

Environmental Science BS Degree Program

On-Line Version

Explanatory Note: Procedure requires two separate program reviews if a program can be offered both less than and more than 50% on-line. This document is the program review for the “less than 50%” version of the Environmental Science BS degree program. The “more than 50%” version is identical in every way to this version except for the title. The only difference is that in the “less than 50%” version, a student may choose to take his university studies core curriculum courses on ground, whereas in the “more than 50%” version, a student may elect to take many to most of his university studies core curriculum courses on line. These differences do not appear as part of the program review document except in this explanatory note. As a result, the reader may save a great deal of time by foregoing reading this same document twice.

Since it's inception in 2003, the environmental science degree program has always offered ENV5 403 Environmental Ethics and Law on-line only. As of Fall 2012, the following courses have been switched from on-ground only to on-line only:

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|----------|---|
| ENV5 104 | Natural Disasters |
| ENV5 301 | Risk Assessment & Environmental Impact Statements |
| ENV5 302 | Phase I Environmental Site Assessment |

6.1 Introduction to department; An update since last review.

6.1.1 Describe actions taken in response to recommendations made in the previous five year review. Include copies of implementation plans and annual reports, if available.

The Environmental Science major requires 47 semester credit hours of core courses and 20 hours of specified support courses. The only change that has been made in the past five years is that ENV5 104, Natural Disasters, was moved from being a support course to a core course.

6.1.2 Describe enrollment trends in the program for the past five years. Provide analysis of how successful the program is in recruiting and graduating students. Include information about how the department meets the needs of students in service courses (for other majors, general education, remediation), if appropriate.

Environmental Science Majors for Past Five years:

| | |
|------|----|
| 2008 | 39 |
|------|----|

| | |
|------|----|
| 2009 | 39 |
| 2010 | 47 |
| 2011 | 44 |
| 2012 | 52 |

Since its inception in 2003, the program has seen steady growth in all but two years, 2005 and 2009. Students are recruited from (1) three university core curriculum courses within the environmental science program, (2) the student grapevine, (3) university-wide recruitment events, and (4) older students wanting to change careers.

Environmental Science BS Degrees Awarded for the Past Five Years

| | |
|-----------|--------------------------|
| 2006–2007 | 5 |
| 2007–2008 | 4 |
| 2008–2009 | 11 |
| 2009–2010 | 2 |
| 2010–2011 | 16 |
| 2011–2012 | xxx (numbers not yet in) |

There are three service courses (i.e. university studies core curriculum courses) offered within the degree. These are:

| | |
|-----------|---------------------------------------|
| ENVS 104 | Natural Disasters |
| ENVS 1301 | Introduction to Environmental Science |
| ESCI 1403 | Physical Geology |

For both Natural Disasters and Introduction to Environmental Science, two sections are offered every semester. For physical geology, two sections are offered every Fall semester.

6.1.3 How has the program and field changed over the past five years and how has the curriculum changed to address developments?

Environmental Field

The field of environmental science occupations has changed little over the past five years, but the demand for environmental scientists is increasing due to current trends in environmental awareness and increased negative environmental impacts throughout the country and world. Environmental scientists typically work in one of three areas, private environmental consulting firms, industry, or government. Since the 1990s, the bread-and-butter task within private environmental consulting firms has been Phase I Environmental Site Assessments in which real estate properties are assessed, prior to purchase, for the potential of a hazardous waste material being found beneath the surface that could require cleanup, many times at a cost far beyond the value of the property. In industry, environmental scientists serve as environmental compliance officers whose job is to make certain their corporations maintain compliance with myriad environmental laws and regulations. Governments at all levels, from city and county through federal, hire environmental scientists to investigate potential

environmental problems and to enforce compliance with government environmental regulations.

The specific areas in which environmental scientists work include air, water, soil, threatened and endangered species, threatened environments, human environments, natural resources, and others. Within each of these areas, environmental scientists are involved with environmental assessments and audits, prevention of significant deterioration, emergency hazardous materials response, hazardous waste release clean-ups and remediation, compliance maintenance, environmental restoration, and many other tasks.

Due to the recent economic trends, employment for students who graduate from ENVS programs has improved over the past five years. Global economic and environmental concerns are showing signs of an increased demand for ENVS majors, and our program is expanding to parallel this trend.

According to the US Bureau of Labor Statistics (web site, January, 2013—<http://www.bls.gov/ooh/life-physical-and-social-science/environmental-scientists-and-specialists.htm>), under Job Outlook for Environmental Scientists and Specialists:

“Employment of environmental scientists and specialists is projected to grow by 19 percent from 2010 to 2020, about as fast as the average for all occupations. Heightened public interest in the hazards facing the environment, as well as the increasing demands placed on the environment by population growth, are expected to spur demand for environmental scientists and specialists.”

Further, according to this page produced by the US BLS, entry level education is a bachelor’s degree, the median pay is \$61,700 per year (in May, 2010), the number of jobs available in May 2010 was 89,400, and the job growth rate is 19%.

Curriculum

The environmental science degree program was established in 2003 and undergone several changes—course additions and deletions—between 2003 and 2008. Much of this was done in response to feedback from graduated students who were working in the field as environmental scientists. Because the specific jobs open to environmental scientists is so widely varied, the philosophy of the curriculum has always been to keep our students environmental education as broadly based as possible. Students become exposed to many things within the field, obtain a good grasp of the overview of environmental problems as well as many specifics, and are able to solve problems as needed. As a result, many of our graduated students become supervisors within the companies they work for.

We stay attuned to what works within the curriculum that leads to student success, and are ready to make changes as needed, but over the past five years, we have not seen the need to make any curriculum changes. However, it is becoming apparent that the demands within the environmental community are now beginning to change to match the evolving environmental issues and trends (for example the increases in geologic,

meteorologic, and man-made disasters), and we are well situated to expand the degree curriculum to keep pace.

6.2 Department Planning and Structure

6.2.1 What are the goals and priorities of the department over the next five years? How do these goals support the college and the university plans and mission?

College Mission — Innovation and Discovery

University Mission — Texas A&M University-Commerce provides a personal educational experience for a diverse community of life-long learners. Our purpose is to discover and disseminate knowledge for leadership and service in an interconnected and dynamic world. Our challenge is to nurture partnerships for the intellectual, cultural, social, and economic vitality of Texas and beyond.

The environmental science BS degree program has five goals for the next five years:

- (1) Continue to grow in the number of majors and the number of degrees awarded. The program has seen steady growth nearly every year since its inception. One year we lost a number of majors, but the reason for the loss (a specific faculty member involved in the program) was quickly remediated and did not continue.
- (2) Develop a fully-on-line version of the degree program. While one of the program's courses has always been on-line (Environmental Ethics & Law), over the past couple of years, four additional courses are now offered on-line. Plans are in place to begin offering other courses within the next couple of years.
- (3) Texas A&M-Commerce has a working presence at Navarro College in Corsicana, Texas. That college recently received approval to begin offering a two-year associates degree in Environmental Science. If approval is met on the Texas A&M University-Commerce campus, beginning in August, 2013, a full four-year BS degree in environmental science will be available to Navarro students through the partnership between our university and Navarro.
- (4) Based on the BS degree program at Texas A&M University-Commerce, a 13 credit-hour graduate certificate in environmental science has been in place for about three years. Although still in the talking and thinking stage, we are considering expanding to offer a full MS degree in environmental science.
- (5) Move the Environmental Science program out of the Department of Biology & Environmental Science and merge with the Chemistry Department. The environmental science program was originally developed within the Earth Science department. That department and the entire Earth Science program were eliminated in the late 1990s, and the environmental science program was merged into the Biology Department. However, it is a common misconception that environmental science refers to ecology, and this misconception needs to be dispelled. Most environmental scientists come from Earth science fields, particularly, while many come from chemistry, and only a few from biology. It is hoped that, if the program merges with the Chemistry department—which will then undergo a to-be-determined name change—the true nature of the

environmental science degree will be more apparent.

These goals uphold the college mission of innovation and discovery because those things are in the very nature of environmental science. Dealing with environmental issues necessitates discovery of factors involved in every issues situation, and sometimes in discovery of facts quite unique from other situations. It also necessitates innovation particularly in solving the many problems encountered when unique approaches and solutions must be sought to achieve the established goals.

These goals uphold the mission of the university by expanding the opportunities for personal educational experience to more students (via on-line and Navarro College). The nature of the program—broad experiences within the environmental science curriculum—prepares our students for leadership roles in the environmental field, as has been shown by the positions now held by many of the students who graduated from this program. The plans for expansion will equally expand the dissemination of knowledge that will be used in leadership and service in a field that is critical to the economy not only of Texas, but of all the United States and the world.

6.2.2 Briefly describe the strengths and weaknesses of the department in terms of faculty numbers, use of part time instructors, staff support, equipment, instructional equipment, facilities, etc.

Strengths — Two full-time instructors are dedicated to the environmental science program. Prior to 2010, there was only one full-time instructor, but steady growth of the program allowed the addition of a new faculty line. The Associate Dean of the college, previously one of the full-time instructors in the program, is still teaching one course per semester within the program. Instructors from other programs—biology, chemistry, and agriculture—have always taught one or two courses within the environmental science curriculum as well. We have also used one adjunct every semester to teach, in alternating semesters, physical geology and (as an elective) historical geology. No support staff are dedicated strictly to the environmental science program, but a sufficient number are common to the Biology, Wildlife, and Environmental Science programs. These include a secretary, purchasing manager/lab-coordinator/, and a small number of student workers. Equipment is mostly low-budget items, such as water-quality hot kits, balances, a stream table, groundwater model, and stream-flow meters. There has been no problem in obtaining the bare-minimum needs. Facilities and instructional equipment are adequate in that there are adequate classrooms, all of which are equipped with appropriate instructional technology (projecting computers, white boards, video equipment, overhead/opaque projectors).

Weaknesses — We now have sufficient instructors able to handle more majors within the program, and we are proposing additional courses to create different emphases and electives. However, If due to continued growth in the number of majors, there comes a time in which we need to add another faculty member, there is no more office space available within the science building which houses the environmental program.

Neither is the space within the nearby IT/Agricultural Science building. Other office space within other buildings across campus, such as Lit and Lang, is also at a premium, and there simply isn't any room for expansion.

One of the weaknesses of the program is that, as mentioned, bare-minimum needs are adequately met, there is a serious lack of contemporary equipment to provide students with adequate and meaningful environmental science training.

6.2.3 Does faculty expertise cover the breadth of the program? Please report how faculty members are engaged and supported in scholarship, research, and/or creative activity.

Two full-time instructors are dedicated to the environmental science program, Dr. Janet Hull and Dr. Ray Arnold. Dr. Chip Fox was dedicated full time to the program prior to reassignment as associate dean, and still teaching two of the program's core courses, one each semester.

Dr. Hull holds a master's degree in Earth Science (with an emphasis in physical geography and cultural geography). Physical geography is a highly respected discipline that covers all of the Earth sciences, which is the foundation of environmental science. Dr. Hull's Ph.D.—recognized and fully accredited in all but four states including Texas—is in human nutrition. Her doctoral studies focused on the adverse effects of environmental toxins on human health. Dr. Hull has extensive work experience in environmental remediation, cleaning up various environmental hazards in both west Texas and in Russia. Dr. Hull is currently involved in researching Earth Dynamics as they relate to the recent increase in geological natural disasters. She is a published author, and writes mainstream books concerning human exposure to environmental toxins.

Dr. Ray Arnold is an environmental toxicologist with extensive education and experience in water quality. His most current work deals with aquatic toxicology and risk assessment leading to the development of national and international water quality criteria for the protection of organisms inhabiting streams, lakes, estuaries, and oceans.

Dr. Haydn A. "Chip" Fox holds a Ph.D. in geological sciences, emphasizing environmental sciences. He also holds a master's degree in Earth sciences with a focus on groundwater hydrology. He is currently serving as Associate Dean of the College of Science, Engineering, and Agriculture.

6.2.4 Do all faculty meet the SACS requirements? Provide qualifications for full time and part time faculty for all faculty teaching courses in the last academic year. (See template for required items.)

Faculty who have taught core courses in the environmental science degree program over the past academic year include the following. Their vitas are included as appendices:

| Instructor | Full or part time with env sci program | Degrees | Courses |
|--------------|--|---|--|
| Janet Hull | Full time | Ph.D. Clayton College, 2000 HOLISTIC NUTRITION* M.S. Texas A&M University, 1982 EARTH SCIENCE (Physical Geography) B.S. The University of Texas at Austin, 1977 INTERNATIONAL GEOGRAPHY C.N. American Health Science University, 1996 CERTIFIED NUTRITION * Nationally accredited but not recognized in the State of Texas | Natural Disasters, Risk Assessment & Env Impact Statements, Phase I Env Site Assessment, Frontiers in Env Science |
| Ray Arnold | Full time | Ph.D. –Biology (Aquatic Ecology/Toxicology Emphasis), University of North Texas, Denton, Texas, 1989 M.S. –Biology (Limnology/Aquatic Ecology Emphasis), Stephen F. Austin State University, Nacogdoches, Texas, 1984 B.S. –Biology (Wildlife Science Major, Geology Minor), Stephen F. Austin State University, Nacogdoches, Texas, 1981 | Intro to Env Science, Intro to Env Toxicology, Frontiers in Env Science, Env Monitoring & Waste Mgt., co-instructor of Biological Literature |
| Chip Fox | Part time (college associate dean) | Ph.D. Geological Sciences (Science Education, Environmental Science), University of South Carolina, 1992 MNS Earth Science (Secondary in Education), Southeast Missouri State University, 1989 BS Secondary Education in Earth Science, Southeast Missouri State University, 1988 BA Theology & Journalism, Ambassador College, 1971 Areas of specialization — General Earth & Environmental Sciences, Teacher Education in Sciences, Hydrology, Environmental Law & Regulation | Env Hydrology, Env Ethics & Law |
| Curtis Jones | Part time (full with Ag dept) | Ph.D. Agronomy, Louisiana State University, Baton Rouge, LA, 2006. M.S., Agronomy, Texas A&M University, College Station, TX, 1999. B.S., Agronomy, Texas A&M University, College Station, TX, 1996. | Soil Science |

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|----------------|--|--|---------------------------------------|
| Jeff Kopachena | Part time (full with biology) | Undergraduate Degree: B.Sc. (maj) Biology, University of Manitoba, May, 1982 M.Sc. Zoology, University of Manitoba, Major Subject: Behavioral Ecology Minor Subject: Statistics May, 1986 Ph.D. Zoology, University of Toronto, Major Subject: Behavioral Ecology Minor Subject: Wildlife Ecology May, 1992 | Ecology |
| Amanda Turley | Part time (adjunct, Dept of Biological & Env Sci) | Texas A&M University MS, Secondary Education, Focus Biology Spring 2012-Present GPA 4.0 University of North Texas M S, Biology Fall 2010-Fall 2011 Incomplete-Transferred to Texas A&M MS program GPA 3.809 BS 2006-2010 Major: Biology GPA 3.586 Minor: Chemistry Cum Laude ESRI GIS Geodatabase Certified ESRI GIS LIDAR Certified | Geospatial Mapping |
| George Nixon | Part time (adjunct, chemistry dept) | Washington State University, Pullman, Washington, Chemistry, B.S. 1961 East Texas State University, Commerce, Texas, Chemistry, M.S. 1964 Notre Dame University, Nelson, B.C. Canada, 1957 1959 Baylor University, Waco, Texas, 1964 Louisiana State University, Baton Rouge, Louisiana, 1966-1967 (b) | Survey of Organic and Biochemistry |
| Jose Lopez | Part time (full with Ag dept.) | Ph.D., Agricultural & Applied Economics, Texas Tech University, December 2009 M.S., Statistics, Texas Tech University, August 2008 M.S., Agricultural & Applied Economics, Texas Tech University, May 2004 B.B.A., Finance and Management, Ave Maria College, December 2001 | Agricultural Economics |

6.2.5 Describe faculty productivity in terms of SCH generation, research, creative and scholarly activities, departmental and university service, community service, and support of service courses, etc.

Included in this section are only the faculty members whose primary teaching responsibility lies with the environmental science program:

Dr. Hull is serving as full-time faculty in charge of building the ENVS on-line program and joint venture ENVS Certification programs. The ENVS 104 Natural Disasters (4sh) class is a service course averaging 80 on-line students every semester, 40 in each of two sections. Dr. Hull has developed this class to incorporate geographical aspects of both the physical and cultural environments, worldwide. In addition, she teaches ENVS 301 Risk Assessment and Environmental Impact Statements (3sh) and ENVS 302 Phase I Environmental Site Assessment (3sh), both on-line, and both currently averaging 15 students each. Dr. Hull is a published author and is interactive, internationally, through her mainstream social network of websites based on her publications and research concerning the toxic effects of environmental and food toxins on human health and global societies. She brings her background as a HAZWOPER engineer and her environmental remediation field experience, both domestic and International, into the service course curriculums, ensuring marketability for ENVS graduates.

Fall 2012 was Dr. Ray Arnold's first semester with the university. During this semester, he taught two sections of ENVS 1301 Introduction to Environmental Science (4sh) with a total enrollment of 97 students, one section of ENVS 304 Frontiers in Environmental Science (a 1sh seminar course) with 11 students, and ENVS 312 Introduction to Environmental Toxicology (3sh) with 12 students enrolled. He also handled one independent study for a master's degree student. Dr. Arnold presented an interactive poster at the North American Meeting of the Society of Environmental Toxicology and Chemistry, Long Beach, California, November 2012. He assumed the role as the faculty supervisor for the Texas A&M University-Commerce Environmental Awareness Society, served as the "Department Host" for the 2013 Alumni Ambassador selection. Dr. Arnold has submitted two manuscripts, one to *Environmental Toxicology* and one to the *Texas Journal of Science*. The latter has been accepted with revisions. He was the session Co-Chair for the session: "Effects of Anthropogenic Chemicals on Chemosensation and Behavior in Fish: Organismal, Ecological, and Regulatory Implications" at the North American Meeting of the Society of Environmental Toxicology and Chemistry, Long Beach, California, November 2012.

Dr. Chip Fox is serving as Associate Dean of the College of Science, Engineering, and Agriculture, but continues to teach one course per semester, one of which is a three-hour course typically with 35 students (105 sch production) and one a four-hour course typically with 15 students (60 sch production). He is also chair of the university's SACS required QEP (quality enhancement plan) committee and is actively involved in the "Texas Affordable Baccalaureate" (i.e., \$10,000 degree) committee. Although not yet published, he has completed, as sole author, a college freshman-level text in physical science. His current research involves phytoremediation of arsenic-contaminated soil, and research into the present state of environmental education. In the past, he has taught all three courses within the environmental science degree requirements that are also university studies (university core curriculum) courses, but these are now being taught by Dr. Hull and Dr. Arnold.

