

**Robert L. “Bob” Williams**  
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903-886-5350  
**Career Summary**

Forty-eight years of professional experience as an educator, including positions as high school agriculture teacher, public school administrator, community college instructor/administrator, university professor, interim department head, interim associate director, and teacher educator. Active in professional development through research, service, and professional organizations.

**Education**

**Texas Tech University**

*Ph.D., 2000* Family and Consumer Sciences Education (major)  
Educational Leadership (minor/academic specialization)  
Emphases on teacher education, program development, and evaluation

**Texas A&M University--Commerce** (formerly East Texas State University)

*Master of Science in Agriculture, 1981 Bachelor of Science in Agricultural Education, 1977*

**Professional Certifications**

Vocational Agriculture--Production, General Ag. Mechanics, CVAE/VEH Farm & Ranch;  
Vocational Home Economics Education; Mid-Management Administrator (Principal);  
Temporary Superintendent (expired); Certified Teacher Appraiser: ILT/TTAS/PDAS;  
Master Trainer: USDA-HOSTA National Tractor Safety and Machinery Operation.

**Employment History**

1999 to Present	Texas A&M University-Commerce
2023-Present	William L. Mayo Professor
2015-Present	Professor of Agricultural Sciences ( <i>Agriculture, Food, &amp; Family</i> )
2014 to 2015	Interim Associate Director-School of Agriculture
2009 to 2014	Associate Professor of Agricultural Sciences ( <i>Ag &amp; Family Education</i> )
2002 to 2009	Assistant Professor of Agricultural Sciences ( <i>Ag &amp; Family Education</i> )
2001 to 2002	Interim Department Head for Agricultural Sciences
2000 to 2001	Assistant Professor of Agricultural Science & Technology
1999 to 2000	<i>Ad Interim</i> Instructor and Teacher Educator in Agricultural Sciences
1998	Spur Independent School District Superintendent of Schools
1996 to 1998	Sulphur Bluff Independent School District Principal and Coordinator for Special Populations (PK-12)

1995	Hamlin Independent School District Agriscience Instructor and Coordinator for Career & Technology
1991 to 1995	Wilson Independent School District High School Principal (92-95) Agriscience, Cooperative Education, and Economics Instructor (91-92)
1984 to 1991	Cedar Valley College (Dallas County Community College District) Interim Chair/Dean--Math, Science, PE, & Tech Division (90-91) Program Coordinator/Instructor for Agricultural Sciences (84-90)
1983 to 1984	Allison Independent School District Production Vocational Agriculture Teacher
1981 to 1983	Leonard Independent School District Production Agriculture and General Agricultural Mechanics Teacher
1978 to 1981	Eagle Mountain-Saginaw Independent School District Production Agriculture and General Agricultural Mechanics Teacher
1978	Lake Worth Independent School District Production Vocational Agriculture Teacher

### **Research and Funded Grants**

- Williams, R. (Project Director), Chavarria, P. & Clemmons, B. (2023). *North Texas Alliance for Urban Agricultural Education*. National Institute of Food and Agriculture, USDA, Non-Land-Grant Colleges of Agriculture Capacity Building Grant Award # 2023-70001-40987 (\$748,455).
- Williams, R. (Project Director) & LaVergne, D. (2021). *Developing Urban Agricultural Educators for the 21<sup>st</sup> Century*. National Institute of Food and Agriculture, USDA, Non-Land-Grant Colleges of Agriculture Capacity Building Grant Award # 2021-70001-34832 (\$30,000).
- Williams, R. (Project Director), Wahrmond, J., & Fortenberry, E. (2014). *Agricultural Courses for Dual Credit (AC/DC)*. National Institute of Food and Agriculture, USDA, Beginning Farmer and Rancher Development Program. Award # 2014-38414-22393. (\$250,645 with \$200,516 from Federal)
- Williams, R. (Project Director), Lopez, J., Jones, C. & Villarino, M. (2010). *Breaking Barriers for Beginning Hispanic Farmers and Ranchers*. National Institute of Food and Agriculture, USDA, Beginning Farmer and Rancher Development Program. Award # 2010-49400-21729. (\$849,686 with \$674,768 from Federal)
- Williams, R. (2007). Potential Public Partnerships to Develop Certified Youth Tractor and Machinery Operators. Feasibility study funded by the National Institute of Occupational Safety and Health (NIOSH) through the Southwest Center for Agricultural Health, Injury Prevention, and Education at the University of Texas Health Center-Tyler. (\$12,500)

