclusive</td>
<td>Placement in Math 101 or take and pass Placement Exam B to earn credit for Math 101. Advance preparation for the exam is necessary**.</td>
</tr>
<tr>
<td>Math</td>
<td>Math ACT greater than or equal to 26, or Math SAT score greater than or equal to 590</td>
<td>Credit for Math 101 will be given if Math ACT/SAT was earned in the previous five years. Eligible to enroll in Math 101 or Math or Statistics course with Math 101 as</td>
</tr>
</tbody>
</table>
the only Math prerequisite. If such a student desires to begin with Math 220 or 222, Placement Exam C is required to earn credit for Math 111 and Math 112. Advanced preparation for the exam is necessary.

| * Math 100 serves as a substitute for Math 101 |
| ** Advance preparation for all of these exams is necessary. Various review materials are available free of charge by accessing the web site www.rehanna.pageout.net. Select the desired course, then “Syllabus,” then select “Instructions for Accessing Review Materials.” |

|  |  |  
|---|---|---|
|  |  |  |
Placement & Testing Requirements for Transfer Students

All new transfer students entering Louisiana Tech in the Fall Quarter 2000 will follow the Math and English placement guidelines detailed above for beginning freshman. The following additional guidelines apply to transfer students.

<table>
<thead>
<tr>
<th>Subject</th>
<th>Test Scores</th>
<th>Placement</th>
</tr>
</thead>
<tbody>
<tr>
<td>University Seminar</td>
<td>Students transferring to Louisiana Tech with less than 24 semester hours and Reading ACT less than or equal to 17, or Verbal + Math SAT score less than or equal to 850</td>
<td>Must enroll in University Seminar 101 (3 credit hours)</td>
</tr>
<tr>
<td>University Seminar</td>
<td>Students transferring to Louisiana Tech with less than 24 semester hours and Reading ACT greater than or equal to 18, or Verbal + Math SAT scores greater than or equal to 860</td>
<td>Option to enroll in University Seminar 100 (1 credit hour)</td>
</tr>
<tr>
<td>University Seminar</td>
<td>Students transferring to Louisiana Tech with more than 24 semester hours</td>
<td>Option to enroll in University Seminar 100 (1 credit hour)</td>
</tr>
</tbody>
</table>

- Students required to take one or more developmental (099) courses are limited to smaller class loads (see Course Loads listed above).
• Withdrawal from developmental education classes is not permitted unless there are extenuating circumstances. If the student needs to reduce his/her course load, the student will be required to drop any regular courses before dropping developmental education classes.

Academic Renewal – Undergraduate students who have dropped out or have been suspended because of poor academic performance may request to start over with the status of an entering freshman. Many conditions apply to academic renewal; see page 7-8 of the 2003 – 2004 Louisiana Tech University Catalog for conditions. A few of the conditions are listed below.

• At least three (3) consecutive calendar years must elapse between the end of the quarter in which the student was last registered for credit at any college or university and being enrolled under academic renewal.

• The student must submit a written application for academic renewal to the Academic Renewal Subcommittee of the Enrollment Management Council using an Academic Renewal Application.

• Request for academic renewal must be received by the end of the last class day of the first quarter of attendance at Louisiana Tech University.

• No prior credit carries forward as part of a degree program; however, the prior record remains a visible part of the student’s transcript.

Dropping a class/resigning from the University

Drop dates

• Students drop individual courses using a Schedule Change Form (“Drop/Add Form”)

• Students should be counseled to drop before the deadline if they are not doing satisfactory work. Poor performance in a class is not an acceptable reason for backdating a drop, even if the grade will affect the student’s probation/suspension status.

• Students frequently request to drop courses after the drop deadline has passed. These requests require the Dean’s signature and are only granted if the student
can produce documentation of a medical emergency that prevented him/her from dropping before the deadline.

**Resignation** – To resign from the University, a student must obtain a Resignation card from the Registrar, secure the required signatures, and return the Resignation card to the Registrar (resignation is not official until the card is on file in the Registrar’s office).