6.2.6 Describe the quality of the management and communications in the department, including information on the collegial environment, management of

staff and part time faculty, mentoring of new faculty, clarity of internal procedures for acquiring clerical support, travel, supplies, etc.

The environmental science program is currently housed within the Department of Biological and Environmental Sciences. Open communication has always been the norm within the department, with the department head providing management as is needed relative to dictates from the college and university upper administration. However, more detailed management of the program itself is accomplished by consensus of the program's three principle faculty members, Dr. Fox, Dr. Hull, and Dr. Arnold. The environment among these three is exceptionally collegial, and all three maintain as foremost the interests of the students and the betterment of the program.

Other faculty who contribute to the program—those from the biology, agriculture, and chemistry departments—are already teaching the same courses to students within those respective programs. The staff who support the environmental science program are the same staff who support the biology and wildlife programs, and all work quite amiably and efficiently together. Supplies are adequate.

One weakness exists relative to this section, and that is the software in use to approve and reimburse travel. It is completely unwieldy and is understandable only to people who use it on a regular basis. Fortunately, the department secretary has become efficient at its use, and is able to help others within the department to navigate the Gordian complexity of the program.

Dr. Ray Arnold is new to the program as of August, 2012. Dr. Chip Fox is his senior faculty mentor, and the two maintain daily communication. Dr. Arnold is proving to be an excellent faculty member in every way, especially in his teaching and interactions with our environmental science students..

6.2.7 What are the procedures for handling student advising and mentoring? Provide an assessment of the quality of student advising and involvement with student majors and other academic student activities.

The first line of student advising for environmental science majors is the college-level student advisor, Karen St. John, who helps students set up and navigate through their degree plans. Technical problems with student degrees, such as allowing faculty-approved course substitutions and monitoring degree audits, are handled by Ms Penny Dooley.

More detailed advising and mentoring are done primarily by Dr. Arnold and Dr. Fox. Dr. Hull teaches strictly on-line, and has a good working relationship with the students in her courses, but is not typically involved with student advising.

The quality of student advising has been exceptional. This assessment is based on the fact that students within the program have never come up to the end of their degree and suddenly discovered they are lacking certain courses and thus prevented from

graduating. The only issue that has extended the expected graduation date for a very few students is when one or more grades within the program's core courses has fallen below a "C" and the course(s) had to be repeated.

6.2.8 For programs with substantial online course offerings or off-campus program offerings, please describe how the quality of the program, including access to faculty, faculty qualifications, student advising, library resources, etc., is assured.

Four of the courses within the program are currently offered on-line. Dr. Hull teaches three of these, ENVS 104 Natural Disasters, ENVS 301 Risk Assessment & Environmental Impact Statements, and ENVS 302 Phase I Environmental Site Assessment. These on-line course offerings began in August, 2012. Prior to establishing these as on-line courses, Dr. Hull completed the course work associated with teaching on-line courses, student response the courses has been highly positive, and both the university's IT department and the eCollege software provider have provided support to ensure these courses maintain the high quality that has always been integral to the environmental science program.

Dr. Fox teaches one on-line course, ENVS 403 Environmental Ethics & Law. He has taught this as an on-line course since, and even before, the environmental program was established in 2003. IT and eCollege support has also been provided for this course.

Students who enroll in these courses have open communication with the instructors primarily via e-mail, but also have access by phone, or in Dr. Fox's case, by personal visit to his on-campus office. The qualifications of the faculty are discussed in sections 6.2.4 and section 6.2.5, with documentation in the appendices.

Physical library access is available on campus, but the library offers on-line a vast selection of subject-related journals as well as many books, all available to any student enrolled in university courses.

6.3 Commitment to Student Learning

6.3.1 Provide the learning goals and assessment program that is in place for students majoring in your program and your assessment program for collecting information regarding student learning. Other than grades, how do you document students are achieving these goals? Does the program have a capstone or culminating experience? How do you gather and use data collected in your assessments?

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|----------------|-----------------------------------|
| Program | BS - Environmental Science |
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|-----------------------------------|--|
| Mission | The Environmental Science Program prepares students for careers related to the protection and restoration of the environment, and to pursue graduate degrees in environmental science. |
| Current majors | (January, 2013) 46 |
| Typical annual graduations | Highly variable — expecting 10 per year during next 5 years |
| SLO's | <ol style="list-style-type: none"> 1. Students will successfully conduct a Phase I Environmental Site Assessment (ESA) and prepare a professional Phase I report 2. Students will successfully calculate the pumping rate required for a pump-and-treat aquifer remediation project. |
| Measures | <ol style="list-style-type: none"> 1. A minimum of 75% of the students in the Phase I ESA course will earn a grade of A or B on their second Phase I report. 2. On the practical final exam in the hydrology course the mean grade will be at least 80% |
| Findings | <ol style="list-style-type: none"> 1. Met: 95% of the students earned a grade of A or B on their 2nd Phase I reports 2. Met: The mean grade on the hydrology practical exam was 80.7 |
| Resulting Action | <ol style="list-style-type: none"> 1. SLO measure achieved—new SLO will be evaluated 2. SLO measure achieved—new SLO will be evaluated |

These Student Learning Outcomes are measured using course-embedded assessments. Faculty teach the courses gather the information for the report. In addition to these program SLOs, each course has its own individual SLOs used to measure (to some extent) the success of the course. This program does not have a capstone course.

A more complete explanation of the program assessment based on SLO's can be found here:

<http://www.tamuc.edu/aboutUs/institutionalEffectiveness/documents/slo/science-engineering--ag/BSEnvironmentalScience3.0104.00HaydenFox.pdf>

6.3.2 Provide a summary analysis of the results of your assessment program. Give examples of changes that have been initiated due to these analyses over the past five years. Include examples from the undergraduate and graduate programs in the department.

A summary analysis appears in the table above. A significant change over the past five years is in the method by which ENV 305 Environmental Hydrology is taught. The last two-thirds of this course now specifically target the final exam. This is valid for this course because the final test is a comprehensive practical of the skills learned during the course. This specific set of skills is one that is of vital importance to many, if not most, environmental occupations.

Another course that is continually under revision is ENV 410 Environmental Monitoring & Waste Management. This course has been somewhat of a catch-all

course, teaching skills and knowledge not presented in other environmental courses. These include methods for environmental monitoring, statistical analysis of data, chain-of-custody protocol, and design of solid and hazardous waste landfills, but the course also includes various field trips and typically guest speakers. Because the skills and knowledge learned in this course are necessary for any meaningful environmental career, the course is constantly updated to take advantage of new information and resources that can be used to increase student learning.

ENVS 104 Natural Disasters has also undergone revision. As a result of current climate changes and the increase in natural disasters, ENVS 104 has evolved into a current events format. With the introduction of geographical principles through extensive world mapping, ENVS 104 emphasizes a blend of two core disciplines - environmental sciences (geological, meteorological, and man-made disasters) and cultural studies, emphasizing the affect of these disasters on the human environment.

6.3.3 For undergraduate programs, describe the program's role in providing service programs to the core curriculum/general education program. How successful are these programs in supporting the University Studies' goals? Please provide the information on which you base your analysis.

Not Applicable

6.3.4 For graduate programs, describe how you gather and use information derived from the assessment of the learning for graduate students to improve your graduate program and student learning. Provide data on learning outcomes of graduate students.

Not Applicable

6.4 Recommendations and Implementation Plan

6.4.1 What are the recommendations of the program in response to this review? Provide the plan that shows implementation of these recommendations and projections for the program for the next five years. In the course of your plan, please address the following: What student profile is anticipated, both in number and type of students? What curricular changes are planned? What scheduling changes are planned?

The steady growth in the program, plus the remarkable projected growth in the number of environmental jobs available over the next several years, fosters optimism that it will continue. Further, because of our plans to expand the program to Navarro College and to expand to a fully on-line version of the program, we believe a conservative estimate 80 environmental majors can be reached within five years.

In the past, the types of students entering the program could be classified into three broad categories. Perhaps 30% are entering freshman, 45% transfer students from two-year colleges or other universities, and 25% are students over the age of 25 or 30 who are seeking a career change. With the addition of Navarro College students, the raw number of freshman entering the program will likely increase, but the percentage may be lowered. The biggest increase is expected to occur once the program is offered fully on-line. At that time, it is probable that more people who are wanting to change careers, but are currently working full time, will be able to access the program in order to meet their goals.

Curricular changes — All of the courses currently in the program (see appendix A) will be retained, but until now, there has been no flexibility, and all of these courses have been required for all environmental science majors. As enrollment increases, plans are in place to develop either elective options (there are none currently) or optional program emphases. Courses that can be quickly added using current faculty include:

- Environmental Geography (on-line) — Hull
- Environmentally Sustainable Urban Planning (on-line) — Hull
- Environmental Remediation (on-line) — Fox
- Industrial Hygiene (hopefully on-line) — Anderson (IE Department)
- Water Resource Management — Arnold
- Environmental Analysis — Arnold
- Environmental Effects Monitoring — Arnold

6.4.2 What types of human, fiscal, and physical resources are needed to implement your enrollment projections and recommendations?

With two full-time instructors and one quarter-time instructor dedicated to the environmental science program, the program has already been able to expand by offering two sections of ENVS 104 Natural Disasters and two sections of ENVS 1301 Intro to Environmental Science every semester. Both of these courses are university studies (i.e., core curriculum) courses, and are primary recruitment tools for enticing new majors into the program. Thus, even without the planned program expansion of offering the program fully on-line (in addition to mostly on-ground courses), and offering it at Navarro College in Corsicana, it is reasonable to expect the program to grow at a rate even faster than it has in the past. If, over the next five years, the number of majors expands from the current 50 to the conservatively-estimated 80, the faculty now in place will be sufficient to maintain the program. When the program reaches, say, 100+ majors, it is likely that an additional faculty line would have to be requested.

This program has always operated on a shoestring, and for most years, only one full-time instructor has been dedicated to the program. Equipment and supplies requirements have been minimal, typically less than \$500 per year, and it is expected to remain about the same relative to absolute needs. Were funds available—say a sudden influx of \$10,000 or so—some of the course laboratories would be able to provide much more up-to-date and technologically-current experiences for our students

(making them more marketable as they seek their jobs), but in lieu of that, the program is accustomed to operating on a shoestring and can continue to do so. This is far from ideal, but is realistic, considering that academic departments are being asked to reduce their operating funds by 1.5% every year. With the addition of one and one-quarter faculty members the program now has, the program operating budget has expanded, but only for instructor salaries.

Appendix A

Environmental Science Course Curriculum

Required courses in major (47 sh)

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|--------------------------|--|
| ENVS 104 | Natural Disasters (4 semester hours) — Prerequisites: None. <u>On-Line Only</u> |
| ENVS 204 1301 | Introduction to Environmental Science (4 semester hours) — Prerequisites: None. |
| ENVS 301 | Risk Assessment & Environmental Impact Statement (3 semester hours) — Prerequisites: None. <u>On-Line Only</u> |
| ENVS 302 | Phase I Environmental Site Assessment (3 semester hours) — Prerequisites: None. <u>On-Line Only</u> |
| ENVS 304 | Frontiers in Environmental Science (1 semester hour) - Prerequisites: None |
| ENVS 305 | Environmental Hydrology (4 semester hours) — Prerequisites: ESci 101 |
| ENVS 312 | Introduction to Environmental Toxicology (3 semester hours) — Prerequisites: Bio 1411, 1413 |
| ENVS 403 | Environmental Ethics & Law (3 semester hours) — Prerequisites: None. <u>On-Line Only</u> |
| ENVS 410 | Environmental Monitoring & Waste Management (4 semester hours) — Prerequisite: None |
| PLS 309 | Soil Science (4 semester hours) — Prerequisites: None |
| BSC 307 | Ecology (4 semester hours) - Prerequisites: None. |
| BSC 417 | Geospatial Mapping (3 semester hours) - Prerequisites: None |
| Chem 408 1407 | Survey of Organic and Biochemistry (4 semester hours) — Prerequisite: CHRM 1411 & 1412. |

Aec 445 or **Resource & Environmental Economics** OR
Aec 219 **Agricultural Economics** (3 semester hours) — Prerequisite: None.

Required Support Courses (20 sh)

ESCI 1403 **Physical Geology** (4 semester hours) — Prerequisites: None.
 Offered both on-line and on-ground
BSC 1411 **Botany** (4 semester hours) — Prerequisites: None.
BSC 1413 **Animal Biology** (4 semester hours) — Prerequisites: None.
Chem 1411 **General Chemistry I** (4 semester hours) — Prerequisites: None.
Chem 1412 **General Chemistry II** (4 semester hours) — Prerequisites: Chem 1411

University Studies Courses (35 sh) (43sh minus 8sh within required program courses)
Minor (18 sh)

Total Require Hours = 120

Appendix B

Faculty Credentials

Dr. Janet Hull
Dr. Ray Arnold
Dr. Chip Fox
Dr. Curtis Jones (Agriculture Department)
Dr. Jeff Kopachena
Ms. Amanda Turley
George Nixon (Chemistry Department)
Dr. Jose Lopez (Agriculture Department)

Janet Starr Hull

email: Janet.Hull@tamuc.edu

EDUCATION

Ph.D. Clayton College, 2000 HOLISTIC NUTRITION*
M.S. Texas A&M University, 1982 EARTH SCIENCE
B.S. The University of Texas at Austin, 1977 INTERNATIONAL
GEOGRAPHY
C.N. American Health Science University, 1996 CERTIFIED NUTRITION

* Nationally accredited but not recognized in the State of Texas

PROFESSIONAL HISTORY

Current: *Instructor* Biological and Environmental Sciences, Texas A&M Commerce.

Book Publications:

- Move Onto The Highest Mountains: *A Guide to the Upcoming Polar Shift*; publication date, under query;
 - Sweet Poison *How The World' Most Popular Artificial Sweetener Is Killing Us - My Story* - , New Horizon Press, September, 1998;
 - Sweet Poison *How The World' Most Popular Artificial Sweetener Is Killing Us - My Story* - , Japanese Edition, Toyo Keizai; Toyko, June 2012;
 - Sweet Poison *How The World' Most Popular Artificial Sweetener Is Killing Us - My Story* - , British Edition, Vision Publications, London, March, 2000;
 - Ten Steps To Detoxification, Amazon, 2000;
 - Splenda: Is It Safe Or Not?, Amazon, 2004;
 - The Richardson Cancer Prevention Diet, Amazon, 2004;
- The Sweetener Wars: *The History of the Diet Sweetener Industry*, under query.

Professional Publications:

- The Earth Expansion Theory in the Gulf of Mexico; Amazon <http://vimeo.com/26882508> <<http://vimeo.com/26882508>;
- Feature health writer *MaryJane' Magazine*;
- Feature health writer www.naturalnews.com;
- *First For Women Magazine*, feature article, March 2012;
- Publisher: Dr. Hull' Monthly Healthy Newsletter, <http://www.janethull.com/newsletter/>; over 100.000 subscribers worldwide;
- Publisher: Ask Dr. Hull Health Forum, <http://www.askdrhull.com/forum/index.php>

Current Research:

- Production advisor, Documentary *Consumption*, Fire Productions, LLC, www.fireproductions.com, www.youtube.com/firevv, <http://www.kickstarter.com/projects/consumption/consumption-a-documentaryabout-sugar>
- Toxic barium and strontium levels penetrating the Trinity Group of Cretaceous aquifers supplying North Texas drinking water sourced to former Camp Maxey, a 39,000-acre facility' experimentation with mustard gas weaponry in the 1940s and 1950s;
- Effects of heavy metal pollutants on human health using hair analysis testing;
- Effects of radiation on human health resulting from nuclear disasters using hair analysis testing;
- Effects of artificial chemical food additives on global societies, demographic cultures, gender and age;
- Effects of chemical sweeteners on learning disabilities, ADHD and autism;
- International environmental influences on human health;

Environmental Research:

- Mapping the current shifting of the geographic North and South Poles;
- Redesigning urban centers before and after natural disasters;
- The impact of natural disasters on human health;
- Volcanism in the Gulf of Mexico, and its effects on temperature and oil exploration;

Wildlife Preservation Research:

- Identification of compatible South American Red Foot genomes;
- Breeding capability of Geochelone Reptilia Testudines worldwide;
- Geographic mapping of Geochelone Reptilia Testudines 500 mya
2005 to Present *CURATOR and BOARD OF DIRECTORS for GREEN (Global Repopulation For Endangered Exotics Non-profit) 501c3 wildlife preservation.*
- 1991 to Present *FOUNDER*, Starr Resources International and The Hullistic Network; environmental-nutrition research and information networks offering research, publications and presentations for the education on the impact *toxins* have on societies and wellness worldwide.
- 1995 to 1997 *PROFESSOR*, Collin County Community College, Geography/Earth Science
- 1991 to 1994 *INTERNATIONAL PROJECT MANAGER*, Environmental Engineering and Geotechnics International (EKOCENTR), remediation of the former Soviet Army bases in Krosno, Poland and Bratislava, Czechoslovakia
- *PROJECT MANAGER*, Environmental Engineering and Geotechnics, Inc., USA
- 1988-1991 *ADJUNCT PROFESSOR*, The University of North Texas, Geography and Environmental Science
- 1987-1988 *PROFESSOR*, Drake University, Geology
- *PROFESSOR*, Des Moines Area Community College, Geography/Earth Science
- 1984-1987 *PROFESSOR*, Richland College, Geography/Earth Science
- 1976-1981 *URANIUM ANALYST*, SUNEDCO, Sun Oil Energy Development Company

CERTIFICATIONS

OSHA 29 CFR 1910.120 US Federal Hazardous Waste Health and Safety Field Operations

- CN License #000399 (Certified Nutrition) American Health Science University
- TCFD Firefighter
- TEXAS TEACHING CERTIFICATION East Texas State University, 1982
- AFAA Professional CERTIFICATION for Health and Fitness
- CPR First Responder CERTIFICATION for Health and Safety

QUICK FACTS

Janet Starr Hull has a very diverse background with academic degrees and experience in geology, international geography, environmental science and toxicology, fitness training

and holistic nutrition. She is an OSHA Certified Environmental Hazardous Waste Emergency Response Specialist and Toxicologist, a university professor, and a former firefighter.