- Williams, R. (2007). Analysis of Safety Knowledge among Participants of the Agricultural Mechanics Career Development Events for Area V & VI FFA 2005-2007. A descriptive/comparative analysis of archived contest score data with regard to contestants' sex, school size, and school location (rural or urban). Graduate School minigrant. (\$600)
- Williams, R. (2006). Analysis of Enrollment Trends in Secondary Agricultural Science and Family & Consumer Sciences Courses. Comprehensive assessment of Ag and FCS course enrollments with regard to gender, ethnicity, disability, and socio-economic status. Partially funded through the Graduate School. (\$600)
- Williams, R. (2005). Analysis of self-assessments of first year agricultural science majors with regard to agricultural mechanization skills and background. A departmental needs analysis related to the prior preparation in agricultural mechanization of agricultural science majors at Texas A&M University-Commerce.
- Williams, R. (2004). Inventory of reading resources and strategies used by secondary agriscience teachers. Pilot study related to contribution to the *National Reading in Agriscience Research Workgroup*, National Council for Agricultural Education. Funded through the Graduate School. (\$500)
- Williams, R. (2004). Strategies for serving students with disabilities used by secondary agriculture and family and consumer science teachers. Study completed in August 2004 with follow-up ongoing. Funded by the Texas A&M University System Regents' Initiative for Excellence in Education. (\$10,000)
- Williams, R. (2003). Calculator-based laboratories and research projects for secondary agriscience. Funded through the Graduate School. (\$1,000).
- Williams, R. and Anderson, R. (2003). Agricultural science teachers' attitudes toward and adoption of information technology. Study completed July 2003 and funded by Houston Livestock Show and Rodeo. (\$1,500)
- Williams, R. and Arnold, S. (2002). Potential demand for soybean-based forages in dairy rations for Northeast Texas Producers. Study completed in November 2003 and funded by Houston Livestock Show and Rodeo. (\$1,000)
- Williams, R. (2000). *Family and consumer sciences teachers' attitudes toward and stage of adoption of information technology*. Doctoral Dissertation, Texas Tech University.
- Williams, R. (2000). Administrators' and mentor teachers' perception of the preparation of agricultural sciences and technology teacher certification candidates. Minigrant study Spring 2000, Texas A&M University--Commerce.
- Williams, R. (1997). Agriscience teachers' use of The Texas Education Network (TENET) Unpublished paper for HEED 7000--Graduate Research, Texas Tech University.