- Deadlines for refunds are listed in the Schedule of Classes and General Information (“Racing Form”)

- The student I.D. must be turned in to the Food Service Office.

- When the student resigns before the close of registration the permanent record reflects registration and resignation only.

- If the student resigns during the first seven weeks of the quarter a grade of “W” will be reflected on the transcript for all courses.

- Students who leave without resigning receive “F” grades for all courses.

- Students living in a dormitory or housing will forfeit the unused portion of any payment or deposit made to the University.

- Students frequently request to resign after the deadline has passed. These requests require the Dean’s signature and are only granted if the student can produce documentation of a medical emergency that prevented him/her from resigning before the deadline.

**Adding Classes after Late Registration ends**

- Students should be counseled to add classes before the drop/add deadlines.

- Occasionally students need to add classes after late registration ends. Students use the Schedule Change Form to add a class and the Dean’s signature is required.

- Approval will be granted when the instructor of the course to be added late verifies in writing that the student will be allowed to complete missed work.
• Students are not allowed to add classes after the final class roll (nine-day roll) is complete.
Academic status

Probation/Suspension – There are three categories of academic status for undergraduate students:

- Academic good standing and eligible to be enrolled,
- Academic probation and eligible to be enrolled,
- Academic suspension, therefore not eligible to be enrolled.

Although students will usually receive official notification of academic status, such notice is not a prerequisite to students being placed in one of the above categories.

Students may appeal for reinstatement after academic suspension; refer the students to the Dean’s office.

College forms – examples of forms are attached and are available in all Applied & Natural Sciences offices and at the following web address:
http://www.latech.edu/latechnet/documents/cans.html

Course Substitutions – Substituting one course for another in a curriculum requires an Undergraduate Course Substitution Form (Blue).

- The Unit head and Dean must approve all course substitutions before the student enrolls in the course.

- Substitutions will not be granted for courses if a deficient grade (D or F) is earned. In the event of a deficient grade, the required course must be taken.

- The originals are kept in the Dean’s office with copies sent to the unit.

Transferring Courses

- When a student transfers to Louisiana Tech University from another university, the transfer courses to be used to satisfy the General Education Requirements (listed on page 14 of the Louisiana Tech University Catalog, 2003 – 2004) must be evaluated for equivalency within the first quarter of the student’s admission to the College of Applied & Natural Sciences.
• Use the Transfer Course Approval Form (Yellow) and the General Education Articulation Matrix (for Louisiana Universities) and the Transfer Equivalency List for out-of-state schools (available in all Applied & Natural Sciences offices).

• The originals are kept in the Dean’s office with copies sent to the unit.

• An advisor, unit head, or designated staff member should contact the appropriate department head to verify equivalency for courses not on the lists.

• Transfer Course Approval Forms should not be given to the student; students are not responsible for obtaining the necessary signatures.

• A grade of “C” or better is considered acceptable for transfer credit for required or equivalent courses in the College of Applied & Natural Sciences degree programs. Transfer credit will not be granted for courses that a deficient grade (D or F) has been earned.

• Do not tell students that the transfer will be granted until the equivalency has been evaluated and approved.

• If a student transfers into your curriculum from another Applied & Natural Sciences curriculum, contact the Dean’s office to find out if an evaluation is already on file.

**Pre-Approval of Transfer Courses** – Currently enrolled students who wish to enroll in a course at another university (regular courses, Internet courses and correspondence courses) must have approval from the Unit head and Dean before the student enrolls in the course.

• Use the Transfer Course Pre-Approval section

• Transfer credit will not be granted for courses if a deficient grade (D or F) is earned.

• Louisiana Tech University does not permit more than six hours of correspondence credit toward pursuit of a degree.
**Minors** – students can earn a minor at Louisiana Tech University; the title of the minor is posted on the student’s transcript.

- Use the Request for Minor Form (Gray).

- Course requirements for a minor are listed in the Louisiana Tech University Bulletin in the unit that offers the minor.

- If the minor follows the requirements listed in the Louisiana Tech University Bulletin, no additional approval is necessary.