A much sought-after speaker, Hull has addressed such distinguished audiences as members of the European Union and British Parliament, has granted over 1,000 radio and television interviews, and has filmed numerous documentaries on the dangers of toxins to humans and wildlife. Her pioneering work has impacted millions of people worldwide. Hull was one of the first Americans to remediate the former Soviet army bases in Eastern Europe after Glasnov in the late 1980s and early 1990s, Her field experience cleaning up toxic waste enhances her research into the effects toxins have on human health and on future societies.

Hull publishes a monthly health newsletter on current social topics impacting societies worldwide, with a readership of over 100,000 subscribers. She and her youngest son founded and operate a Federal 501C3 Wildlife Preservation for endangered animals. They have one of the largest collections of endangered tortoises from around the world. Her professional reputation and international presence as an artificial sweetener expert has produced Top 10 Internet rankings in the major search engines, and generates over 1,000,000 page views to her sites every year. She has published over 500 Internet articles on the dangers of artificial sweeteners and their impact on human health.

Hull' research and publication web sites include:

www.extinctiontheory.com (under updates)

www.tortshack.com (501C3 Wildlife Preservation)

www.janethull.com <<http://www.janethull.com>>

www.sweetpoison.com <<http://www.sweetpoison.com>>

www.splendaexposed.com <<http://www.splendaexposed.com>>

www.issplendasafe.com <<http://www.issplendasafe.com>>

www.detoxprogram.net <<http://www.detoxprogram.net>>

www.hairanalysisprogram.com <<http://www.hairanalysisprogram.com>>

www.healthynewsletter.com <<http://www.healthynewsletter.com>>

www.hullisticnetwork.com <<http://www.hullisticnetwork.com>>

www.hullisticweb.com <<http://www.hullisticweb.com>>

www.alternativecancerdiet.com <<http://www.alternativecancerdiet.com>>

Dr Ray Arnold

Curriculum Vitae

January 2013

Instructor: W. Ray Arnold, Ph.D. –Assistant Professor

Academic Department: Biological and Environmental Sciences

University Address: Biological and Environmental Sciences

Science Building

Texas A&M University-Commerce

PO Box 3011

Commerce, TX 75429-3011

Office Phone: (903) 469-3271

University Email Address: Ray.Arnold@tamuc.edu

Faculty Web Page Address: NA

EDUCATION

Ph.D. –Biology (Aquatic Ecology/Toxicology Emphasis), University of North Texas, Denton, Texas, 1989

M.S. –Biology (Limnology/Aquatic Ecology Emphasis), Stephen F. Austin State University, Nacogdoches, Texas, 1984

B.S. –Biology (Wildlife Science Major, Geology Minor), Stephen F. Austin State University, Nacogdoches, Texas, 1981

TEACHING EXPERIENCE

2012-2013 –Assistant Professor, Department of Biological and Environmental Sciences, Texas A&M University at Commerce, Commerce TX.

Classes:

Introduction to Environmental Science

Introduction to Environmental Toxicology

Frontiers of Environmental Science

Environmental Monitoring and Waste Management

2010-2012 - Adjunct Faculty and Research Scientist, Waters of East Texas Center, Division of Environmental Sciences, Arthur Temple College of Forestry, Stephen F. Austin State University, Nacogdoches, TX.

Classes:

Environmental Risk Assessment

Environmental Law and Policy

PUBLICATIONS

27. Wang, N., Mebane C.A., Kunz, J.L., Ingersoll, C.G., Brumbaugh, W.G., Santore, R.C., Gorsuch, J.W., **Arnold W.R.** 2011. Influence of Dissolved Organic Carbon on Toxicity of Copper to Rainbow Mussel (*Villosa iris*) and Cladoceran (*Ceriodaphnia dubia*) in Acute and Chronic Water Exposures. *Environmental Toxicology and Chemistry* 30:2115-2125.

26. DePalma, S.G.S., **W. R. Arnold**, J.C. McGeer, D.G. Dixon, D.S. Smith. 2011. Protective effects of dissolved organic matter and reduced sulfur on copper toxicity in coastal marine environments *Ecotoxicology and Environmental Safety* 74:230-237.

25. DePalma, S.G.S., **W. R. Arnold**, J.C. McGeer, D.G. Dixon, D.S. Smith. 2011. Variability in Dissolved Organic Matter Fluorescence and Reduced Sulphur Concentration in Coastal Marine and Estuarine Environments. *Applied Geochemistry* 26:394-404.

24. **Arnold, W.R.**, R.L. Diamond, D. S. Smith. 2011. The Acute and Multi-generation Chronic Toxicity of Copper to the Rotifer, *Brachionus plicatilis* ("strain) *Archives of Environmental Contamination Toxicology* 60:250-260.

23. **Arnold, W.R.**, R.L. Diamond, D. S. Smith. 2010. The Effects of Salinity, pH, and Dissolved Organic Matter on Acute Copper Toxicity to the rotifer, *Brachionus plicatilis* ("strain). *Archives of Environmental Contamination Toxicology* 59:225-234.

21. **Arnold, W.R.**, J. S. Cotsifas, R. S. Ogle, S.G.S. DePalma, D. S. Smith. 2010. A Comparison

of the Copper Sensitivity of Six Invertebrate Species in Ambient Saltwater of Varying Dissolved

- Organic Matter Concentrations. *Environmental Toxicology and Chemistry* 29:311-319.
20. **Arnold, W.R.**, J.S. Cotsifas, D. Scott Smith, S. Le Page, K.M. Gruenthal. 2009. Comparison of the Copper Sensitivity of *Mytilus edulis* and *Mytilus galloprovincialis* in Ambient Saltwater of Varying Dissolved Organic Matter Concentrations: Implications for Determining the Ambient Copper Saltwater Criteria. *Environmental Toxicology* 24:618-628.
19. Wang, N., C.A. Mebane, J.L. Kunz, C.G. Ingersoll, T.W. May, **W.R. Arnold**, R.C. Santore, T. Augspurger, F.J. Dwyer, and M.C. Barnhart. 2009. Evaluation of acute copper toxicity to juvenile freshwater mussels (fatmucket, *Lampsilis siliquoidea*) in natural and reconstituted waters. *Environmental Toxicology and Chemistry* 28:2367-2377.
18. Van Genderen, E., W. Adams, R. Cardwell, P. van Sprang, **W.R. Arnold**, R. Santore, P. Rodriguez. 2008. An evaluation of the bioavailability and aquatic toxicity attributed to ambient copper concentrations in surface waters from several parts of the world. *Integrated Environmental Assessment and Management* 4:416-424.
17. **Arnold, W.R.** and J.S. Cotsifas. 2008. An Assessment of the Application Factor Used to Derive the Saltwater Acute Ambient Water Quality Copper Criterion. *Integrated Environmental Assessment and Management* 4:252-254.
16. Hall, L.W., Jr., B.L. Lewis and **W.R. Arnold**. 2008. The Influence of Salinity and Dissolved Organic Carbon on the Toxicity of Copper to the Estuarine Copepod, *Eurytemora affinis*. *Archives of Environmental Contamination and Toxicology* 54:44-56.
15. **Arnold, W.R.**, J.S. Cotsifas, A.R. Winter, J.S. Klinck, D.S. Smith, and R.C. Playle. 2007. Effects of the Use of Synthetic Sea Salts on Measuring and Modeling Copper Toxicity in Saltwater Toxicity Tests. *Environmental Toxicology and Chemistry* 5:935-943.
14. **Arnold W.R.** and W.J. Warren-Hicks. 2007. Probability-based Estimates of Site-specific Copper Criteria for the Chesapeake Bay, USA. *Integrated Environmental Assessment and Management* 3:101-117.
13. **Arnold W.R.** and W.J. Warren-Hicks. 2007. Assessment of Aquatic Ecological Risk and Site-specific Criteria of Copper in San Francisco Bay, California, USA, *Integrated Environmental Assessment and Management* 3:32-48.
12. **Arnold, W.R.**, J.S. Cotsifas and K. M. Corneillie. 2006. Validation and Update of a Model Used to Predict Copper Toxicity to the Marine Bivalve *Mytilus* sp. *Environmental Toxicology* 1:65-70.
11. **Arnold, W.R.**, R.C. Santore, and J.S. Cotsifas. 2005. Predicting Copper Toxicity in Estuarine and Marine Waters Using the Biotic Ligand Model. *Marine Pollution Bulletin* 50:1634-1640.
10. **Arnold, W.R.** 2005. Estimations of Copper Roof Runoff Rates for the United States of America. *Integrated Environmental Assessment and Management* 1:333-342.
9. Gravenmier, J.J., D.W. Johnston, R.C. Santore, and **W.R. Arnold**. 2005. Acute Toxicity of Copper to the Threespine Stickleback, *Gasterosteus aculeatus*. *Environmental Toxicology* 20:150-159.
8. **Arnold, W.R.** 2005. Effects of Dissolved Organic Carbon on Copper Toxicity: Implications for Saltwater Copper Criteria. *Integrated Environmental Assessment and Management* 1:34-39
7. Gravenmier, J.J., D.W. Johnston, and **W.R. Arnold**. 2005. Acute Toxicity of Vanadium to the Threespine Stickleback, *Gasterosteus aculeatus*. *Environmental Toxicology* 20:18-22.
6. Perkins, C., F. Nadim, and **W.R. Arnold**. 2005. Effects of PVC, Cast Iron, and Concrete

- Conduit on Concentrations of Copper in Stormwater. *Urban Water Journal* 2:183-191.
5. Woods, R., R. Davi, and **W.R. Arnold**. 2004. An Estimation of the Chronic Toxicity of Vanadium to the Estuarine Mysid, *Americamysis bahia* (Molenock) (Formerly *Mysidopsis bahia*). *Bulletin of Environmental Contamination and Toxicology* 73:635-643.
4. Bielmyer, G.K., J. Tomasso, S.J. Klaine, and **W.R. Arnold**. 2004. Changes in Water Quality After Addition of Sea Salts to Fresh Water: Implications During Toxicity Testing. *Chemosphere* 57:1707-1711.
3. Mancini, E.R., A.E. Steen, G.A. Rausina, D.C.L. Wong, **W.R. Arnold**, F.E. Gostomski, T. Davies, J.R. Hockett, W.A. Stubbefield, K.R. Drottar, T.A. Springer, and P. Errico. 2002. Methyl-Tertiary Butyl Ether Ambient Water Quality Criteria: A Public/Private Partnership, *Environmental Sciences and Technology* 36: 125-129.
2. Rausina, G.A., D.C.L. Wong, **W.R. Arnold**, E.R. Mancini, and A.E. Steen. 2001. Toxicity of Methyl-Tertiary Butyl Ether to Marine Organisms: Ambient Water Quality Criteria Calculation, *Chemosphere* 47:525-534.
1. Wong, D.C.L., **W.R. Arnold**, Rausina G.A., E.R. Mancini, A.E. Steen. 2001. Development of a Freshwater Aquatic Toxicity Database for the Ambient Water Quality Criteria for Methyl-Tertiary Butyl Ether. *Environmental Toxicology and Chemistry* 20:1125-1133.
- BOOK:**
1. Gorsuch, J.R., **W.R. Arnold**, R.C. Santore, D.S. Smith. 2009. Copper: Environmental Transport, Fate, Effects and Models. Selected Papers from *Environmental Toxicology and Chemistry*, 1983-2007. Society of Environmental Toxicology and Chemistry.
- BOOK CHAPTERS:**
1. Burton, G.A., **W.R. Arnold**, L.W. Ausley, J.A. Black, G.M. DeGraeve, F.A. Faulk, J.F. Heltshe, W.H. Peltier, J.A. Pletl, and J.H. Rodgers, Jr. 1996. Effluent Toxicity Test Variability. In: D.R. Grothe, K.L. Dickson, and D.K. Reed-Judkins, editors, *Whole Effluent Toxicity Testing: An Evaluation of Methods and Prediction of Receiving Systems Impacts*. Society of Environmental Toxicology and Chemistry Press, Pensacola, FL.
- SPECIAL PUBLICATIONS:**
1. **Arnold, W.R.** and W.J. Konkel. 1999. Impacts of Petroleum Product Marketing Terminals on the Aquatic Environment. *American Petroleum Institute Publication 4673*. American Petroleum Institute, Washington, D.C.

Dr. Chip Fox

1

Haydn A. "Chip" Fox, Ph.D.

Assistant Professor of Earth Sciences
 Department of Biological and Earth Sciences
 Texas A&M–Commerce, Commerce, TX 75429
 e-mail: haydn_fox@tamu-commerce.edu

Education

Ph.D. Geological Sciences (Science Education), University of South Carolina, 1992
MNS Earth Science (Secondary in Education), Southeast Missouri State University, 1989
BS Secondary Education in Earth Science, Southeast Missouri State University, 1988
BA Theology & Journalism, Ambassador College, 1971
Areas of specialization — General Earth & Environmental Sciences, Teacher Education in Sciences, Hydrology, Environmental Law & Regulation

Appointments

1995–Present Texas A&M University–Commerce, Commerce, Texas
Assistant Professor of Earth and Environmental Sciences
1992–1995 Clemson University, Clemson, South Carolina
Visiting Assistant Professor
1991–1992 Southeast Missouri State University, Cape Girardeau, Missouri
Visiting Assistant Professor
1989–1990 University of South Carolina
Teaching Assistant and Research Assistant (Graduate Assistant),
1988–1989 Southeast Missouri State University
Teaching Assistant (Graduate Assistant)

Selected Publications

In Preparation: Fox, C (20012) Science in Our Lives (university-level physical science text) Adison-Wesley publishers.
Chernicoff, S., and C. Fox, (2003) Essentials of Geology, 3rd. ed. (Geology Text). Boston: Houghton-Mifflin
Chernicoff, S., C. Fox, L. Tanner (2001) Earth: Geologic Principles and History (Physical & Historical Geology Text). Boston: Houghton-Mifflin
Chernicoff, S., and C. Fox, (1999) Essentials of Geology, 2nd ed. (Geology Text). Boston: Houghton-Mifflin
Cromer, A., L. Duvall, C.D. Martinez-Bagwill, H. Fox (1997) Select Science Series. Denton, TX : RonJon Publishing. This is a series of three science units (Earth Science, Life Science, and Physical Science) for use at the 6th grade level. I was the sole author of about one half of the Earth Science book. The publisher is currently opting for Texas statewide adoption of these texts. Although the publication date lists 1997, these were actually published in August, 1999)
Pitt, R., and H.A. Fox (1998) The Effects of the 1996 Drought on The Lake Tawakoni Reservoir. New Waves (a publication of the Texas Water Resources Institute), December, 1998.
Fox, H.A., Fox, J.B. Fox (1998) Instructor's resource manual and Test Bank (to accompany Chernicoff's GEOLOGY, 2nd ed.) Boston.
Fox, H.A. (1997) Earth Science 100 Lab Manual. Denton, TX: RonJon Publishers.
Chernicoff, S., and C. Fox, (1996) ESSENTIALS OF GEOLOGY (Geology Text). New York: Worth Publishers.
Fox, H.A. and J.R. Carpenter (1992) Delphi study on barriers to environmental education. Journal of Geologic Education.

Dr. Curtis Jones

Curtis A. Jones, Assistant Professor/Blacklands Extension Agronomist

Department of Agricultural Sciences

Texas A&M University – Commerce

Education:

Ph.D. Agronomy, Louisiana State University, Baton Rouge, LA, 2006.
M.S., Agronomy, Texas A&M University, College Station, TX, 1999.
B.S., Agronomy, Texas A&M University, College Station, TX, 1996.

Employment:

Assistant Professor/Blacklands Extension Agronomist, Texas A&M Commerce, Commerce, TX
2009 to present

Self employed, Custom application service, Tom Bean, TX, 2006 to 2009

Research Associate, Louisiana State University – LSU AgCenter, Dept. of Agronomy Baton
Rouge, LA 2001 to 2006

Research Associate, Louisiana State University – LSU AgCenter, Dept. of Plant Pathology and
Crop Physiology, Baton Rouge, LA, 1999-2001

Research/Teaching Assistant, Texas Agricultural Experiment Station, College Station, TX,
1997-1999

Teaching Experience

Texas A&M University – Commerce

2009S – 2010S PLS 309 – Intro to soils - Professor

2009S – 2010 S PLS 326 – Intro to forages - Professor

2009S1 – PLS 420 – Crop Practicum - Professor

2009F – PLS - Soil Fertility – Professor

2009F – PLS – Weed Control – Professor

Served on Master’s Committee

David Colbert

Cheyne Hughes

Louisiana State University

2002 - 2006 AGRO 4070 –Lab Assistant and guest lecturer

2001 PLHL 4070 –Lab Instructor and guest lecturer

Texas A&M University

1998 AGRO 105 –Lab Instructor

Grants and In kind gifts:

2009

Curtis Jones PI

1. BASF (Herbicide demonstration) 1,000.00

2. Syngenta (Aflatoxin research) 7,000.00

2

Curtis Jones and Jim Swart Co PI

1. Bayer CropScience (*Wheat Seed Treatment*) 5,000.00

2. Syngenta Crop Protection (*Corn Seed Treatment Research*) 9,000.00

3. Bayer CropScience (*Research*) 7,000.00

4. Texas Wheat Producers Association (*Wheat Research*) 10,000.00

5. Pioneer Hi-Bred Int., Inc. (*Wheat Variety Research*) 2,400.00

6. Bayer CropScience (*2009 Research, 2010 Research*) 7,750.00

7. Valent (*Grain Sorghum & 2009-10 Wheat*) 8,000.00

8. Syngenta Crop Protection (*Crop Research Grant Money*) 3,000.00

9. Bayer CropScience (*2009-10 Wheat Research*) 2,750.00

10. Bayer CropScience (*Research*) 3,500.00

Curtis Jones and Steve Hague Co PI

1. Texas Department of Agriculture (*2010-11 Sunflower Production*) 40,000 .00

Articles in Refereed Journals:

Jones, C.A., and J.L. Griffin. 2009. Red Morningglory Control (*Ipomoea coccinea*) and
Competition in Sugarcane. *J. Am. Soc. Sugarcane Technol.* 29:25-35.

Jones, C.A., and J.L. Griffin. 2008. Residual Red Morningglory (*Ipomoea coccinea*) Control with

Foliar- and Soil-Applied Herbicides. *Weed Technol.* 22:402-407.

Roider C.A., J.L. Griffin, S.A. Harrison, and C.A. Jones. 2008. Carrier Volume Affects Wheat Response to Simulated Glyphosate Drift. *Weed Technol.* 22:453-458.

Judice, W.E., J.L. Griffin, L.M. Etheredge Jr., and C.A. Jones. 2007. Effects of Crop Residue Management and Tillage on Weed Control and Sugarcane Production. *Weed Technol.* 21:606-611.