## Peer Reviewed Publications

- Duerst, C. K., Williams, R., Lopez, J., & LaVergne, D. (2024). Garden access and barriers for low-income community members. *Journal of Agriculture, Food Systems, and Community Development*. Advance online publication. <https://doi.org/10.5304/jafscd.2024.141.008>
- Gonzales, T. & **Williams, R.** (2023). Growing minds and community through a peer-led garden club. *The Agricultural Education Magazine* 95(6), 9-10.
- LaVergne, D.D., Bakhtavoryan, R., & **Williams, R.L.** (2018). Using a logistic regression approach to estimate the influence of demographical factors on small engine and welding competency of secondary agricultural education teachers. *Texas Journal of Agriculture & Natural Resources* 31, 1-11.
- Mayorga, B. B., **Williams, R.L.**, Wickersham-Fish, L. & Duch-Cervallo, T. (2017). Needs assessment for prospective Hispanic farmers and ranchers. *Journal of Southern Agricultural Education Research* 67(1), 86-100.
- Perry, D. K., **Williams, R. L.**, & Anderson, R. G. (2012). Safety conditions and practices in secondary agricultural mechanics programs. *Journal of Agricultural Systems, Technology and Management*, 23, 45-55.
- Anderson, R. & **Williams, R.** (2012). Texas agricultural science teachers' attitudes toward information technology. *Journal of Career and Technical Education*, 27(2), 57-68.
- Anderson, R., **Williams, R.**, & Hillison, J. (2008). Self-Reported Level of Mathematics Integration of Outstanding Virginia Agricultural Educators. *Journal of Southern Agricultural Education Research*, 58 (1).
- Anderson, R., Miller, **R.**, **Williams, R.**, Swafford, M., & Cannon, J. (2007). Gender differences among agricultural education instructors toward information technology. (Abstract) *North American Colleges and Teachers of Agriculture Journal*, 51(2), 75.
- Williams, R.** (2004). Beginning agriscience teacher standards: Whose? How? Why? *The Agricultural Education Magazine* 77, (2).
- Taylor, A. and **Williams, R.** (2003). Skills for agricultural science teachers: Administrators' perspectives. *Texas Journal of Agriculture and Natural Resources*, 16, (1).
- Williams, R.** & Stout, B. (2001). Barriers and incentives to the adoption of information technology by Texas family and consumer sciences teachers. *TAFCS Research Journal*, 1, (6).
- Williams, R.** (1993). Environmental studies in agriscience: An integrated approach. *The Agricultural Education Magazine*, October 1993.

## Peer Reviewed Conference Presentations

**Williams, R.** (2024). Urban school partnerships: Plans, progress, and pitfalls. Abstract in Proceedings and poster presentation at the Western Region Research Conference of the American Association for Agricultural Education. Chico, CA.

**Williams, R.,** Leftrick, C., Garcia, C., Gonzalez, J., Pina, P. (2024). Urban neighbors and neighborhoods: Professional development for school-based agricultural educators. Abstract in Proceedings and oral presentation at the North American Colleges and Teachers of Agriculture Annual Conference. Wooster, OH.

Fincher, L., & **Williams, R.** (2024). Recent SNAP participation in farmers markets: Market representatives' perspectives. Abstract in Proceedings and poster presentation at the Southern Rural Sociological Association Research Conference. Atlanta, GA.

Martinez, S. & **Williams, R.** (2023). School based agricultural educators' perceptions of sustainable agriculture. Abstract in Proceedings and poster presentation at the Western Region Research Conference of the American Association for Agricultural Education. Logan, UT.

**Williams, R.** (2023). Urban agricultural education: Priorities, projects, & plans. Abstract in Proceedings and oral presentation at the North American Colleges and Teachers of Agriculture Annual Conference. Las Cruces, NM.

Richardson, C. & **Williams, R.,** Salem, M. & Doss, W. (2023). An inaugural career development event in sustainable agriculture. Abstract in Proceedings and poster presentation at the National Research Conference of the American Association for Agricultural Education. Raleigh, NC.

Richardson, C. & **Williams, R.** (2022). An inaugural career development event in sustainable agriculture. Abstract in Proceedings and poster presentation at the Western Region Research Conference of the American Association for Agricultural Education. Las Cruces, NM.

Hollenshead, A. & **Williams, R.** (2022). Knowing & growing: Cultivating curiosity outdoors. National Children and Youth Garden Symposium. American Horticultural Society. Richmond, VA.

**Williams, R.,** Cooper, H., Curtin, K., & Richardson, C. (2022). Food security challenges for university freshmen and their families during the shutdown semester of a pandemic. Abstract in Proceedings and poster presentation at the Southern Rural Sociological Association annual research conference. New Orleans, LA.