- When the minor deviates from the courses listed in the Bulletin, written approval from the head of the unit that offers the minor must be submitted.

**Advising juniors and seniors** – After 60 semester hours are earned, students and advisors should complete a Junior/Senior Year Courses to Complete Curriculum Form (White). This form shows which courses remain in the student’s curriculum to complete the degree, and blocks which quarter the courses are to be taken in order to graduate.

- The reverse side of the form shows a Guideline for Completing General Education Requirements for Applied & Natural Sciences majors.

- Two-year tentative course offerings by quarter for Tech can be found on the University’s home page at the following address: http://www.latech.edu/tech/enrollment-services/registrar/course-availability/

**Graduation Procedures**

**Registration for Graduation** – Students are required to apply for graduation in the Registrar’s office during the first three weeks of the quarter in which he/she expects to graduate. Forms are available on BOSS.

- The last day to register for graduation is listed in the Schedule of Classes and General Information.
Transfer course work during the last quarter – A student who has fulfilled the minimum residency requirement (see page 17 of the 2003 – 2004 Louisiana Tech University Catalog) may be permitted to earn only nine (9) of the last 36 semester hours out-of-residence. This policy includes correspondence courses (six hours maximum), which count as part of the student’s quarter course load. Students planning to transfer their last hours back to Tech should be made aware that it is their responsibility to request that the school they are attending transfer their grades to Tech in time to be posted prior to graduation. It is also the responsibility of the student to be sure that the transfer has been completed.

Graduation with Latin Honors

- Summa Cum Laude – 3.90 gpa on all hours pursued

- Magna Cum Laude – 3.70 gpa on all hours pursued

- Cum Laude – 3.50 gpa on all hours pursued

- Students receiving their first associate degree are also recognized as follows: Distinction (3.70 gpa) and Honors (3.30 gpa). The student must have earned a minimum of 15 semester credit hours at Louisiana Tech University to be eligible for and receive such recognition.

Applied & Natural Sciences Organization and Curricula with concentration listed

DEPARTMENT OF AGRICULTURAL SCIENCES

(Dr. Gary Kennedy, Head – 3275)

Agricultural Business (BS)

Animal Science (BS)

Dairy Processing
Dairy Production
Equine Science
General Animal Science
Livestock Production
Pre-Veterinary Medicine
Plant Science (BS)

Agronomy

General Plant Science

Landscape and Turf Management

SCHOOL OF BIOLOGICAL SCIENCES
(Dr. David Mills, Director – 4573)

Biology (BS)

Animal Biology

Applied Biology

Cell and Molecular Biology

Microbiology

Plant Biology

Medical Technology (BS)

Pre-Dentistry

Pre-Medicine

Pre-Physical Therapy

Biology (MS)

SCHOOL OF FORESTRY
(Dr. John Adams, Director – 4985)

Forestry (BSF)

Wildlife Conservation (BS)

INTERDISCIPLINARY PROGRAM IN ENVIRONMENTAL SCIENCE
(Dr. Milan Vavrek, Coordinator – 4573)

Environmental Science (BS)

DEPARTMENT OF HEALTH INFORMATION MANAGEMENT
(Mrs. Angela Kennedy, Head – 2854)

Health Information Technology (AS)

Health Information Administration (BS)
SCHOOL OF HUMAN ECOLOGY

(Dr. Janet Pope, Director – 3727)

Merchandising & Consumer Affairs (BA)
  Consumer Affairs
  Merchandising

Family & Child Studies (BS)
  Applied Child Development
  Child Life
  Family Sciences

Family and Consumer Sciences Education (BS)

Nutrition & Dietetics (BS)

Family & Consumer Sciences (MS)
  Early Childhood Administration
  Early Childhood Education
  Family and Child Development
  Family and Consumer Sciences Education
  Human Ecology

Nutrition & Dietetics (MS)
  Clinical Dietetics
  Community Dietetics

DIVISION OF NURSING

(Ms. Pam Moore, Director – 3101)