Roider, C. A., J.L. Griffin, S.A. Harrison, and C.A. Jones. 2007. Wheat Response to Simulated Glyphosate Drift. *Weed Technol.* 21:1010-1015.

Judice, W.E., J.L. Griffin, C.A. Jones, L.M. Etheredge Jr., and M.E. Salassi. 2006. Weed Control and Economics Using Reduced Tillage Programs in Sugarcane. *Weed Technol.* 20:319-325.

Siebert, J.D., J.L. Griffin, C.A. Jones, and K.A. Gravois. 2004. Sugarcane seed response to 2,4-D. *Weed Technol.* 18:38-44.

3

Siebert, J.D., J.L. Griffin, and C.A. Jones. 2004. Red morningglory response to 2,4 -D alternatives. *Weed Technol.* 18: 304–309.

Ellis, J.M., J.L. Griffin, and C.A. Jones. 2002. Effect of carrier volume on corn (*Zea mays*) and soybean (*Glycine max*) response to simulated drift of glyphosate and glufosinate. *Weed Technol.* 16:587-592.

Jones, C. A., J. M. Chandler, J. E. Morrison, Jr, S. A. Senseman and C. H. Tingle. 2001. Glufosinate Combinations and Row Spacing for Weed Control in Glufosinate -Resistant Corn (*Zea mays*). *Weed Technol.* 15:141-147.

Semi-technical Papers (Louisiana Agriculture)

Griffin, J.L., C.A. Jones and J.D. Siebert. 2003. Weapons of Weed Destruction: Controlling Red Morningglory in Sugarcane. *Louis. Agr.* 45(3):4-5.

Griffin, J.L., J.M. Ellis, C.A. Jones, J.D. Siebert, and S.D. Linscombe. 2003. Reducing Roundup Drift. *Louis. Agr.* 45(1):16-18.

Ellis, J.M., J.L. Griffin, and C.A. Jones. 2002. Benefits of soil-applied herbicides in Roundup Ready soybeans. *Louis. Agri.* 44(3):12-14.

Department or Research Station Reports:

Griffin, J.L., C.A. Jones, L.M. Etheredge and W.J. Judice.. 2006. Weed Science 2005 Annual Research Report.

Griffin, J.L., C.A. Jones, L.M. Etheredge and W.J. Judice.. 2005. Weed Science 2004 Annual Research Report.

Griffin, J.L., C.A. Jones, L.M. Etheredge and W.J. Judice. 2004. Weed Science 2003 Annual Research Report.

Griffin, J.L., C.A. Jones, and J.D. Siebert. 2003. Weed Science 2002 Annual Research Report, 179pp.

Griffin, J.L., C.A. Jones, and J.D. Siebert. 2002. Weed Science 2001 Annual Research Report, 180pp.

Griffin, J.L., C.A. Jones, and J.D. Siebert. 2001. Weed control research in sugarcane. Sugarcane Research Annual Progress Report, p 121-123.

Griffin, J.L., J.M. Ellis, C.A. Jones, B.J. Viator, and J.D. Siebert. 2001. Weed Science 2000 Annual Research Report, 206pp.

Griffin, J.L., J.M. Ellis, B.J. Viator and C.A. Jones. 2000. Weed control research in sugarcane. Sugarcane Research Annual Progress Report, p 121 -123.

Griffin, J.L., J.M. Ellis, C.A. Jones, J.H. Pankey, B.J. Viator, R.W. Costello, J.A. Bond, and D.A. Peters. 2000. Weed Science 1999 Annual Research Report, 322pp.

Abstracts:

- Etheredge, L.M., Jr., J.L. Griffin, C.A. Jones, and J.M. Boudreaux. 2006. Interference Of Purple Nutsedge (*Cyperus Rotundus* L.) In Louisiana Sugarcane. Proc. South. Weed Sci. Soc. 59.
- Boudreaux, J.M., J.L. Griffin, C.A. Jones, L.M. Etheredge, Jr., and M.E. Salassi. 2006. Alternative Crops For Fallowed Sugarcane Fields.
- Jones, C.A., J.L. Griffin, L.M. Etheredge, Jr., and W.E. Judice. 2006. Response Of Red Morningglory (*Ipomoea coccinea* L.) To Shade and Soil Applied Herbicides. Proc. South. Weed Sci. Soc. 59.
- Jones, C.A., J.L. Griffin, L.M. Etheredge, Jr., and W.E. Judice. 2005. Residual Control of Red Morningglory (*Ipomoea coccinea*) With Sugarcane (*Saccharum* spp. hybrids) Herbicides. Proc. South. Weed Sci. Soc. 58.
- Judice, W.E., J.L. Griffin, C.A. Jones and L.M. Etheredge Jr., 2005. Weed Management in Reduced Tillage Sugarcane. Proc. South. Weed Sci. Soc. 58.
- Etheredge, L.M., J.L. Griffin, M.E. Salassi, C.A. Jones and W.E. Judice. 2005. Economic Evaluation of Fallow Field Weed Control Programs in Louisiana Sugarcane. Proc. South. Weed Sci. Soc. 58.
- Jones, C.A., J.L. Griffin, L.M. Etheredge, W.E. Judice, and J.S. Siebert. 2004. Evaluation Valor in Sugarcane. Proc. South. Weed Sci. Soc. 57.
- Etheredge, L.M., Jr., J.L. Griffin, C.A. Jones, and W.E. Judice. 2004. Reduced Tillage Weed Control Programs in Fallowed Sugarcane Fields. Proc. South. Weed Sci. Soc. 57.
- Judice, W.E., J.L. Griffin, C.A. Jones and L.M. Etheredge. 2004. Reduced Tillage Weed Control Programs in Plant and Stubble Sugarcane. Proc. South. Weed Sci. Soc. 57.
- Jones, C.A., J.L. Griffin, and J.D. Siebert. 2003. Red Morningglory (*Ipomoea coccinea*) Emergence and Response to Shade and Tillage. Proc. South. Weed Sci. Soc. 56.
- Siebert, J.D., J.L. Griffin, C.A. Jones, and K.A. Gravois. 2003. Sugarcane seed response to 2,4-D and alternatives for red morningglory control. Proc. South. Weed Sci. Soc. 56:.
- Roider, C.A., J.L. Griffin, S.A. Harrison, and C.A. Jones. 2003. Effect of carrier volume on wheat response to simulated Roundup drift. Proc. South. Weed Sci. Soc. 56.
- Jones, C.A., J.L. Griffin, and J.D. Siebert. 2002. Alternatives for johnsongrass control in sugarcane. Proc. South. Weed Sci. Soc. 55:21.
- Roider, C.A., J.L. Griffin, S.A. Harrison, and C.A. Jones. 2002. Wheat response to Roundup drift. Proc. South. Weed Sci. Soc. 55:24.
- Siebert, J.D., J.L. Griffin, C.A. Jones, and K.A. Gravois. 2002. Sugarcane seed response to 2,4-D. Proc. South. Weed Sci. Soc. 55:211.
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- Jones, C.A., J.L. Griffin, and J.M. Ellis. 2001. Imazapyr/diuron combinations in fallowed fields and after sugarcane planting. Proc. South. Weed Sci. Soc. 54:18.
- Ellis, J.M., J.L. Griffin, C.A. Jones, E.P. Webster, and J.L. Godley. 2001. Effect of carrier volume on crop response to simulated drift of glyphosate and glufosinate. Proc. South. Weed Sci. Soc. 54:150-151.
- Siebert, J.D., J.L. Griffin, E.P. Castner, J.M. Ellis, and C.A. Jones. 2001. Evaluation hexazinone/diuron combinations in sugarcane. Proc. South. Weed Sci. Soc. 54:17.
- Viator, B.J., J.L. Griffin, J.M. Ellis, and C.A. Jones. 2000. New herbicide chemistries for weed control in sugarcane. Proc. South. Weed Sci. Soc. 54:190 -191.
- Tingle, C.H., J.M. Chandler, C.A. Jones, and G.L. Steele. 2000. Competition and control

of smellmelon (*Cucumis melo* L. var. *dudain* Naud.) in cotton (*Gossypium hirsutum*). Proc. South. Weed Sci. Soc.

Jones, C.A., J.M. Chandler, J.E. Morrison, Jr., and T.J. Gerik. 1999. Liberty plus preemergence or postemergence herbicides and row spacing for weed control in Liberty - Link corn. Proc. South. Weed Sci. Soc.

Jones, C.A., J.M. Chandler, J.E. Morrison, Jr., and T.J. Gerik. 1998. Evaluation of glufosinate tank-mixes and row spacing in weed management of corn. Proc. South. Weed Sci. Soc.

Invited Seminars:

Jones, C.A., J.M. Chandler, T.J. Gerik, and J.E. Morrison, Jr. 1997. Liberty and row spacing for weed control in corn. Proc. Texas Plant Protection Assoc.

Other Professional Meetings:

Siebert, J.D., J.L. Griffin, C.A. Jones, and K.A. Gravois. 2002. Sugarcane seed response to 2,4-D. Louisiana Division, American Society of Sugarcane Technologists Mtg., February 27, 2002. Baton Rouge, LA.

Jones, C.A., C.A. Roider, J.L. Griffin, and S.A. Harrison. 2002. Wheat response to Roundup drift. Louis. Plant Protection Assn. Mtg., April 1-2, 2002. Baton Rouge, LA (Proc. Louis. Plant Protection Assn. 12:21).

Siebert, J.D., J.L. Griffin, and C.A. Jones. 2002. Sugarcane response to 2,4-D seed treatment. Louis. Plant Protection Assn. Mtg., April 1-2, 2002. Baton Rouge, LA (Proc. Louis. Plant Protection Assn. 12:39).

Griffin, J.L., C.A. Jones, and J.D. Siebert. 2002. Johnsongrass control alternatives in sugarcane. Louis. Plant Protection Assn. Mtg., April 1-2, 2002. Baton Rouge, LA (Proc. Louis. Plant Protection Assn. 12:22).

Jones, C.A., J.M. Ellis, J.L. Griffin, E.P. Webster, and J.L. Godley. 2001. Effect of carrier volume on crop response to simulated drift of glyphosate and glufosinate. Louis. 6

Plant Protection Assn. Mtg., March 26-27, 2001. Baton Rouge, LA (Proc. Louis. Plant Protection Assn. 11:5).

Siebert, J.D., J.L. Griffin, E.P. Castner, J.M. Ellis, and C.A. Jones. 2001. Weed control with hexazinone / diuron combinations in sugarcane. Louis. Plant Protection Assn. Mtg., March 26-27, 2001. Baton Rouge, LA (Proc. Louis. Plant Protection Assn. 11:4).

Viator, B.J., J.L. Griffin, J.M. Ellis, and C.A. Jones. 2000. Milestone: Sugarcane response and weed control. Louis. Plant Protection Assn. Mtg., April 6-7, 2000. Baton Rouge, LA (Proc. Louis. Plant Protection Assn. 10:2).

Extension presentations:

2009 Major meetings (>30 participants)

April - Grayson County, Aflatoxin/Aflaguard Meeting

May - Grayson, Collin, and Fannin County, Wheat Research Field day

September - Hunt County, Wheat Research Summary Meeting

December - Hunt County, Ag Technology Conference

December - Kaufman County, Tri-County C.E.U Program

Numerous meeting with individual and small groups of county agents and producers

Activities/Honors/Special Training

Commercial Applicator License- subcategories - Field crop, pasture, roadside and right-ofway, turf and ornamental, aquatics

SWSS

2002 – 2003 Student Representative to Program Committee
2000 – 2003 Student Representative, Louisiana State University
Louisiana State University Weed Team, 2000-2003
2003 Team coach
2002 SWSS Weed Contest 3rd Place Team coach
2001 SWSS Weed Contest 3rd Place Team coach
2000 SWSS Weed Contest 3rd Place Team member
Texas A&M University Weed Team, 1997-1999
1999 SWSS Weed Contest Team member
1998 SWSS Weed Contest Team member
1997 SWSS Weed Contest 3rd Place Team alternate

Dr. Jeff Kopachena

CURRICULUM VITAE

NAME:

Dr. Jeffrey G. Kopachena
Professor and Head, Department of Biological and Environmental Sciences,
Texas A&M University – Commerce,
Commerce, TX 75429-3011
Phone: (903) 468-8730
Fax: (903) 886-5997
E-mail: Jeff_Kopachena@tamu-commerce.edu

CITIZENSHIP:

Canadian, Permanent Resident of U.S.A.

EDUCATION

Undergraduate Degree: B.Sc. (maj) Biology,
University of Manitoba,
Graduated May, 1982
Masters Degree: M.Sc. Zoology,
University of Manitoba,
Major Subject: Behavioral Ecology
Minor Subject: Statistics
Graduated May, 1986
Doctoral Degree: Ph.D. Zoology,
University of Toronto,
Major Subject: Behavioral Ecology
Minor Subject: Wildlife Ecology
Graduated May, 1992

POSTDOCTORAL EXPERIENCE

Queen's University, Department of Biology, Kingston, Ontario, Canada. Genetic research on behavioral and plumage polymorphisms in white-throated sparrows. With Dr. Fred Cooke and Dr. Jeanette Holden. April 1991 - August 1993.

PREVIOUS APPOINTMENTS

Associate Professor (Tenured) - Department of Biological Sciences, Texas A&M University - Commerce, Commerce, Texas, U.S.A. Aug. 2002 – present.

Assistant Professor - Department of Biological Sciences, Texas A&M University - Commerce, Commerce, Texas, U.S.A. Aug. 1994 – 2002.

Adjunct Professor of Biology, Queen's University, Department of Biology, Kingston, Ontario, Canada. May 1994 – May 1996.

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Assistant Professor of Biology, Augustana University College, Camrose, Alberta. Sept. 1993 - May 1994. (9 month appointment).

CURRENT APPOINTMENTS

Full Professor - Department of Biological and Environmental Sciences, Texas A&M University – Commerce, Commerce, Texas, U.S.A. June 2009 – present.

Department Head – Department of Biological and Environmental Sciences, Texas A&M University – Commerce, Commerce, Texas, U.S.A. July 2007 – present.

Senior Graduate Faculty Member – College of Graduate Studies and Research, Texas A&M University - Commerce, Commerce, Texas, U.S.A. March 2003 – present.

Adjunct Graduate Faculty Member, Department of Wildlife and Fisheries Sciences, Texas A&M University, College Station, Texas, U.S.A.

ADMINISTRATIVE ACCOMPLISHMENTS

1) Between Fall 2008 and Fall 2009 was able to hire three replacement faculty for Department of Biological and Environmental Sciences.

2) In fall of 2009 was able get approval for a brand new faculty line for the Department of Biological and Environmental Sciences.

3) Established a division of freshman biology, dedicating 2 two faculty and 4 graduate assistantships and two student mentors to overseeing the delivery and mentoring of freshman biology classes.

3) Oversaw restructuring of freshman biology sequence and, by doing so, was able to increase first year grades by 10% while simultaneously increasing content and course rigor.

4) Established a committee in 2009 to develop a new four-year Biotechnology program.

5) Oversaw the establishment of a monthly social gathering of student and faculty to facilitate student faculty mentoring.

6) In 2009, was able to garnish two additional graduate assistantship positions.

7) Served as Co-PI for an NSF S-STEM grant for the amount of \$593,700.00.

8) Oversaw the development of an articulation agreement with Collin County Community College for delivery of the Environmental Science degree.

9) Oversaw a memorandum of understanding for a joint program with International American University's Pre-medical Program.

10) Increased departments income through course fees by 75%

11) Established a graduate program coordinator to oversee graduate program admissions, assignment of graduate advisors, implementation of program assessment tools.

12) Increased graduate enrollments by 100%

13) Developed cooperative agreements in support of educational and research initiatives with the

Dallis AgriLife Center of the Texas Agricultural Extension Service.

14) Developed a cooperative agreement with Texas A&M University in College Station to place MS graduates into Doctoral programs in College Station.

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RESEARCH BACKGROUND

Current Research

- 1) Ecology and population biology of Great-tailed Grackles. Study is aimed at developing a method of limiting urban nuisance populations of this species.
- 2) Behavioral ecology of reproduction in the Barn Swallow (*Hirundo rustica*). Current studies are designed to test alternate hypotheses on the causation and function of hatching asynchrony. Additional studies are looking at virus titers and host/parasite relationships between barns swallows and swallow bugs.
- 3) Ecology and conservation of birds in northeast Texas. Current projects include work on Bell's Vireos, Cave Swallows, and Interior Least Terns.
- 4) Function of the stabilimentum in *Argiope aurantia*. Study is designed to test the prey attraction hypothesis of the stabilimentum found in the webs of garden spiders..

Previous Research

- 1) Post-doctoral Research (April 1991 - August 1993) Queen's University, Kingston, Ontario, Canada

The genetic basis of polymorphism in the White-throated Sparrow (*Zonotrichia albicollis*).

- 2) Doctoral Research (April 1986 - May 1992)

Behavioral correlates of polymorphism and post-fledging parental care in the White-throated Sparrow (*Zonotrichia albicollis*).

- 3) Masters Research (April 1982 - May 1986)

Spatial and temporal aspects of flocking behavior in Franklin's Gulls (*Larus pipixcan*)

TECHNICAL SKILLS

1. Non-destructive sampling of avian tissues (skin biopsy, feather pulp, blood) for tissue culture and DNA analyses.
2. Culture of avian tissues (skin and feather fibroblasts, peripheral lymphocytes); cytogenetic procedures including karyotyping and staining (C, G, R, and Q banding).
3. Black and white photographic and darkroom techniques. Color digital imaging using digital camera, image software, and high resolution color printer.
5. Organization and management of ecological and behavioral field research. Experience includes spatial and temporal observations of birds along flight lines, manipulation of parental, aggressive, and territorial behavior, measurements of nestling and fledgling growth and survival, vegetation and habitat analyses, and territory mapping.

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6. Handling and use of mist-nets and the organization of a banding program using aluminum and colored bands.
7. Organization and management of captive breeding programs for passerine birds.
8. Preparation of museum skins (birds and mammals) and skins as experimental models.
9. Field recording of vocalizations using parabolic microphones and Uher, Nagra, or Sony recording equipment. Use of sound equipment for playback experiments and use of a Kay Digital

Sonograph for making high resolution sonograms.

10. Data management and analyses on personal computers using SAS, MS-Word, MS-Excel.

11. Statistical analyses: linear and non-linear models, parametric and non-parametric tests, multivariate analyses, clustering and cladistic procedures.

12. GIS/GPS: use of a Trimble GeoXT GPS unit to collect submeter accuracy shapefiles, use of ArcView mapping software, data conversions, federal and state databases.