Cooper, H., **Williams, R.,** & LaVergne, D. (2022). Developing urban agricultural educators for the 21<sup>st</sup> century. Abstract in Proceedings and poster presentation at the Southern Region Research Conference of the American Association for Agricultural Education. New Orleans, LA.

**Williams, R.** (2020). Food Talk Fridays: Finding food in town challenge. Abstract in Proceedings and oral presentation at the North American Colleges and Teachers of Agriculture Virtual Conference.

Lopez, J., **Williams, R.,** LaVergne, & Drake, D. (2019). Perceived barriers and challenges to

study abroad based on academic classification and major within a college of agricultural sciences. Abstract in Proceedings and poster presentation at the Western Region Research Conference of the American Association for Agricultural Education. Anchorage, AK.

Cirkles, M., **Williams, R.**, Lopez, J., & Green, R. (2019). Australian shepherd owners' preferences for dog food. Poster presentation at the Southern Agricultural Economics Association annual meeting. Birmingham, AL.

**Williams, R.**, Lopez, J. & Edler, C. (2019). Evolution of a campus food studies movement. Abstract in Proceedings and poster presentation at the Southern Rural Sociological Association annual research conference. Birmingham, AL.

**Williams, R.**, Lopez, J., & Arnold, C. (2018). Restoration of a Small Farm through Experiential Learning. Abstract in Proceedings and oral presentation at the International Conference on Innovation in Agrarian Topics. La Molina; Lima, Peru.

**Williams, R.**, Arnold C. & Lopez, J. (2018). Farm to Fork Honors Course. Abstract in Proceedings and oral presentation at the North American Colleges and Teachers of Agriculture Annual Conference. Ames, IA.

Arnold, C., Edler, C., Hernandez, C., Lockhart, K. & **Williams, R.** (2018). Starting freshmen with a signature course about food. Abstract in Proceedings and poster presentation at the Southern Rural Sociological Association annual research conference. Jacksonville, FL.

Arnold, C., Hernandez, C., Lopez, J. & **Williams, R.** (2018). Taking the Honors College to the Farm. Abstract in Proceedings and poster presentation at the Southern Rural Sociological Association annual research conference. Jacksonville, FL.

Lopez, Jennifer & **Williams, R.** (2017). Enrollment trends in animal related courses in Texas secondary education based on ethnicity. Abstract in Proceedings and poster presentation at the Western Region Research Conference of the American Association for Agricultural Education. Fort Collins, CO.

Arnold, S., **Williams, R.**, & Salem, M. (2017). . Perceptions of a First Year Experience with the Agriculture Courses for Dual-Credit Initiative. Abstract in Proceedings and poster presentation at the Western Region Research Conference of the American Association for Agricultural Education. Fort Collins, CO.

Joie, L. & **Williams, R.**, (2017). Using round table discussions to engage and inform students. Abstract in Proceedings and oral presentation at the North American Colleges and Teachers of Agriculture Annual Conference. West Lafayette, IN.

Joie, L. & **Williams, R.**, (2017). Mining websites to identify and recruit community college agriculture students. Abstract for research poster presentation at the Southern Association of Agricultural Scientists (SAAS) - Agricultural Communication Section Annual Meeting, Mobile, AL.