Nursing (AS)
# Commonly Used SIS Screens

<table>
<thead>
<tr>
<th>Screen Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address information</td>
<td>003</td>
</tr>
<tr>
<td>Advisor list</td>
<td>119</td>
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<tr>
<td>Class room profile</td>
<td>1C5</td>
</tr>
<tr>
<td>Class Roster</td>
<td>107</td>
</tr>
<tr>
<td>Classroom usage</td>
<td>1C7</td>
</tr>
<tr>
<td>Clear registration access number</td>
<td>7R3</td>
</tr>
<tr>
<td>Course sections scan (sections offered/course)</td>
<td>105</td>
</tr>
<tr>
<td>Registration audit</td>
<td>139</td>
</tr>
<tr>
<td>Registration holds &amp; comments</td>
<td>148</td>
</tr>
<tr>
<td>Section registration controls (check course prerequisites)</td>
<td>131</td>
</tr>
<tr>
<td>Student schedule</td>
<td>109</td>
</tr>
<tr>
<td>Test scores</td>
<td>221</td>
</tr>
<tr>
<td>Transcript</td>
<td>136</td>
</tr>
<tr>
<td>Transfer credit articulation</td>
<td>142</td>
</tr>
<tr>
<td>Transfer credit summary</td>
<td>144</td>
</tr>
</tbody>
</table>
Appendix G Environmental Science Program Governance

Governance of the Environmental Science Program
College of Applied & Natural Sciences

Name
Environmental Science Program

Administration
Administrative Head & Title
Program Coordinator
Location
Office of Program Coordinator
School of Biological Sciences
Selection
Recommended by the Director of the School of Biological Sciences and approved by the Dean, College of Applied and Natural Sciences
Subject to review
Every five years
Role and Responsibilities
Chair the Environmental Science Coordinating Council (ESCC)
Schedule courses and assign instructors in coordination with participating academic units
Generate racing form and catalog entries in coordination with participating academic units
Generate program assessment reports
Graduation checkout

Environmental Science Coordinating Council (ESCC)
Members
To maintain the multidisciplinary nature of the Environmental Science Program, three to four members representing the School of Biological Sciences and the units having faculty involved with the Environmental Science Program will be selected.
Selection
Recommended by the Program Coordinator to the Dean.
Term
Three years, staggered.
Role and Responsibilities
Coordinate recruiting
Maintain web site
Assist Program Coordinator with course scheduling, racing form and catalog entries, graduation checkout and program assessment.

Environmental Science Faculty
New faculty members must be approved by a simple majority of the Environmental Science faculty.
Each faculty member must be active in at least one role of the Environmental Science faculty.
Reappointment requires active participation in the Environmental Science Program and a majority vote of the Environmental Science Faculty. A committee will review faculty member participation every five (5) years. Faculty members will document participation in the Environmental Science Program in their annual self-evaluation. After consultation with the Environmental Science Coordinator, the unit head of the faculty member’s home unit will review the faculty’s contribution to the Environmental Science Program based on the supplemented faculty self-evaluation.

The Environmental Science Faculty will meet at least once per year.

Faculty Role
- Academic advising
- Maintain contact with graduates
- Maintain contact with prospective employers
- Fund raising
- Recruiting
- Teaching
- Advising student organizations
- Research
- Administration
- Committee membership

Student Representation
One undergraduate student with full voting privileges will be invited to attend the Environmental Science Program faculty meetings. In a meeting held by the Louisiana Tech University student chapter of the National Association of Environmental Professionals (NAEP), students enrolled in the Environmental Science Program will select the student representative.

Undergraduate Curriculum
The Faculty are responsible for the development and subsequent modification of the curriculum. The advisory board will be consulted for their recommendations.

Advisory Board
Members will consist of 10 to 20 persons who will serve three-year terms. Faculty members, unit heads, and the Dean will make recommendations for new members. Members to the Advisory Board will be selected based on a simple majority of the Environmental Science Faculty.

Accreditation
The Environmental Science Program will seek and maintain accreditation if available.