PUBLICATIONS

Peer-reviewed Journal Papers

Dickinson, T.E., Falls, J.B., and Kopachena, J.G. 1987. Effects of female pairing status and timing of breeding on nesting productivity in Western Meadowlarks (*Sturnella neglecta*). *Canadian Journal of Zoology* 65: 3093-3101.

Kopachena, J.G. 1987. Variations in the temporal spacing of Franklin's gull (*Larus pipixcan*) flocks. *Canadian Journal of Zoology* 65: 2450-2457.

Kopachena, J.G. 1991. Food dispersion, predation, and the relative advantage of colonial nesting. *Colonial Waterbirds* 14: 7-12.

Kopachena, J.G. and C.J. Crist. 2000. Micro-habitat features associated with Painted and Indigo Buntings in northeast Texas. *Texas Journal of Science* 52: 133-144.

Kopachena, J.G. and C.J. Crist. 2000. Macro-habitat features associated with Painted and Indigo Buntings in northeast Texas. *Wilson Bulletin* 112: 108-114.

Kopachena, J.G. and Evans, R.M. 1990. Flock recruitment in Franklin's Gulls. *Colonial Waterbirds* 13: 92-95.

Kopachena, J.G. and Falls, J.B. 1991. An experimental study of brood division in white-throated sparrows. *Animal Behaviour* 42: 395-402.

Kopachena, J.G. and Falls, J.B. 1993. Post-fledging parental care in the White-throated Sparrow (*Zonotrichia albicollis*). *Canadian Journal of Zoology* 71: 227-232.

Kopachena, J.G. and Falls, J.B. 1993. Re-evaluation of morph-specific variations in parental behaviour of White-throated Sparrows. *Wilson Bulletin* 105: 48-59.

Kopachena, J.G. and Falls, J.B. 1993. Aggressive performance as a behavioral correlate of plumage polymorphism in the White-throated Sparrow (*Zonotrichia albicollis*). *Behaviour* 124: 249-266.

Kopachena, J.G. and Kollar, C.S. 1999. A herpetological survey of three old-field sites at Cooper Lake. *Texas Journal of Science* 51:211-224.

Kopachena, J.G., A.J. Buckley, and G.A. Potts. 2000. Effects of the American Swallow Bug (*Oeciacus vicarius*) on reproductive success in the Barn Swallow (*Hirundo rustica*). *Texas Journal of Science* 52: 33-47.

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Kopachena, J.G., A.J. Buckley, and G.A. Potts. 2000. Effects of the Red Imported Fire Ant (*Solenopsis invicta*) on reproductive success of Barn Swallows (*Hirundo rustica*) in northeast Texas. *The Southwestern Naturalist* 45: 475-482.

Kopachena, J.G., Cochran, B.L., and Nichols, T.B. 2007. The incidence of American swallow bugs (*Oeciacus vicarius*) in barn swallow (*Hirundo rustica*) colonies in northeast Texas. *Journal of Vector Ecology*, 32 (2): 280-284.

Sinha, A., J.G. Kopachena, and J. Eidson. 2009. Plant diversity in a globally imperiled gammagrass community in northeastern Texas. *Southwestern Naturalist*, in press. Accepted

22 Sept., 2008.

Turner, K.T. and J.G. Kopachena. 2009. Breeding biology of the barn swallow in northeast Texas with temporal and geographic comparisons to other North American Studies. *Texas Journal of Science*, in press. Accepted 20 Oct., 2008.

Book Chapters

Falls, J.B., and Kopachena, J.G. 1994. White-throated Sparrow (*Zonotrichia albicollis*). *In* *Birds of North America*, No. 128 (A. Poole and F. Gill, Eds.). Philadelphia: The Academy of Natural Sciences; Washington, D.C.: The American Ornithologists Union.

Kopachena, J.G. 2003. Waste oil from Automobiles. *In* Ragsdale, D. and Breclaw, E. (Eds.). *Field Activities in Biology*. Holt, Rinehart, and Winston Co. Austin, Texas.

Book Reviews

Kopachena, J.G. 2003. *Birds of the Texas Hill Country*. *Quarterly Review of Biology* 78:241.

Manuscripts in Preparation

Kopachena, J.G. and Potts, G. Intermittent incubation during the egg-laying period and its effect on

hatching asynchrony in the Barn Swallow. To be submitted to *Condor*.

Kopachena, J.G. and Strickland, K. A test of the egg viability hypothesis in the Barn Swallow. To be submitted to *Condor*.

Kopachena, J.G., and Turner, K. Reproductive biology of the Barn Swallow in northeast Texas. To be

submitted to *Texas Journal of Science*.

Sinha, A. and Kopachena, J.G. A floristic survey of the Cowleech Prairie Preserve in Hunt Co., Texas.

To be submitted to *Texas Journal of Science*.

Abstracts

Kopachena, J.G. 1987. Spatial and temporal aspects of Franklin's gull flocks. *Proceedings of an International Symposium of the Colonial Waterbird Group and the Pacific Seabird Group*.

Studies in Avian Biology 10: 81.

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Theses

Kopachena, J.G. 1986. Spatial and temporal aspects of flocking behaviour in the Franklin's Gull (*Larus pipixcan*). M.Sc. Thesis, University of Manitoba.

Kopachena, J.G. 1992. Behavioral correlates of polymorphism and post-fledging parental care in the White-throated Sparrow (*Zonotrichia albicollis*). Ph.D. Thesis, University of Toronto.

Other

Ortho Books Company. 1986. *The Birds Around Us*. Edited by Alice Mace and Edward Tsakaris. (Contributing author).

Kraai, K.J. and Kopachena, J.G. 2001. Late winter feeding habits and condition of female mallards

utilizing stock ponds in the oak woods/blackland prairie region of northeast Texas. *Texas Parks and Wildlife* 2001 *Wildlife Research Highlights* 5: 29.

Student Masters Theses

Bilecki, T. 2003. A test of the insect attraction hypothesis as it relates to the stabilimenta of *Argiope aurantia* (Lucas). Masters Thesis, Texas A&M University – Commerce.

- Cochran, B. 2008. Egg size variation in the American Barn Swallow (*Hirundo rustica erythrogaster*). Masters Thesis, Texas A&M University – Commerce.
- Crist, C.J. 1998. An evaluation of habitat selection among Painted Buntings (*Passerina ciris*) and Indigo Buntings (*Passerina cyanea*). Masters Thesis, Texas A&M University - Commerce.
- Dees, D. 1998. The significance of spot patterns in the Convergent Lady Beetle. Masters Thesis, Texas A&M University - Commerce.
- Kraai, K. 2003. Late winter feeding habits, body condition, and feather molt intensity of female mallards utilizing livestock ponds in northeast Texas. Masters Thesis, Texas A&M University - Commerce.
- Mangham, R.M. 2008. Changes in plant composition in response to a stream restoration project in Woodruff County, Arkansas. Masters Thesis, Texas A&M University – Commerce.
- Mays, M.Y. 1998. A comparison of the karyotypes of *Junco hyemalis*, *Zonotrichia querula*, and *Zonotrichia leucophrys*. Masters Thesis, Texas A&M University - Commerce.
- Miersiovsky, Christy. 2005. Pollination ecology of Black-eyed Susans. Masters Thesis, Texas A&M University - Commerce.
- Potts, Gregory. 2002. Incubation patterns during egg-laying and their effects on hatching asynchrony in Barn Swallows. Masters Thesis, Texas A&M University - Commerce.
- Seo, Suk Ran. 2004 The diet of *Argiope aurantia*. Masters Thesis, Texas A&M University - Commerce.
- Sharma, Tulasi R. 2006. Habitat utilization, home range size and population size of Hispid Cotton Rat (*Sigmodon hispidus*) at the Cowleech Prairie Preserve in northeast Texas. Masters Thesis, Texas A&M University - Commerce.
- Strickland, K. 2002. A test of the egg viability hypothesis in Barn Swallows (*Hirundo rustica*). Masters Thesis, Texas A&M University - Commerce.
- 7
- Wakoson, A.H. 1996 Chromosomal polymorphism in white-throated sparrows. Masters Thesis, Texas A&M University - Commerce.
- Wilkinson, J.R.. 1997. Comparison of fecundity, longevity and larval viability in four lines of *Drosophila melanogaster*. Masters Thesis, Texas A&M University - Commerce.
- Williams, Vashunda Renee. 2001. A novel behavioral screen of *Drosophila melanogaster* mutants: Detection for avoidance of benzaldehyde. Masters Thesis, Texas A&M University - Commerce.
- Student Honors Theses
- Ffradelis, S. 2002. A test of the tasty chick hypothesis in the barn swallow. Honors Thesis, Texas A&M University – Commerce.
- Healy, J.M. 1997. Distribution of arsenic residues at the Commerce, Texas, SuperFund Site. Honors Thesis, Texas A&M University - Commerce.
- Kollar, C.M. 1995. A herpetological survey of three degraded tall-grass prairie sites around Cooper Lake. Honors Thesis, East Texas State University.
- Miller, T.M. 1997. A study of movement patterns and basking behavior of a turtle population inhabiting a northeast Texas pond. Honors Thesis, Texas A&M University - Commerce.
- May, Heather. 2006. A herpetological survey of the Cowleech prairie. Honors Thesis, Texas A&M University - Commerce.

- Turner, K. 2007. Breeding biology of the barn swallow in northeast Texas and a test of Lack's Hypothesis. Honors Thesis, Texas A&M University - Commerce.
Student Theses (in progress)
- Bullard, Pam. Effects of land management practices on avian biodiversity in Northeast Texas. Master's Thesis, expected date of completion: May 2011.
- Gurley, Wade. Nest site selection in Cave, Cliff, and Barn Swallows in northeast Texas. Master's Thesis, expected date of completion: May 2010.
- Lin, Jonathan. Mating success in male Great-tailed Grackles. Master's Thesis, expected date of completion: May 2011.
- Salinas, Anna. Ecology and reproduction of Bell's Vireos in northeast Texas. Master's Thesis, expected date of completion: May 2010.
- CONFERENCE PRESENTATIONS**
- Cochran, B.L., Kopachena, J.G. and Miskevich, F. 2007a. Preliminary Analysis of the Tasty Chick Hypothesis as it Applies to Broods of the American Barn Swallow (*Hirundo rustica erythrogaster*). Proceedings of the 110th Annual Meeting of the Texas Academy of Science, 1 March - 3 March, 2007, Baylor University, Waco, TX.
- Cochran, B.L., Kopachena, J.G. and Miskevich, F. 2007b. Preliminary Analysis of the Tasty Chick Hypothesis as it Applies to Broods of the American Barn Swallow (*Hirundo rustica erythrogaster*). Sigma Xi Student-Faculty Research Forum, 26 April 2007, Texas A&M University - Commerce, Commerce, TX.
- Cochran, B.L. and Kopachena, J.G. 2008. Egg size variation in the North American barn swallow (*Hirundo rustica erythrogaster*). Proceedings of the 111th Annual Meeting of the Texas Academy of Science, 6-8 March, 2008, Texas A&M University-Corpus Christi, Corpus Christi, TX.
- Crist, C.J., and Kopachena, J.G. 1998. An evaluation of gross habitat features around the song perches of Indigo and Painted Buntings in Northeast Texas. Proceedings of the 101st annual meeting of the Texas Academy of Science, 5 March - 7 March, 1998, The University of Texas at Tyler, Tyler, TX.
- Crist, C.J., and Kopachena, J.G. 1997. A comparison of habitat selection by male Painted and Indigo Buntings. Proceedings of the 100th annual meeting of the Texas Academy of Science, 6 March - 8 March, 1997, Sam Houston State University, Huntsville TX.
- Crist, C.J., and Kopachena, J.G. 1997. A comparison of habitat selection by male Painted and Indigo Buntings. Annual District Convention of the Tri-Beta Biological Honours Society, 12 April - 14 April, 1997, University of Oklahoma Field Station, Lake Texoma, Oklahoma.
- Fulmer, J.R., Lee, D.R., and Kopachena, J.G. 1998. A microbiological study of *in vitro* soil and water microhabitats of ponds using a Winogradsky method. Proceedings of the 101st annual meeting of the Texas Academy of Science, 5 March - 7 March, 1998, The University of Texas at Tyler, Tyler, TX.
- Healy, J.M., and Kopachena, J.G. 1997. Distribution of arsenic residues at the Commerce, Texas, SuperFund site. Proceedings of the 100th annual meeting of the Texas Academy of Science, 6 March - 8 March, 1997, Sam Houston State University, Huntsville TX.

- Healy, J.M., and Kopachena, J.G. 1997. Distribution of arsenic residues at the Commerce, Texas, SuperFund site. Annual District Convention of the Tri-Beta Biological Honours Society, 12 April - 14 April, 1997, University of Oklahoma Field Station, Lake Texoma, Oklahoma.
- Kennedy, M., Price, D.M., Betts, J.G., and Kopachena, J.G. 1996. Analysis of biomass and productivity of the goldenrod (*Solidago sp.*). Annual District Convention of the Tri-Beta Biological Honours Society, 12 April - 14 April, 1996, University of Oklahoma Field Station, Lake Texoma, Oklahoma.
- Kollar, Cynthia M., and Kopachena, Jeffrey G. 1996. A herpetological survey of three degraded tallgrass prairies around Cooper Lake. Proceedings of the 99th annual meeting of the Texas Academy of Science, 29 February - 2 March, 1996, Texas A&M University at Galveston, Galveston TX. p. 124.
- Kollar, Cynthia M., and Kopachena, Jeffrey G. 1996. A herpetological survey of three degraded tallgrass prairies around Cooper Lake. National Council on Undergraduate Research Meeting, University of North Carolina at Asheville, Asheville, North Carolina.
- Kollar, Cynthia M., and Kopachena, Jeffrey G. 1996. A herpetological survey of three degraded tallgrass prairies around Cooper Lake. Annual District Convention. Beta Beta Beta Biological Honours Society, University of Oklahoma Field Station, Oklahoma.
- Kopachena, J.G. 1985. Spatial and temporal aspects of Franklin's gull flocks. Special Symposium: The ecology and behavior of gulls. Joint Meeting of the Colonial Waterbird Group and the Pacific Seabird Group. 6 December 1985, San Francisco, California.
- 9
- Kopachena, J.G. 1995. Polymorphisms in White-throated Sparrows (*Zonotrichia albicollis*) - genetically based reproductive strategies? Proceedings of the 98th annual meeting of the Texas Academy of Science, 3 March, 1995, Baylor University, Waco, TX.
- Kopachena, Jeffrey G. 1996. Physical correlates of nest departure in a ground-nesting bird: the whitethroated sparrow *Zonotrichia albicollis*. Proceedings of the 99th annual meeting of the Texas Academy of Science, 29 February - 2 March, 1996, Texas A&M University at Galveston, Galveston TX.
- Kopachena, J.G. and Falls, J.B. 1988. Post-fledging parental care in the white-throated Sparrow. Ontario Ethology and Ecology Colloquium. 18 April 1988, University of Western Ontario, London, Ontario.
- Kopachena, J.G. and Falls, J.B. 1989. Behavioral correlates of polymorphism in the Whitethroated Sparrow. Ontario Ethology and Ecology Colloquium. 15 April 1989, Queen's University, Kingston, Ontario.
- Kopachena, J.G. and Falls, J.B. 1989. Behavioral correlates of polymorphism in the Whitethroated Sparrow. 101st Stated Meeting, American Ornithologists Union. 9 August 1989, Pittsburgh, Pennsylvania.
- Kopachena, J.G., Buckley, A.J., and Potts, G.A. 1999. Effect of the American Swallow Bug

(*Oeciacus vicarius*) on reproductive success in the Barn Swallow. Proceedings of the 102nd annual meeting of the Texas Academy of Science, 4 March - 6 March, 1999, Texas Lutheran University, Seguin, Texas.

Kopachena, J.G., Robinson, K.E., Wing, M., Cooke, F., and Holden, J.J.A. 1993.

Characterization

of a chromosomal polymorphism with phenotypic effect in the White-throated Sparrow (*Zonotrichia albicollis*). Annual Meeting of the Genetics Society of Canada. 11-14 June 1993, Lac Du Lage, Quebec.

Simpson, E.M. and Kopachena, J.G. 2001. A test of the nest protection hypothesis in the Eastern Phoebe (*Sayornis phoebe*). Proceedings of the 104th annual meeting of the Texas Academy of Science, 2 March - 3 March, 2001, Southwest Texas State University, San Marcos, Texas.

Wilkinson, J.R., and Kopachena, J.G. 1997. Comparison of fecundity, longevity and larval viability in *Drosophila*. Proceedings of the 100th annual meeting of the Texas Academy of Science, 6 March - 8 March, 1997, Sam Houston State University, Huntsville TX.

POSTER PRESENTATIONS

Cochran, B.L. and Kopachena, J.G. 2008. Egg size variation in the North American barn swallow (*Hirundo rustica erythrogaster*). Proceedings of the 6th annual Texas A&M University System Pathways Student Research Symposium, 7-8 November, 2008, Texas A&M University – Commerce.

Nichols, Tammy B. and Kopachena, J.G. 2006. The incidence of American Swallow Bugs in Barn Swallows in northeast Texas. 41st Texas Chapter of The Wildlife Society Annual Meeting, South Padre Island, February 16-18, 2006.

Richardson, Jade M., Flanders, A.A., Kopachena, J.G., and Harp, D.A. 2006. Analyses of Soil Properties Associated with Nest Sites in Interior Least Terns. 41st Texas Chapter of The Wildlife Society Annual Meeting, South Padre Island, February 16-18, 2006.

10

Rogers, Heather A., and J.G. Kopachena. 2006. A herpetological survey of the Cowleech Prairie Preserve in northeast Texas. 41st Texas Chapter of The Wildlife Society Annual Meeting, South Padre Island, February 16-18, 2006.

Salinas, Anna M., Flanders, A.A., and Kopachena, J.G. 2006. Breeding ecology and management of Interior Least Terns on a northeast Texas reservoir. 41st Texas Chapter of The Wildlife Society Annual Meeting, South Padre Island, February 16-18, 2006.

VanCleve, M. and Kopachena, J.G. 2007a. Screening of American Swallow Bugs (*Oeciacus vicarius*) inhabiting the nests of Barn Swallows (*Hirundo rustica*) for arbovirus. Annual District Convention. Beta Beta Beta Biological Honours Society, University of Oklahoma Field Station, Oklahoma, March 31, 2007.

VanCleve, M. and Kopachena, J.G. 2007b. Screening of American Swallow Bugs (*Oeciacus vicarius*) inhabiting the nests of Barn Swallows (*Hirundo rustica*) for arbovirus. Sigma Xi Student-Faculty Research Forum, 26 April 2007, Texas A&M University - Commerce, Commerce, TX.