- Arnold, C., **Williams, R.**, and Fortenberry, E. (2016). A financial analysis of the FFA career development events hosted by Texas A&M University-Commerce for 2012, 2013, and 2014. Abstract in Proceedings and oral presentation at the North American Colleges and Teachers of Agriculture Annual Conference. Honolulu, HI.
- Williams, R.**, Fortenberry, E. Salem, M., Holtzman, C., Wahrmund, J., and Arnold, S. (2016). A SWOT analysis of agricultural courses for dual credit. Abstract in Proceedings and oral presentation at the North American Colleges and Teachers of Agriculture Annual Conference. Honolulu, HI.
- Clark, C., and **Williams, R.** (2016). Agricultural networking night: An alternate career development activity. Abstract in Proceedings and poster presentation at the North American Colleges and Teachers of Agriculture Annual Conference. Honolulu, HI.
- Williams, R.** (2015). Experiential learning through student farming at five colleges and universities. Abstract in Proceedings and oral presentation at the North American Colleges and Teachers of Agriculture Annual Conference. Athens, GA.
- Williams, R.**, Froneberger, C., & Froneberger, D. (2015). Authentic assessment through a barbeque build-off. Abstract in Proceedings and poster presentation at the Southern Region Research Conference of the American Association for Agricultural Education, Atlanta, GA.
- Sparks, G.D., Lopez, J., & **Williams, R.** (2015). Representation from socially disadvantaged groups in agricultural cooperatives. Abstract for research poster presentation at the Southern Association of Agricultural Scientists (SAAS) - Agricultural Communication Section Annual Meeting, Atlanta, GA.
- Brenes, B., **Williams, R.**, Duch, T., & Heitholt, J. (2014). *Needs Assessment for Prospective Hispanic Farmers and Ranchers*. Abstract in Proceedings and poster presentation at the National Research Conference of the American Association for Agricultural Education, Snowbird, UT.
- Williams, R.** (2014). *A bucketful of learning: Simple strategies for teaching ag ethics*. Abstract in Proceedings and poster presentation at the Southern Region Research Conference of the American Association for Agricultural Education, Dallas, Texas.
- Lopez, J., **Williams, R.**, & Villarino, M. (2013). Northeast Texas Initiative for Cooperative Development. Abstract in Proceedings and poster presentation at the Western Region Research Conference of the American Association for Agricultural Education. Lubbock, Texas.
- Ortez, M., Rojas, K., Brenes, B., Carvallo-Duch, T., Lopez, J., & **Williams, R.** (2013). *Public school partnerships for training beginning Hispanic farmers and ranchers*. Abstract in Proceedings and poster presentation at the National Research Conference of the American Association for Agricultural Education, Columbus, Ohio.
- Brenes, B. & **Williams, R.** (2012). *Latino Agriculture Student Speakers Outreach*. Abstract in Proceedings and poster presentation at the Southern Region Research Conference of the American Association for Agricultural Education, Orlando, Florida.

- Ortez, M., Rojas, K., Brenes, B., Carvallo-Duch, T., Lopez, J., & **Williams, R.** (2012). *Public school partnerships for training beginning Hispanic farmers and ranchers*. Abstract in Proceedings and poster presentation at the Southern Region Research Conference of the American Association for Agricultural Education, Orlando, Florida.
- Pearson, C. & **Williams, R.** (2012). *Gardening across the curriculum: An innovative course*. Abstract in Proceedings and poster presentation at the Southern Region Research Conference of the American Association for Agricultural Education, Orlando, Florida.
- Fortenberry, E. & **Williams, R.** (2012). Teacher attitudes toward the National Safe Tractor and Machinery Operation Program: A comparison by gender, competition, and campus location. Abstract in Proceedings and poster presentation at the Southern Region Research Conference of the American Association for Agricultural Education, Birmingham, Alabama.
- Duch-Cavallo, T., Ortez, M., & **Williams, R.** (2012). *Taking a systems approach to sustainable agriculture in a beginning Hispanic farmer and rancher program*. Abstract in Proceedings and poster presentation at the Southern Region Research Conference of the American Association for Agricultural Education, Birmingham, Alabama.
- Rojas, K., Lopez, J., Villarino, M. & **Williams, R.** (2012). *Real time translation using CTSS encoders for outreach programs*. Abstract in Proceedings and poster presentation at the Southern Region Research Conference of the American Association for Agricultural Education, Birmingham, Alabama.
- Whinery, J. & **Williams, R.** (2012). *Agricultural IQ scholarship quiz for university preview day interest session*. Abstract in Proceedings and poster presentation at the Southern Region Research Conference of the American Association for Agricultural Education, Birmingham, Alabama.
- Clubine, W. & **Williams, R.** (2011). *Meet, Greet, Compete and Eat: Learning by Doing-Leadership Contest*. Abstract in Proceedings and poster presentation at the Southern Region Research Conference of the American Association for Agricultural Education, Corpus Christi, TX.
- Herreros, S., **Williams, R.**, Lopez, J., Jones, C., & Villarino, M. (2011). *Breaking Barriers for Beginning Hispanic Farmers and Ranchers*. Abstract in Proceedings and poster presentation at the Southern Region Research Conference of the American Association for Agricultural Education, Corpus Christi, TX.
- Anderson, R., **Williams, R.**, & Hillison, J. (2009). *Attitudes towards mathematics integration and related professional development needs of outstanding agricultural education instructors*. Paper in Proceedings of Southern Region Research Conference of the American Association for Agricultural Education, Atlanta, GA.
- Williams, R.**, Perryman, A., & Rater, K. (2009). *Principals' perceptions regarding agricultural safety education programs*. Abstract in Proceedings and poster