INVITED LECTURES

Evidence for the optimization of parental care. Queen's University Biological Seminar Series, March,

1990. Queen's University, Kingston, Ontario.
Polymorphism and secondary sex characters in White-throated Sparrows. Sigma Xi, Bi-annual Dinner,
October, 1994. East Texas State University, Commerce, Texas.
Sex and polymorphism in White-throated Sparrows. Biology Seminar Series, October 11, 1997.
Texas Women's University, Denton, Texas.
Breeding Habitats of Painted and Indigo Buntings in Northeast Texas. College of Arts and Sciences
Lunch Hour Colloquium Series, November 9, 1999. Texas A&M University – Commerce,
Commerce, Texas.

PROFESSIONAL REVIEWING

Manuscript reviewer for Journal of Field Ornithology.
Manuscript reviewer for Texas Journal of Science.
Manuscript reviewer for Journal of Applied Science.
Professional Reviewer for Journal of Field Ornithology's "Current Literature". Published by the
Association of Field Ornithologists, 810 E. 10th St., Lawrence, KS 66044.
Reviewer: Chapter 13: Biological Resources, pp. 260-282. *In* Cunningham, W.P and Saigo, B.W.
1995. Environmental Science, 3rd edition. Wm.C. Brown Publishers, Dubuque, IA., U.S.A.
Reviewer: Vertebrate Biology, Chapter 4: Reptiles, Birds, and Mammals; Chapter 16.
Intraspecific
behavior and ecology. By D Linzey (M. Kemp, Ed.), WCB/McGraw-Hill, Dubuque, IA
52001, December 1998.
Reviewer: Great Texas Birds, by John P. O'Neill, Edited by Suzanne Winckler. Austin (Texas):
University of Texas Press. Reviewed at request from Quarterly Review of Biology.
Reviewer: Birds of the Texas Hill Country, By Mark W. Lockwood, forward by Terry Maxwell,
drawings by Clemente Guzman III. Austin (Texas): University of Texas Press. Reviewed at
request from Quarterly Review of Biology.

11

MEMBERSHIP IN PROFESSIONAL SOCIETIES

Academy for Educator Development. Regular Member
American Ornithologists Union. Regular Member
Association of Field Ornithologists Regular Member
Beta Beta Beta, Biological Honors Society.
Cooper Ornithological Society. Regular Member
Sigma Xi, The Scientific Research Society. Chapter Vice President
The Texas Academy of Science. Regular Member
The Wildlife Society
Wilson Ornithological Society. Regular Member

SCHOLARSHIPS AND FELLOWSHIPS

Connaught Doctoral Scholarship - 1986 to 1988. Stipend plus academic fees.
Ontario Graduate Scholarship - 1989.
University of Toronto Open Fellowship - 1989. Declined in favor of OGS (above).

RESEARCH GRANTS

Funded Grants:

NSF-S-STEM Grant Program. Scholarships and Research Experiences for Transfer Students to Excel in Science and Engineering. B. Jang (PI), M. Elam, J. Kopachena, B. Li (Co-PIs). Awarded August 2008 for \$593,700.00.

Harry Frank Guggenheim Foundation Research Grant - 1994 - 1996. Salary for laboratory technologist.

East Texas State University, Faculty Research Grant - 1995 (Equipment Grant)

East Texas State University Mini Research Grant - Fall 1994

East Texas State University Mini Research Grant - Spring 1995

East Texas State University Mini Research Grant - Fall 1995

Texas A&M University Commerce, Mini Research Grant - Fall 1996.

Texas A&M University Commerce, Mini Research Grant - Spring 1997.

Texas A&M University Commerce, Faculty Research Grant - 1997 (Equipment Grant)

Texas A&M University Commerce, Mini Research Grant - Spring 1998.

Texas A&M University Commerce, Mini Research Grant - Spring 1999.

Texas A&M University Commerce, Faculty Research Grant - 2000 (Equipment Grant)

Texas A&M University Commerce, Mini Research Grant - Fall 2000.

Texas A&M University Commerce, Faculty Research Grant - 2001 (Equipment Grant)

Texas A&M University Commerce, Mini Research Grant - Fall 2001.

Texas A&M University Commerce, Faculty Development Grant – Fall 2001.

Texas A&M University Commerce, Mini Research Grant – Spring 2002.

Texas A&M University Commerce, Faculty Development Grant – Spring, 2003.

Texas A&M University Commerce, Mini Research Grant – Spring 2003.

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Texas A&M University Commerce, Faculty Development Grant – Spring, 2004

Texas A&M University Commerce, Faculty Travel Grant – Spring, 2005

Texas A&M University Commerce, Faculty Development Grant – Spring, 2006

Texas A&M University – Commerce, Faculty Travel Grant – Spring 2007.

Texas A&M University – Commerce, Mini Grant – Spring 2007.

The Nature Conservancy of Texas - \$1500.00 for student support of restoration activities at Cowleech Prairie Preserve.

Texas A&M University – Commerce, Special funding from President's Office to support research on Urban Control of Great-tailed Grackles.

Grants Submitted

THECB-ARP Grant Program. Characterization and analysis of a neural stem cell intermediates. F. Miskevich (PI) and J. Kopachena (Co-PI). Submitted July, 2008 for \$150,000.00. Not funded.

NSF-REU Grant Program. Biological Processes in Human Dominated Landscapes. J. Kopachena (PI), J. Heitholt (Co-PI). Submitted Aug., 18, 2008 for @264,579.00. Pending.

NSF-URM Grant Program. Success in Undergraduate Research Excellence - Northeast Texas (SURE-NET). J. Kopachena (PI), J. Cain, M. Hanna, F. Miskevich (Co-PIs). Submitted Sept. 16, 2008 for \$300,000.00. Not funded.

NSF STEP Grant Program. INternships and SUPportive Curriculum Creating Enhanced Educational Development. R. Kreminski (PI), A. Chourasia, M. Elam, B. Jang, J.

Kopachena (Co-PIs). Submitted Sept. 20, 2008 for \$922,067.00. Not funded.

ACADEMIC AND PROFESSIONAL RECOGNITION (PERSONAL)

Honors Professor of the Year, 1997. Texas A&M University - Commerce.

Best Faculty Presentation, 2002. 2002 Texas A&M University - Commerce Annual Sigma Xi Student/Faculty Research Symposium

Kappa Alpha Teacher of the Month, April 2002. Texas A&M University – Commerce.

ACADEMIC AND PROFESSIONAL RECOGNITION (MENTORED STUDENTS)

Foundation Research Grant. Tri-Beta Biological Honours Society – awarded December 1995, to Juliet Healy for arsenic research project.

Graduation with Highest Honours. Awarded December, 1995, to C.M. Kollar, for herpetology project.

Foundation Research Grant. Tri-Beta Biological Honours Society – awarded December 1996, to Terri Miller for turtle project.

13

First place, Graduate Student Presentation Competition. Annual District Convention of the Tri-Beta Biological Honours Society – awarded April 1997, to Chris Crist for bunting research presentation.

Best Undergraduate Presentation. Awarded to Juliet Healy for arsenic research presentation. Annual Sigma Xi Student Forum, April 1997.

Second Place, Graduate Presentation. Awarded to Chris Crist for bunting research presentation. Annual Sigma Xi Student Forum, April 1997.

Foundation Research Grant. Tri-Beta Biological Honors Society – awarded December 1999 to Robert Cloud for ladybug research.

Foundation Research Grant. Tri-Beta Biological Honors Society – awarded December 2000 to Curtis Lane for ladybug research.

Foundation Research Grant. Tri-Beta Biological Honors Society – awarded November 2001 to Shayne Ffredelis for barn swallow research.

Best Undergraduate Presentation. Awarded to Shayne Ffradelis for barn swallow research presentation. 2002 Texas A&M University Commerce Annual Sigma Xi Student/Faculty Research Symposium.

Second place, Graduate Student Presentation Competition. Awarded to Kim Strickland for barn swallow research presentation. 2002 Texas A&M University Commerce Annual Sigma Xi Student/Faculty Research Symposium.

Second Place, Graduate Student Poster Competition. Awarded to Tammy Nichols for barn swallow research presentation. 41st Texas Chapter of The Wildlife Society Annual Meeting, South Padre Island, February 16-18, 2006.

Third Place, Texas Academy of Science Annual Student Research Award Competition. Awarded to Beverly Cochran for barn swallow research proposal. The 109th Annual Meeting of the Texas Academy Science. March 2 – 4, 2006, Lamar University, Beaumont, Texas.

Third Place, Texas A&M Commerce Sigma Xi Chapter. Awarded to Anna Salinas for Interior Least Tern poster. Fifth Annual Student/Faculty Research Symposium, April 20th, 2006, Texas A&M University – Commerce, Commerce, Texas.

Summer Research Assistantship. Awarded to Wade Gurley for his proposal: Ecological

segregation among three species of swallows in northeast Texas. April 2008.
Jerry and Marilyn Morris Distinguished Master's Student Scholarship. Awarded to Beverly Cochran for her work on the reproductive ecology of American Barn Swallows.
April 2008.

STUDENT MENTORSHIP

Academic advisor for the Texas A&M University – Commerce chapter of the Wildlife Society.
2003 to present.

Academic advisor for the Delta Gamma Chapter of Beta Beta Beta Biological Honors Society at Texas A&M University – Commerce. 1997-2002.

CURRENT TEACHING DUTIES

Behavioral Ecology (BSc 410/532) - 1 semester, senior year and graduate.

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Topics: A study of the evolutionary and ecological aspects of animal behavior.

Ecological Genetics (BSc 512) – 1 semester, graduate.

Topics: Population genetics and the ecological contexts of population genetic processes.

Ecology (BSc 307) - Lecture and lab, 1 semester, junior year.

Topics: Energy and matter flow through ecosystems, community structure, niche dynamics and species interactions, population dynamics.

Evolutionary Biology (BSc 414/510) - 1 semester, senior year and graduate.

Topics: Evolutionary theory, natural selection, genetic variation, speciation, isolating mechanisms.

Geospatial Mapping (BSc 417) – 1 semester, senior year.

Topics: GIS, geographic coordinates systems, map projections, symbology, GPS applications.

Human Biology (BSc 106) – Lecture and lab, 1 semester, freshman non-majors.

Topics: Scientific method and the philosophy of science, ecology, human evolution, human sociobiology, human impacts on the environment.

Methods in Field Biology (BSc 497/511) - 1 semester, senior year and graduate.

Topics: Ecological methods for mapping habitat, measuring community structure, conducting inventories, and developing management plans. University Studies course for non-majors.

Our Endangered Planet (BSc 320) - 1 semester, junior year.

Topics: Deforestation, water pollution and management, agriculture and productivity, human population pressures, biodiversity issues, sustainable development, waste management, and other local, regional, and global issues. University studies capstone course for upper level non-majors.

Ornithology (BSc 402) - 1 semester, senior year and graduate.

Topics: Physiology, anatomy, behavior, ecology, and systematics of birds.

Vertebrate Biology (BSc 404/534) - 1 semester, senior year and graduate.

Topics: Vertebrate evolution and diversity.

Comparative Vertebrate Anatomy (BSc 422) - 1 semester, senior year.

Topics: Vertebrate structure and function, based on lectures and dissections.

Wildlife Management II (Ag/BSc 336) – 1 semester, sophomore year.

Topics: Relationships between wildlife and physical environment, habitat management, role

of preserves and refuges, economics of wildlife management.

PRIOR TEACHING DUTIES

Environmental Biology - Lecture and lab, 1 semester, sophomore year.

Ecological principles, environmental impacts on atmospheric, aquatic, and terrestrial systems.

Environmental Ethics - 1 semester, senior year, Honors Capstone course. Influences of science, culture, economics, religion, and esthetics on the ethics of environmental perspectives and decision making.

Genetics (BSc 204) - Lecture and lab, 1 semester, sophomore.

15

Topics: Mendelian genetics, gene linkage and chromosome mapping, chemical structure and DNA replication, mutation and DNA repair, regulation of gene activity, population genetics.

Human Biology - Lecture and lab, 1 semester, freshman year.

Topics: Basic Human anatomy and physiology. Course for non-majors.

Human Ecology - Lecture and lab, 1 semester, sophomore year.

Human origins, evolution, population biology. Course designed for non-majors.

TEACHING ASSISTANTSHIPS

Institution Course Supervisor Date

Univ. Manitoba

Intro. Biology

Dr. L. Graham

09/82 - 04/86

Univ. Manitoba Chordate anatomy Dr. K.W. Stewart 09/82 - 04/86
and evolution

Univ. Manitoba Animal Behavior Dr. R.M. Evans 01/84 - 04/86

Univ. Toronto Vertebrate Dr. T.S. Parsons 09/86 - 04/88

Anatomy

Univ. Toronto Intro. Biology Dr. C. Goldman 09/88 - 04/89

Univ. Toronto Animal Ecology Dr. J.B. Falls 09/88 - 04/91

CURRENT MEMBERSHIP ON UNIVERSITY COMMITTEES

Director: Texas A&M University - Commerce Wildlife and Conservation Science program. Duties are to administer and oversee the Wildlife and Conservation Science program offered jointly by the departments of biology and agriculture. Fall 2003 to present.

Member: Texas A&M University Library Committee. Duties are to review library activities, develop

future library plans, and review acquisitions policies. Fall 2004 to present.

Member: Institutional Animal Care and Use Committee. Duties are to oversee institutional policies

regarding the use of live animals and to approve of educational and research protocols. Fall 2005 to present.

Member: Texas A&M University – Commerce Promotion and Tenure Committee. Duties are to review applications for tenure and promotion and make recommendations based on those applications. Fall 2004 to present.

Member: Texas A&M University – Commerce Honors Council. Duties are to review honor theses proposals, serve on Honors thesis defenses, and develop honors program policy. Fall 2004 to present.

Member: Texas A&M University – Commerce Graduate Council. Duties are to review graduate school policies and procedures, evaluate graduate programs, develop methods to improve graduate school services. Fall 2005 to present.

Chair: Texas A&M University – Commerce Administration Committee of the Graduate Council. Duties are to review and revise graduate procedures. Fall 2005 to present.

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Chair: Dept. of Biology and Earth Sciences Graduate Program Committee. Duties are to develop a revised MS program in Biology, develop graduate admission standards, review graduate applications to the department. Fall 2006 to present.

PRIOR COMMITTEE MEMBERSHIPS

1995 – 1996 Member: Dean of Arts and Science Search Committee

1995 – 1998 Member: Texas A&M University - Commerce Honors Committee. Duties are to vote on the approval of honors thesis proposals and participate in honors student thesis defenses.

1997 Member: Physical and Analytical Chemist Search Committee

Member: Biological and Earth Science Department Head Search Committee

1997 – 1998 Chair: Biological and Earth Science Department Physiologist Search Committee

1998 – 1999 Chair: Biological and Earth Sciences Department Botanist Search Committee.

1999 – 2000 Chair: Biological and Earth Sciences Department Biologist Search Committee.

Member: College of Arts and Sciences Academic Programs Taskforce.

Member: College of Arts and Sciences College Reorganization Advisory Committee.

1998 – 2000 Joint Chairperson: Department of Biological and Earth Sciences Environmental Science Program Development Committee.

1999 – 2002 Member: Graduate Council. Duties are to review graduate programs and make provisions for on-going research and academic endeavors in the Graduate School.

2000 – 2002 Chair: Graduate Committee on Curriculum. Duties are to review curriculum changes suggested by departments within the Graduate School and improve the efficiency and delivery of graduate programs.

2001 – 2002 Member: Texas A&M University SACS 5A Committee. Duties are to review academic facilities, libraries, and labs for compliance to SACS accreditation criteria.

2003 – 2005 Member: Texas A&M University new science building committee. Duties were to determine facilities needed for a new science building to be constructed on campus.

2006 (Spring) Vice Chair: Texas A&M University – Commerce Graduate Council. Duties were to convene meetings of the graduate council when the chair was unable to. Spring 2006.

PROFESSION-RELATED COMMUNITY SERVICES

1995 – 1998

Rains County Eagle Fest – Professional Guide and Eagle Spotter. Annual event each January
2003 – present

Cooper Lake midwinter Bald Eagle survey (sponsored by Texas Parks and Wildlife Dept.)
2004 – present

Member of Board of Advisors for Kids Environmental Education Project.
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2004 – present

Member of Board of Directors for the Sweeney Environmental Education Center at Boles ISD.
2005 – present

East Texas Black Bear Task Force (sponsored by Texas Parks and Wildlife Dept.)
2005 – present

East Texas Rare Bat Working Group (sponsored by Texas Parks and Wildlife Dept.)

RELATED EXPERIENCE

Research Assistant, April 1981 - August 1981. Worked under Dr. R.M. Evans, Dept. of Zoology, University of Manitoba. Laboratory studies of behavior in gull chicks. Duties included design and construction of rearing pens and test arenas, incubation and rearing of chicks, banding White Pelican chicks at a breeding colony, and collection of behavioral data.

Research Assistant, April 1985 - July 1985. Worked under Dr. J.B. Falls, A. Horn, and T.E. Dickinson, Dept. of Zoology, University of Toronto. Field studies on the functions of song and other vocalizations in Western Meadowlarks. Duties included mapping territories, recording vocalizations, conducting playback experiments, finding nests, and measuring nest and territory parameters.

Consultant, January 1986 - March 1986. Hired by Ortho Books (Chevron Chemical Company). Worked as contributing author for 'The Birds Around Us' (1986, A. Mace, E. Tsakaris (eds.)).

REFERENCES:

Dr. James Klein, Dean

College of Arts and Sciences, Dept. of Biological and Environmental Sciences,
Texas A&M University – Commerce Texas A&M University – Commerce
Commerce, TX 75429-3011 Commerce, TX 75429-3011
(903) 886-5166 (903) 468-3116

James_Klein@tamu-commerce.edu Frank_Miskevich@tamu-commerce.edu

Kenneth Steigman, Ph.D.

UNT, Institute of Applied Science
Director, Lewisville Lake Environmental Learning Area
1801 N. Mill Street, Suite A
Lewisville, Texas 75057
(972) 219-3926
steigman@unt.edu

Amanda Turley

Amanda C. Turley

ATURLEY@LEOMAIL.TAMUC.EDU

ACADEMICS

Texas A&M University

Masters of Science, Secondary Education, Focus Biology Spring 2012-Present

GPA 4.0

University of North Texas

Masters of Science, Biology Fall 2010-Fall 2011

Incomplete-Transferred to Texas A&M MS program GPA 3.809

Bachelors of Science 2006-2010

Major: Biology GPA 3.586

Minor: Chemistry Cum Laude

Honors College Distinguished Scholar

Honors Thesis: Spring 2009

Anatomical and Morphological Effects of Flooding on *Sesbania herbaceae*

RESEARCH

Wetland Plant Ecology Research Group, Kevin Stevens PhD, mentor 2008-2011

- GIS Mapping/Monitoring of Research Sites
- Trimble GPS in field mapping of Research Sites
- Wetland Development and Management of Grand Prairie Landfill Oxbow
- Maintained Greenhouses, Cultivated Plants, Maintained Rhizobium cultures

Fundamental Neuroscience Research Lab, Jannon Fuchs PhD, mentor 2006-2007

WORK EXPERIENCE

Dallas County Community College District (North Lake Campus)

Adjunct Faculty Biological Sciences Spring 2012-Present

- Introductory Biology Labs Instructor
- Science Learning Center Tutor

University of North Texas

Graduate Teaching Assistant Fall 2010-Fall 2011

- Microbiology Lab Instructor Fall 2010-Present
- Majors Biology II Grader Spring 2011
- Ecology Grader Fall 2011

Undergraduate Research Assistant-REU Summer 2009-Summer 2010

- Wetland Development and Management of Grand Prairie

Landfill Oxbow Site

- ARC GIS Mapping/Monitoring of Wetland Sites
- Assessment of Clear Creek and Greenbelt Fauna
- Trimble GPS Mapping Assessments of Clear Creek and Greenbelt
- Coordination with UNT Engineering Department for

REU research project

- Composed educational booklet for Clear Creek Natural

Heritage Center, Elementary Student Outreach Program

AWARDS

- Honors College member 2006-Present
- Board of Regents Scholar 2006-2010
- „Y National Society of Collegiate Scholars 2007-Present
- Dean’s List Fall 2006
- President’s List Spring 2007

SCHOLARSHIPS/GRANTS

- Beth Baird Tuition Scholarship Fall 2010-Fall 2011
- UNT Tuition Grant Fall 2010-Fall 2011
- CAS Travel Grant Fall 2010
- SGA Travel Grant Fall 2010, Spring 2011
- UNT Tuition Scholarship Summer 2010
- Honors College Scholarship Spring 2006-Spring 2009
- Smart 4 Grant Spring 2009
- Smart 3 Grant Fall 2008
- Federal Pell Grant Fall 2006-Spring 2009
- Texas Public Education Grant Summer 2008
- ACG 2 Grant Fall 2007-Spring 2008
- ACG 1 Grant Fall 2006-Spring 2007
- Federal Supplemental Grant Fall 2006-Spring 2007
- Kohl’s Kids Who Care Scholarship Fall 2006 (Community Service Scholarship for High School Students)

PROFESSIONAL PRESENTATIONS

„Y Society of Environmental Toxicology and Chemistry May 2011

Development of a Sensitive Toxicity Test for Macrophyte Stress Due To Environmental Contaminants of Aquatic Systems

- WaterWays 2010 & Fluid Frontier-International Conference March 2010

Untitled Algae from Reservoir #16 for Portable Media Players

Collaboration with Art Department fellows Cary Peppermint and Dr. Christine Nadir Interdisciplinary Project to Introduce Science in New Venues

<http://www.art.unt.edu/cwetexas/about.html>

- Scholars Day Paper Presentation April 2009

Anatomical and Morphological Responses to Flooding
in *Sesbania Herbacea*

- Scholars Day Poster Presentation April 2007

Centrosomes and Neuronal Cilia

PROFESSIONAL MEMBERSHIPS

- Native Plant Society of Texas Fall 2011-Present
- Ecological Society of America Spring 2011-Present

- Society of Wetland Scientist Fall 2010-Present

CONFERENCES

- Society of Environmental Toxicology and Chemistry May 2011
- Society of Wetland Scientist October 2010
- Society of Wetland Scientist October 2009

ORGANIZATIONS

- Silvey Honors Society Officer 2009-Present
- Professional Leadership Program (PLP) 2008-Present
- Eta Sigma Phi Officer 2008-Present

(Students of Latin & Greek Honors Society)

CERTIFICATIONS

- NIH Human Subjects Certification
- Hippa Certification
- ESRI GIS Geodatabase Certified
- ESRI GIS LIDAR Certified

Note to the Reader: George Nixon's vita is poorly formatted because it was available only as an image. It was scanned and converted to Word, and better formatting could not be achieved.

George Nixon

Name: George Allen Nixon

SS#: 532-42-8907

Year Appointed: 1961

Department: Chemistry

(a) Academic Degrees

Washington State University, Pullman, Washington, Chemistry, B.S. 1961

East Texas State University, Commerce, Texas, Chemistry, M.S. 1964

Notre Dame University, Nelson, B.C. Canada, 1957 1959

Baylor University, Waco, Texas, 1964

Louisiana State University, Baton Rouge, Louisiana, 1966-1967 (b)

Professional Experience:

Adjunct Professor of Chemistry, Texas A&M University- *Commerce*, 2007-present
 Assistant Professor of Chemistry, East Texas State University, 1974-2005
 Instructor of Chemistry, East Texas State University, 1961-1974
 Cancer Research Scholarship, M.D. Anderson Hospital, Houston, *Texas*, Summer 1975
 Adjunct Professor, Instructor of Chemistry, Northeast Texas Community College, 1986-1987

(c) Faculty and Administrative Load

| | | |
|---------------------|------------------------|--|
| Spring 2008-present | Chemistry 1407 | Survey of Organic and Biochemistry |
| Fall 2007-present | Chemistry 1405 | Survey of General Chemistry |
| | Fall 2004 | Chemistry 112 |
| | | Chemistry 102 |
| | | Chemistry 102 |
| | | Chemistry 107 |
| | | Integrated Science 151 |
| | | Chemistry 107 |
| | | Chemistry 112 |
| Spring 2004 | Chemistry 108 | Organic and BioChemistry with lab tutorial |
| | Chemistry 102 | Chemical Calculations |
| | Chemistry 102 | Chemical Calculations |
| | Integrated Science 151 | Physics, Earth Science, and Chemistry |
| | Chemistry 112 | General Chemistry |
| | Chemistry 397 | Chemical Calculations |
| | Chemistry 108 | Chemistry 107 |
| | Chemistry 112 | Integrated Science 151 |
| Fall 2003 | Chemistry 112 | Integrated Science 151 |
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| Spring 2003 | Chemistry 105 | Lab supervision |
| | Chemistry 101 | Lab supervision |
| | Chemistry 212 | |
| | Chemistry 111 | General Chemistry with lab tutorial |
| | Chemistry 202 | Chemical Calculations |
| | Chemistry 212 | Chemical Calculations |
| | Chemistry 108 | Organic and Bio Chemistry with lab tutorial |
| | Chemistry 111 | Physics, Earth Science, and Chemistry |
| Fall 2002 | Chemistry 211 | Lab supervision |
| | Chemistry 202 | Lab supervision |
| | Chemistry 112 | Lab supervision |
| | Chemistry 102 | Organic and Bio Chemistry with lab tutorial |
| | Chemistry 107 | Chemical Calculations |
| | Chemistry 211 | Organic Chemistry |
| | Chemistry 112 | General Chemistry |
| | Chemistry 107 | Tutorial for Organic 212(Problem session) |
| Spring 2002 | | Lab supervision |
| | Chemistry 108 | Lab supervision |
| | Chemistry 111 | Lab supervision |
| | Chemistry 101 | Organic Chemistry |
| | Chemistry 212 | Organic Tutorial |
| | Chemistry 202 | General Chemistry |
| | Chemistry 212 | Tutorial for General Chemistry |
| | | Bio and Organic Chemistry |
| | | Laboratory supervision |
| | | Laboratory supervision |
| | | Laboratory supervision |
| | | Organic and Bio Chemistry with lab tutorial |
| | General Chemistry | |
| | Lab supervision | |
| | General Chemistry Tutorial(Problem session) | |
| | Organic Chemistry | |
| | Tutorial for Organic 212(Problem session) | |
| | Lab supervision | |

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| Fall 2001 | Chemistry 211 Chemistry 20 I Chemistry 112 Chemistry 102 Chemistry 2 II Chemistry 112 Int Sci 151 | Int Sci 151.00 I |
| Spring 2001 | Chemistry 108 Chemistry 108 Chemistry 406 Chemistry 112 Chemistry 112 | |
| Fall 2000 | Chemistry 111.002 Chemistry 10L.004 Chemistry 108.00 1 Chemistry 306.001 | |
| Spring 2000 | Chemistry 112.002 Chemistry 102.004 Chemistry 406.001 Chemistry 108.001 | |
| Fall 1999 | Chemistry 101.003 Chemistry 111.002 Chemistry 306.001 Int Sci 151.00 I | |
| Spring 1999 | Chemistry 102.003 Chemistry 108.001 Chemistry 302.001 Chemistry 406.001 Int. Sci. 152.001 | |
| Fall 1998 | Chemistry 101.002 Chemistry 107.001 Chemistry 306.001 | |

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Integrated Science

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| Spring 1998 | Chemistry 101.004 Chemistry 108.001 Chemistry 302.001 Chemistry 406.001 Int Sci 152.001 | Chem Calculations Organic & Biochemistry With Lab Morial Criminalistics Making the Atomic Bomb Integrated Science |
| Spring 1997 | Chemistry 108.001 Chemistry 406.001 | SurveyOrgan!Biochem Making of the Atomic Bomb |
| Fall 1996 | Chemistry 101.001 Chemistry 107.001 Chemistry 306.001 | Introduction to Chern Calculations I Survey of General Chemistry Intelligent Life Universe |
| Smmner 2 1996 | Chemistry 112.001 | General and Quantitative Chemistry |
| Summer I 1996 | Chemistry 111.0(JI) | General and Quantitative Chemistry |
| Spring 1996 | Chemistry 102.001 Chemistry 108.001 Chemistry 302.001 Chemistry 406.001 | Introduction to Chern Calculations II Survey of Organic and Biochemisu-y Introduction to Crirn.inalistics Making of the Atomic Bomb |
| Fall 1995 | Chemistry 101.00 I Chemistry 107.001 Chemistry 306.001 | Introduction to Chern Calculations I Survey of General Chemistry Intelligent Life Universe |
| Summer 2 1995 | Not on Teaching Salary | |
| Summer 1 1995 | Not on Teaching Salary | |
| Spring 1995 | | Chemistry 102.001 |
| | Spring 1994 | Chemistry 108.001 Chemistry 302.001 Chemistry 406.001 |
| Fall1994 | | Chemistry 101.00 I Chemistry 107.001 Chemistry 306.001 |
| Summer 2 1994 | | Not on Teaching Salal) Not on Teaching Salary |
| Summer I 1994 | | Chemistry 102.001 |

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Chemistry Intelligent Life Universe

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| | Chemistry 108.00 I | Survey of Organic and Biochemistry Introduction to Criminalistics |
| | Chemistry 302.001 | Making of the Atomic Bomb |
| | Chemistry 406.001 | |
| Fall 1993 | Chemistry 101.001 | Introduction to Chem Calculations I |
| | Chemistry 107.00 I | Survey of Organic and Biochemistry |
| | Chemistry 306.001 | Intelligent Life Universe |
| Summer 2 1993 | Not on Teaching Salary | |
| Summer 1 1993 | Chemistry 111. 00 J | General and Quantitative Chemistry |
| | Chemistry 418.00 I | Undergraduate Research |
| Spring 1993 | Chemistry 108.001 | Survey of Organic and Biochemistry |
| | Chemistry 302.001 | Introductory Criminalistics |
| | Chemistry 406.00 I | Making of the Atomic Bomb |
| Fall 1992 | Chemistry 103.00 I | Modern Science: Concepts and Historical Development to 1900 |
| | Chemistry 107.001 | Survey of General Chemist!) |
| | Chemistry 306.001 | Intelligent Line In the Universe (I I |
| Summer 2 1992 | Not on Teaching Salary (hours teaching) | |
| Summer 1 1992 | Not on Teaching Salary | |
| Spring 1992 | Chemistry 101.001 | |
| | Chemistry 108.001 | Introduction to Chemical Calculations I I |
| | Chemistry 212.00 I | Survey of Organic and Biochemistry |
| | Chemistry 302.001 | Organic Chemistry |
| Fall 1991 | Chemistry 101.001 | Introductory Criminalistics (12 hours teaching) |
| | Chemistry 107.001 | |
| | Chemistry 112.001 | Introduction to Chemical Calculations |
| | Chemistry 211 .00 I | I Survey of General Chemistry |
| | | General and Quantitative Chemistry |
| | | Organic Chemistry |
| Summer 2 1991 | Not on Teaching Salary (13 lm. teaching) | |
| Summer 1, 1991 | Spring 91 | |

Not on Teaching Salary

Chemistry 101.001 Introduction to Chemical Calculations I
Chemistry 108.001 Survey of Organic and Biochemistry
Chemistry 111.001 General and Quantitative Chemistry
Chemistry 302.001 Introductory Criminalistics
Chemistry 307.001 Special Topics: Chemistry of Wine
Chemistry 41.001 Undergraduate Research

(16 hrs. teaching)

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| Fall 1990 | Chemistry 102.001 | Introduction to Chemical Calculations (2 sections) |
| | Chemistry 103.001 | Modern Science: Concepts and Historical Development to 1900 |
| | Chemistry 107.001 | Survey of General Chemistry General |
| | Chemistry 112.001 | and Quantitative Chemistry Special |
| | Chemistry 597.001 | Topics: Physical Science I (Chemistry) (17 hrs. teaching) |
| Summer 2 1990 | Not on Teaching Salary | |
| Summer 1 1990 | Chemistry 111.001 Chemistry 211.001 | General and Quantitative Organic Chemistry (8 hrs. teaching) |
| Spring 1990 | Chemistry 101.001 Chemistry 108.001 Chemistry 111.001 Chemistry 212.001 Chemistry 397.001 | Introduction to Chemical Calculations I (2 Sections) Survey of Organic and Biochemistry General and Quantitative Chemistry Organic Chemistry Chemistry of Wine (14 hrs. teaching) |
| Fall 1989 | Chemistry 107.001 General and Quantitative Chemistry Chemistry | Survey of General Chemistry Chemistry 112.001 Chemistry 211.001 Organic (8hrs. Teaching) Summer 2 |
| 1989 | Not on Teaching Salary | |

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| Summer I, 1989 | Chemistry III.OO1 Chemistry 211.00 I | General and Quantitative Organic Chemistry (8 hrs. teaching) |
| Spring 1989 | Chemistry 108.001 111.001 211.00 I | Survey of Organic and Biochemistry Chemistry General and Quantitative Chemistry Chemistry Organic Chemistry |
| (1 2 hrs. Teaching) | | |
| Fall 1989 | Chemistry '107.001 | |
| Chemistry 112.001 | | |
| Chemistry 212.001 | | |
| Chemistry 397.001 | | |
| Summer 2 1988 | Not on Teaching Salary | |
| Spring 1 1988 | Chemistry 111.001 | |
| Chemistry 397.001 | | |
| Spring 1988 | Chemistry 108.001 | |
| Chemistry .III.OO1 | | |
| Chemistry 211.001 | | |
| Fall 1997 | Chemistry 107.001 | |
| Chemistry 112.0III | | |
| Chemistry 397.001 | | |

Spring 1987 Chemistry 108.001
Chemistry 111.001
Chemistry 211.00 I

Fall I 986 Chemistry 107.001
Chemistry 112.001
Chemistry 397.001

Survey of General Chemistry General and Quantitative Chemistry Organic Chemistry
Chemistry of Wine
(12 hrs teaching)

General and Quantitative Chemistry
Principles of General Chemistry
(6 lrrs. Teaching)

Survey of General Chemistry General and Quantitative Chemistry Organic Chemistry
(12 hrs. Teaching)

Survey of General Chemistry General and Quantitative Chemistry Basic Concepts of Physical Science (12
Jus Teaching)

Survey of Organic and Biochemistry General and Quantitative Chemistry Organic Chemistry
(12 hrs Teaching)

Survey of General Chemistry
General and Quantitative Chemistry
Chemistry of Wine

4.) Service Activities

A.) Uiversity

(1.) University Wide

Se1vice to tlte East Texas State University Athletic Department and to the Football prognun in particular
1998 to 2000.

Administered March 10, 1986, the State Board Exam for High School Teachers

Severn! presentations to visiting High School Students 1999-2000

Chemical lecture & demonstration via Randy McDonald & Suzanne Woodley

Donated to the Dr. Steven L. Jliak Scholarship Fund \$600 received for services rendered to Nippon Television Co. during their filming of "Astonishing News."

(2.) College

- (a) On Arts & Science Recruiting task force 2000
- (b) Pre Medical Committee 1999 to present
- (c) Committee for Hiring new Chemistry Department Head 1999

(3.) Departmental

English Usage Exam grader

Faculty Senate 1989-present

Wine Preparation with 10 students in the 397 course. "Methods of Making and Bottling Wine."

Adventures in Research 1987, developed with Dr. K. L. Peterson

B) Community

Energy calculation for E-Systems Greenville Division, March 1988

Vice Chairman of the Board of the American Red Cross for Hunt, Rains, and Delta Counties, elected in 1987. Title requires about 36 hours per year.

Certification of lifeguards at the Commerce City Pool. (As requested by the Zeppa Center Station (80 hours)

Water analysis of city pool water to determine apparent leakage in the new Commerce City Pool

Presented Several Wine Appreciation Seminars by the Department of Chemistry for social clubs in Hunt and Delta counties.

5. Professional Association, Activities

Chairman of the Board, American Red Cross, Tri-Counties Chapter, 1985- 86 (Hunt, Rains, and Delta Counties)

6. Professional Assignments, Activities

None

7. Publications, Exhibitions, JernoncrF.Etc. a) Refereed adjudicated, etc

1.) National

Team Teaching Introductory Wine Course at the College Level, with D. R. Lee and F. A McClurg, I. Chem. Educ. 1986. 63, 1964.

Synthesis and Biological Evaluation of Soluble 2-Boronocyclopentadiene

Compounds, with A. II. Saloway, D. W. Odom, and J. D.

Campbell, J. Med. 1964. 7,640-653.

2.) State/Regional -None

3.) Local •None

(b.) Non-refereed, adjudicated, etc.

1.) National

Evaluation and review of Integrated Science, Second Edition by authors Bill W. Tillery, Eldon P. Enger and Frederick C. Ross was completed on July 17, 2003 for McGraw-Hill, Inc.