presentation at the Southern Region Research Conference of the American Association for Agricultural Education, Atlanta, GA.

Lair, M., **Williams, B.**, Wilson, E., & Phillips, T. (2008). *Strategies used by agricultural science teachers to serve secondary students with disabilities*. Abstract in Proceedings and poster presentation at the National Agricultural Education Research Conference of the American Association for Agricultural Education, Reno, NV.

Wilson, E., **Williams, B.** & Lair, M. (2008). *Professional Development for Tractor and Machinery Certification*. Abstract in Proceedings and poster presentation at the National Agricultural Education Research Conference of the American Association for Agricultural Education, Reno, NV.

Anderson, R., **Williams, R.**, & Hillison, J. (2008). *Self-Reported level of mathematics integration of outstanding Virginia agricultural educators*. Proceedings of Southern Region Research Conference of the American Association for Agricultural Education, Dallas, TX.

Anderson, R., Miller, R., **Williams, B.**, Swafford, M., & Brooks, K. (2008). *Gender differences among agricultural education instructors' attitudes toward information technology*. Abstract in Proceedings and poster presentation at the Southern Region Research Conference of the American Association for Agricultural Education. Dallas, TX.

**Williams, B.**, Phillips, T., Lair, M., & Wilson, E. (2008). *Strategies used by agricultural science teachers to serve secondary students with disabilities*. Abstract in Proceedings and poster presentation at the Southern Region Research Conference of the American Association for Agricultural Education. Dallas, TX.

**Williams, R.**, Wilson, E., & Lair, M. (2008). *Professional development for tractor and machinery certification*. Abstract in Proceedings and poster presentation at the Southern Region Research Conference of the American Association for Agricultural Education. Dallas, TX.

Anderson, R., Miller, R., **Williams, R.**, Swafford, M., & Cannon, J. (2007). *Gender differences among agricultural education instructors toward information technology*. Abstract in Proceedings and poster presentation at the Association of Career and Technical Education Research Conference. Las Vegas, NV.

Anderson, R., Miller, R., **Williams, B.**, Swafford, M., & Cannon, J. (2007). *Gender differences among agricultural education instructors toward information technology*. Paper presented at North American Colleges and Teachers of Agriculture Conference, Champaign, IL.

Lair, M. and **Williams, R.** (2007). *A<sup>2</sup>E<sup>2</sup>: Integration of mathematics into secondary agriscience*. Abstract in Proceedings and poster presentation on innovations in teaching. American Association for Agricultural Education, National Research Conference. Minneapolis, MN.