Preparation of an Integrated Teaching Strategy for the second edition of Physical Science by Tillery, Enger, and Ross. The teaching strategy is part of the web resources for teachers that accompanies this textbook.

2.) State/Regional -None

3.) Local

Reviewed environmental science manuscript submitted for publication by Dr. Clip Fox.

1. Presentation, Workshops, Demonstrations, etc.

1.) National

Chautauqua N.S.F. Development Program 2004 Chemistry of outer space via the Star Dust Explorer, University of Washington

"Green Chemistry in Education" workshop held at the University of Oregon July 26-August 1, 2003. Professors James Hutchison and Kenneth Doxsee, presenters, July 2003.

Chautauqua N.S.F. Development Program 2002 Creativity and Innovation - G. Gilham and Zinoviy Royzn, University of Washington

Chautauqua N.S.F. Development Program 2002 Making Science relevant for Science and Engineering Majors-TI10mas Stoebe, University of Washington

Chautauqua N.S.F. Development Program 2001 Ceramics: Superconductors Solid Energy storage- Faith Dogan, University of Washington Interdisciplinary Science Course for Elementary Education

Majors, with R. Kolstad, National Science Teachers Association Convention, San Antonio, Texas, November 19-21, 1987

The Science and Aesthetics of Wine. with F. A. McClurg, The Society of Wine Educators, San Francisco, California. 1985

Team Teaching an Introductory Wine Course at the College Level. with F. A. McClurg, Department of Vine-Culture at the Fachhochschule in Wiesbaden, Technical University of Wiesbaden, West Germany, 1984

Chemistry for Elementary Teachers, National Teachers Association Meeting, Kansas State University, Manhattan, Kansas, 1989

2.) State/Regional

"Strategies to promote Active Learning in Chemistry Courses Workshop," held in Stephenville, Texas was given by Prof. Eileen L. Lewis, Dept of Chemistry, University of California, Berkeley, 2003.

Using Models to Teach Molecular Chemistry in the Primary Grades, with R. Kolstad, A TE Mid America Regional Conference, Lake Texoma, Oct. 5, 1989

Team Teaching an Introductory Wine Course at the College level, with F. A. McClurg. Joint Southwest/Southeast Regional Meeting of the American Chemical Society, Memphis, TN. 1985

The Science and Aesthetics of Wine, with F.A. McClurg, The Texas Academy of Sciences, San Antonio, Texas, 1984

3.) Local

Honors Society, ETSU, Wine Tasting

Home Economics, ETSU, Food Tasting

E-Systems, Greenville, Executive Wine Tasting

Judged the Sigma Xi Scientific Research Society's annual Student-Faculty Research for April/2004.

Acted as consultant to Nippon Television during their filming of "Astonishing News," a Japanese forensic science movie about the mutilating of three West Texas women. (Tim Hines, Production Manager, Milky Way Med Inc., 193 Washington Park, Brooklyn, N.Y.

11205)

Developed demonstration for University Recruitment as requested by Randy McDomtld,
Admissions

9.) Research

Data on the morphological transition of "Pigeon Grape" and "Little Mountain Grape" has utilized about 18-20 hours of continuous computer time. This data will be used by Drs Peterson, Comeaux, and Mr. Nixon to publish a paper regarding the morphological transitions of one variety of grape into the other.

Received \$600 mini-grant from Texas A&M University-Commerce in Fall 2004 to study surface chemistry with Dr.

Anil Chourasia

10.) Conference Attended

Attended Conference for the Advancement of Science Teaching, Houston, Texas. Oct 30, 2003- Nov 1, 2003

11.) Grants, Proposals

Application of Pattern Recognition to the Classification of Texas Grape Species and to the Classification of Atomic Uranium Energy Levels, with K. L. Peterson, ETSU Faculty Research, \$10,770 requested. Not funded.

A total of \$189,345 for grants requested but only \$10,000 was available for funding.

Departmental Grant, with Drs. Rawiak, Quane, and Ashley, Robert A. Welch Foundation, 1988-90, \$75,000 funded.

Grant from EFSA, Texas Coordinating Board, with R. Kolstad, \$50,000, 1987-88, funded

Elementary Grades with Dr. R. Kolstad and D. Richardson, National Science Foundation, \$165,000, June 1989.

East Texas State University Organized Research Grant, 1966, \$6,000.00, funded

Applied for Faculty Research Mini Grant \$500.00 on February 7, 1997 from TA

Jose Lopez

Revised: December 2012

Jose A. Lopez, Ph.D.

Contact Information

Assistant Professor of Agribusiness

Department of Agricultural Sciences

Texas A&M University-Commerce

P.O. Box 3011, Commerce, Texas 75429-3011

E-mail: Jose.Lopez@tamuc.edu

Phone: (903) 886-5623

Website: <http://faculty.tamu-commerce.edu/jlopez/>

Education

Ph.D., Agricultural & Applied Economics, Texas Tech University, December 2009

- Dissertation Title: “[The Mexican Meat Market: An Econometric Analysis of Demand Properties and Trade.](#)”
- Committee Members: Dr. Jaime Malaga (Chair), Dr. Benaissa Chidmi, Dr. Eric Belasco, Dr. James Surles

M.S., Statistics, Texas Tech University, August 2008

- Thesis Title: “[Mexican Meat Consumption: An Application of Seemingly Unrelated Regressions in Stratified Sampling.](#)”
- Committee Members: Dr. James Surles (Chair), Dr. Petros Hadjicostas

M.S., Agricultural & Applied Economics, Texas Tech University, May 2004

- Thesis Title: “[Econometric Modeling of the European Union Cotton Demand.](#)”
- Committee Members: Jaime Malaga (Chair), Octavio Ramirez, Samarendu Mohanty

B.B.A., Finance and Management, Ave Maria College, December 2001

Professional Experience

2010-present Assistant Professor of Agribusiness, Dept. of Agricultural Sciences, TAMU-Commerce, TX

2006-2009 Grad. Research Assistant, Agricultural & Applied Economics Dept., Texas Tech University, TX

2004-2005 Ground Coffee Product Manager, Marketing Dept., Cafe Soluble S.A., Nicaragua

2004-2004 Part-Time Professor, School of Business, Ave Maria College, Nicaragua

2002-2003 Grad. Research Assistant, Agricultural & Applied Economics Dept., Texas Tech University, TX

2001-2001 Teaching Assistant, School of Business, Ave Maria College, Nicaragua

Teaching Experience

Texas A&M University-Commerce

AEC 219 – Agricultural Economics, web enhanced, 3 credits

AEC 314 – Farm Management, web enhanced, 3 credits

AEC 316 – Agricultural Marketing, web enhanced, 3 credits

AEC 340 – Agricultural Finance, web enhanced, 3 credits

AEC 360 – Agricultural Law, web enhanced, 3 credits

AEC 380 – Agricultural Statistics, web enhanced, 3 credits

AEC 435 – Agricultural Policy, 3 credits

AEC 445 – Resource & Environmental Economics, web enhanced, 3 credits

AEC 455 – Commodity Futures Marketing, 3 credits

AEC 489 – Independent Studies, offered on demand

AEC 497 – Special Topics, offered on demand

AEC 518 – Thesis, offered on demand

AEC 589 – Independent Study, offered on demand

AEC 597 – Survey Sampling, offered on demand

Texas Tech University

AAEC 3315 – Agricultural Price Theory, 3 credits, Summer 2007

AAEC 4302 – Statistical Methods in Agricultural Research, 3 credits, Summer 2003

Ave Maria College

AC241 – Principles of Accounting I, 3 credits, Spring 2004

AC242 – Principles of Accounting II, 3 credits, Spring 2004

CIS180 – Computer Information System for Managers, 3 credits, Spring 2004

MA099 – Intermediate Algebra, 3 credits, Spring 2004

MA095 – Elementary Algebra, 3 credits, Spring 2004

Publications and Presentations

Journal Articles

Lopez, J.S., J.E. Malaga, B. Chidmi, E. Belasco, and J. Surles. 2012. “ Mexican Meat Demand at the

Table Cut Level: Estimating a Censored Demand System in a Complex Survey.” *Journal of Food Distribution Research*, 43(2).

Lopez, J.A., J.E. Malaga, B. Chidmi, E. Belasco, and J. Surles. 2011. “Understanding Mexican Meat

Consumption and Imports at the Table Cut Level.” *Journal of International Agricultural Trade and Development*, 7(2):145-168.

Peer-Reviewed

Durborow, S., and J.A. Lopez. “An Analysis of the Potential Economic Impact of Huanglongbing on the

California Citrus Industry.” Paper presented at the Southern Agricultural Economics Association Annual Meeting, Orlando, Florida, February 2-5, 2013.

Ortez, M., K. Rojas, B. Brenes, T. Duch-Carvalho, J.A. Lopez, R. Williams. “Public School Partnerships

for Training Beginning Hispanic Farmers Ranchers.” Poster Presented at the Southern Region Conference of the American Association for Agricultural Education, Orlando, Florida, February 3-5, 2013.

Rojas, K., J.A. Lopez, J. Swart, and T. Duch-Carvallo. “An Economic Analysis of Foliar Fungicides Used in Northeast Texas Wheat Production.” Poster presented at The Texas A&M University System 10th Annual Pathways Student Research Symposium, Galveston, Texas, November 9-10, 2012.

Rojas, K., J.A. Lopez, M. Villarino, and R. Williams. “Real Time Translation Using CTCSS Encoders for Outreach Programs.” Poster presented at the Southern Region Conference of the American Association for Agricultural Education (AAAE) Annual Meeting, Birmingham, Alabama, February 4-7, 2012.

Duch-Carvallo, T., J.A. Lopez, B. Brenes, R. Williams. “Breaking Barriers for Beginning Farmers and Ranchers.” Poster presented at the Southern Rural Sociological Association (SRSA) Annual Meeting, Birmingham, Alabama, February 4-7, 2012.

Lopez, J.A. “A Comparison of Price Imputation Methods under Large Samples and Different Levels of Censoring.” Paper presented at the Agricultural & Applied Economics Association Annual Meeting, Pittsburgh, Pennsylvania, July 24-26, 2011.

Herreros, S., R. Williams, J.A. Lopez, C. Jones, and M. Villarino. “Breaking Barriers for Beginning Hispanic Farmers and Ranchers.” Poster presented at the Southern Region Conference of the American Association for Agricultural Education, Corpus Christi, Texas, February 5 -8, 2011.

Lopez, J.A. and J.E. Malaga. "A Stratified Sample or a Simple Random Sample Approach? The Case of

Mexican Meat Consumption at the Table Cut Level of Disaggregation." Contribution to an organized

symposium on Complex Surveys, a Blessing or a Curse? at the Southern Agricultural Economics Association Annual Meeting, Orlando, Florida, February 6-9, 2010.

Lopez, J.A. and J.E. Malaga. "[Forecast and Simulation Analysis of Mexican Meat Consumption at the](#)

[Table Cut Level: Impacts on U.S. Exports.](#)" Poster presented at the Agricultural & Applied Economics Association Annual Meeting, Milwaukee, Wisconsin, July 26-28, 2009.

Lopez, J.A. and J.E. Malaga. "[Estimation of a Censored Demand System in Stratified Sampling: An Analysis of Mexican Meat Demand at the Table Cut Level.](#)" Paper presented at the Southern Agricultural Economics Association Annual Meeting, Atlanta, Georgia, January 31 – February 3, 2009.

Argüello, P.B., J. E. Malaga, B. Chidmi; E. Belasco, T. Knight; J.A. Lopez. "[Derived Demand for Cottonseed: Dairy Industry Component.](#)" Paper presented at the American Agricultural Economics Association Annual Meeting, Orlando, Florida, July 27-29, 2008.

Lopez, J.A. and J.E. Malaga. "[European Union Cotton Demand: An Application of Demand Systems and](#)

[Panel Data.](#)" Paper Presented at the Southern Agricultural Economics Association Annual Meeting, Tulsa, Oklahoma, February 14-18, 2004.

Lopez, J.A. and J.E. Malaga. "[One Or Many European Union Cotton Demand?](#)" Paper Presented at Beltwide Cotton Conference, San Antonio, Texas, January 5-9, 2004.

Abstracts

Lopez, J.A. and J.E. Malaga. "Complex Surveys, a Blessing or a Curse?" *Journal of Agricultural &*

Applied Economics, Vol. 42, No. 3 (August 2010): p. 602.

Lopez, J.A. and J.E. Malaga. "Estimation of a Censored Demand System in Stratified Sampling: An Analysis of Mexican Meat Demand at the Table Cut Level." *Journal of Agricultural & Applied Economics*, Vol. 41, No. 2 (August 2009): p. 551.

Lopez, J.A. and J.E. Malaga. "European Union Cotton Demand: An Application of Demand Systems and Panel Data." *Journal of Agricultural & Applied Economics*, Vol. 36, No. 2 (August 2004): p. 520.

Working Papers

Durborow, S., J.A. Lopez, J. Heitholt, and R. Williams. "Predicting the Economic Impact of Huanlongbing (HLB) on the California Citrus Industry."

Rojas, K. and J.A. Lopez. "An Economic Analysis of Foliar Fungicides Used in Northeast Texas Wheat Production."

Lopez, J.A. "Imputation Methods and Approaches: An Analysis of Protein Sources in the Mexican Diet."

Argüello, P.B., J. E. Malaga, B. Chidmi; E. Belasco, T. Knight; J.A. Lopez. "The Dairy Industry's Derived Demand for Feed Grains and Its Effect on the Cottonseed Market."

Seminars

Lopez, J.A and R. Williams. "Budgeting Your Garden." BBFBHFR Seminar Series, AC Williams Elementary School, Commerce, TX, October 4, 2012.

Lopez, J.A. "Labor Management in Agribusiness." BBFBHFR Seminar Series, Professional Agricultural Workers Building, Sulphur Springs, TX, November 22, 2011.

Lopez, J.A. "Fundamental Record Keeping and Financial Statements." BBFBHFR Seminar Series, AgriLife Extension Agency, Sulphur Springs, TX, November 8, 2011.

Lopez, J.A. "Introduction to Basic Farm Business Activities and Terminology." BBFBHFR Seminar Series, Professional Agricultural Workers Building, Sulphur Springs, TX, October 25, 2011.

Lopez, J.A and R. Williams. "Budgeting Your Garden." BBFBHFR Seminar Series, Como-Pickton High School, Como, TX, April 2nd, 2012.

Others

Lopez, J.A. "The Mexican Meat Market: An Econometric Analysis of Demand Properties and Trade."

Ph.D. Dissertation, Department of Agricultural Economics, Texas Tech University, December 2009.

Lopez, J.A. "Mexican Meat Consumption: An Application of Seemingly Unrelated Regressions in Stratified Sampling." M.S. Thesis, Department of Mathematics & Statistics, Texas Tech University, August 2008.

Lopez, J.A. "Econometric Modeling of the European Union Cotton Demand." M.S. Thesis, Department of Agricultural & Applied Economics, Texas Tech University, May 2004.

Projects

Funded

Northeast Texas Initiative for Cooperative Development (NTICD). Funded by the Small [Socially-Disadvantaged Producer Grant \(SSDPG\)](#), Rural Business Cooperative Service, Rural Development, United States Department of Agriculture (with Project Director Jose A. Lopez and collaborators Jim

Heitholt, Robert Williams, and Curtis Jones, \$175,000. [2013].

[Breaking Barriers for Beginning Hispanic Farmers and Ranchers](#). Funded by Beginning Farmer and Rancher Development Program (BFRDP), National Institute of Food and Agriculture (NIFA), United

States Department of Agriculture (USDA) (with Project Director Bob Williams, and Collaborators Curtis Jones and Mario Villarino), \$674,768. [2010-2013].

Alliance to Achieve and Maintain Competitive in Logistics within NAFTA through Strategic Leadership

(LOGIS). Funded by the [Fund for the Improvement of Postsecondary Education \(FIPSE\)](#), North American Mobility Program in Higher Education, US Department of Education (with Project Director

Jennifer Oyler and collaborators), \$190,000. [2010-2014].

Service Activities

Professional Activities

- PhD Dissertation Award Committee, Southern Agricultural Economics Association (SAEA)
- Reviewer for Southern Agricultural Economics Association (SAEA)
- Reviewer for Texas Journal of Agriculture and Natural Resources
- Moderator for Selected Papers in International Agriculture and Trade at the Southern Agricultural

Economics Association Annual Meeting, Atlanta, Georgia, January 31 – February 3, 2009.

Graduate Student Advisement, Texas A&M University – Commerce

- Kandy Rojas, M.S. in Agricultural Sciences, program in progress
- Sandeep Patel, M.S. in Agricultural Sciences, program in progress
- Samantha Durborow, M.S. in Agricultural Sciences, program completed

Departmental and College Committees, Texas A&M University – Commerce

- Agricultural Sciences Graduate Coordinator
- Member, Search Committee, Selective Departmental Positions
- Member, IRB College Human Subjects Protection Committee
- Chair, IRB Departmental Human Subjects Protection Committee

- Member, IRB Departmental Human Subjects Protection Committee
- Chair, Schedule of Classes, Department of Agricultural Sciences

Departmental Activities, Texas A&M University – Commerce

- Curriculum revisions
- Graduate and undergraduate students advisement
- Farm Business Management Contest, TAMUC Area V and VI FFA Career Development Event.

Awards

- 2012 Certificate of Appreciation for Research and Creativity Activity, Office of Sponsored Programs, Texas A&M University – Commerce.
- 2012 Provost Award for Research and Creative Activity, Texas A&M University – Commerce
- 2011 Student Recognition Award for Teaching Excellence, Texas A&M University – Commerce
- 2009 Outstanding Dissertation Award, Social Sciences, Graduate School, Texas Tech University
- 2008-2009 Outstanding Doctor of Philosophy Student, Department of Agricultural and Applied Economics, Texas Tech University
- 2003 Outstanding Masters Graduate Student at Texas Tech University, Gamma Sigma Delta (ΓΣΔ), Texas Tech University
- 2003 Outstanding Graduate Student, Gamma Sigma Delta (ΓΣΔ), Texas Tech University
- 2003 High Scholarship, Outstanding Achievement or Service at Texas Tech University, Gamma Sigma Delta (ΓΣΔ), Texas Tech University
- Received education scholarship, \$32,000. [1998-2001]

Affiliations

Agricultural & Applied Economics Association (AAEA)

Southern Agricultural Economics Association (SAEA)

Gamma Sigma Delta Honor Society

Texas Tech Alumni Association

Computer Skills

Statistical packages: SAS, STATA, ITSM, MATLAB, GAUSS, R, GAMS, SHAZAM, and SIMETAR.

Computer programs: Microsoft Office Suite and Latex.