- Lair, M. and **Williams, R.** (2007). *A<sup>2</sup>E<sup>2</sup>: Integration of mathematics into secondary agriscience*. Abstract in Proceedings and poster presentation on innovations in teaching. American Association for Agricultural Education-Southern Region Research Conference. Mobile, AL.
- Wilson, E. and **Williams, R.** (2007). *Agriscience teachers' attitudes and perceptions regarding safety programs*. Poster presentation. TAMUS Fifth Annual Pathways to the Doctorate Student Research Symposium. Stephenville, TX.
- Williams, R.**, Phillips, T., Fullwood, H., and Stanley, R. (2004). *Strategies used by secondary family consumer sciences and agricultural sciences teachers to serve students with disabilities*. Poster presentation. Eighth Annual Conference on School-University Partnerships, Texas A&M University System. San Antonio, TX.
- Williams, R.**, Arnold, S., Guillory, E. & Oehlke, T. (2002). *Agricultural sciences and family & consumer sciences: Transition to teaching for degreed professionals*. Poster presentation TAMUS Conference on School-University Partnerships. Houston, TX.

### Invited Presentations and Talks

- Williams, R.** (2024). Integrating sustainable agriculture into FFA competitive events. Teaching content area presentation at Agriculture Teachers Association of Texas Summer Professional Development Conference.
- Williams, R.** (2024). Urban farm tours in the City of Dallas. Teaching content area presentation at the Agriculture Teachers Association of Texas Summer Professional Development Conference.
- Scherer, H. & **Williams, R.** (2024). Improving Food-Energy-Water-Nexus-Based Education: Defining New Research Directions from Problems of Practice. Professional Development Workshop at the North American Colleges and Teachers of Agriculture Research Conference. Wooster, OH.
- Leftrick, C., Garcia, C., Gonzalez, J., Pina, P. & **Williams, R.** (2023). Getting to know your urban neighbors and neighborhood. Teaching content area presentation at Agriculture Teachers Association of Texas Summer Professional Development Conference.
- Williams, R.** (2023). Urban farms for education and food outreach in Dallas County. Teaching content area presentation at Agriculture Teachers Association of Texas Summer Professional Development Conference.
- Williams, R.** (2020). Frank discussions and fresh perspectives: Sustainable agriculture. Teaching content area presentation at Agriculture Teachers Association of Texas Virtual Summer Professional Development Conference.
- Williams, R.** (2019). Urban ag & food security: Nearby educational opportunities in higher education. *Earth X* Conference hosted by El Centro College. Dallas, TX.

- Williams, R.** (2014). Implementing a tractor safety program to certify 14-15 year olds as safe operators for agricultural employment. Texas Agricultural Science and Technology Teachers' Professional Development conference. *Presented annually since 2007.*
- Williams, R.** (2009). Strategies for engaging youth in safe practices. Farm Safety and Health Workshop for Extension Educators. Hosted by Noble Foundation and the Southwest Center for Agricultural Health, Safety, and Education.
- Williams, R.** (2007). Certification for National Safe Tractor and Machinery Operation. Texas Professional Development Conference for Agricultural Science and Technology Teachers.
- Williams, R.** (2006). Reinforcing reading regularly in Career and Technology courses. Texas Career Education Conference.
- Thompson, A. and **Williams, R.** (2005). Barriers to Female Enrollment and Participation in Agricultural Mechanics Courses. Texas Career Education Conference.
- Williams, R.** (2005). Overcoming obstacles to enrollment of college bound students in CTE courses: A facilitated roundtable discussion with counselors and administrators regarding the obstacles limiting CTE enrollment by college bound students and potential strategies for overcoming these obstacles. Texas Career Education Conference.
- Williams, R.** (2004). Who are these students in Special Populations? Texas Professional Development Conference for Agricultural Science and Technology Teachers.

### **Academic Program Development**

- Master of Science in Agricultural Leadership, Education, and Communications (2024)  
The MS in ALEC is available in both thesis and thesis options and will be offered in a fully online, asynchronous format that allows working agricultural professionals the opportunity to complete courses with flexible scheduling. The School Leadership Option for this program combines courses in ALEC with courses in EDAD that are required for principal certification, thus allowing current agricultural educators the opportunity to strengthen their teaching and prepare for roles in school leadership.
- Graduate Certificate in Sustainable Food Systems (2021)  
This 12 semester hour graduate certificate was developed to provide a specific focus on Sustainable Food Systems for those students seeking such emphasis. Program was designed for primarily for secondary, postsecondary, and extension educators who are instrumental in effecting the positive changes in our food systems.
- Bachelor of Science in Sustainable Agriculture and Food Systems (2020)  
This is the first degree program in sustainable agriculture in the TAMU System and the second in the state. The interdisciplinary program consists of six new courses combined with existing courses within the College of Agricultural Sciences and Natural Resources to create a new educational opportunity that will increase and

diversify the student body within CASNR and introduce students to new and emerging professions as well as entrepreneurial opportunities.

#### Transition to Teaching in Ag/FCS (*Ongoing since Summer 2001*)

This program was developed during 2000-2001 and implemented in the summer of 2001. It is a graduate-level program for persons seeking initial certification to teach Agriculture, Food, & Natural Resources or Family & Consumer Sciences. The curriculum consists of six graduate courses that integrate pedagogy, learning assessment, youth development, special populations, information technology, and program development into professional practice for Ag or FCS teachers grades 6-12.

### **Collaborative Academic Projects**

#### Food Studies Minor (*ongoing since 2018*)

The minor in food studies was launched in the Fall of 2018 after the overwhelming interest from students in food-themed signature courses. The interdisciplinary minor consists of courses from the Colleges of Agricultural Sciences and Natural Resources, Education and Human Services, and Humanities, Social Sciences, and Arts.

#### Signature Course Initiative (2017-2022)

I served on the planning committee and developed a new course for UNCO 1310, the university's new signature course initiative is intended to increase student communication skills, developing stronger institutional identity and improve freshmen retention. I developed *Food: Choices, Challenges, and Consequences* as one of the signature courses and offered it for three years. I also taught *Cowboys & Cowgirls* as a signature course for two years. The course emphasized the culture of the American Cowboy from its origin to present day and includes elements of history, geography, economics, art, music, poetry, literature, fashion, and sport.

#### Family and Consumer Sciences Minor (*ongoing since 2005*)

The minor in Family and Consumer Sciences consists of courses from a variety of disciplines that support family and consumer oriented professions and align with careers with organizations and agencies offering support to families.

#### Certified Safe Tractor and Machinery Operator (July 2005-2016)

This is a safety education initiative targeted at secondary agricultural science teachers and students. Activities were: (1) outreach promotions to FFA and 4-H groups regarding the potential hazards associated with tractor operations and (2) professional development for pre-service and in-service secondary agricultural science teachers that qualifies them to teach a U.S. Department of Labor approved tractor safety course that qualifies students ages 14-15 to be legally employed as tractor operators. This project was originally funded by the Southwest Center on Agricultural Health, Injury Prevention, and Education at University of Texas Health Center-Tyler (SW Ag Center) through a \$5000 grant to Collegiate FFA @ TAMUC. I continued providing professional development workshops on this program for Texas agricultural science teachers and county extension agents until 2016. During 2008, I worked with the SW Ag Center to conduct a *master trainer* program to provide more master trainers for Texas. One of those master trainers continued the outreach that I started with high school agriculture teachers and extension agents, and has expanded to agricultural and community-based organizations.

#### Virtual Field Trip Network (2001)

The Virtual Field Trip Network was a project funded under a Technology In Education (TIE) Grant with Liberty-Eylau ISD and the Texas Institute for Educational Partnerships at Texas A&M University-Texarkana. The project consists of public school, university, and informal educators developing web-based resources to share the vast cultural and historic resources of Texas with public school students through virtual field trips. Proposal accepted and project completed entitled *Texas Cotton*. Total grant support for this project: \$24,000.

#### Northeast Texas Regional Educational Technology Network Consortium (1998)

Twenty-one rural school districts formed a partnership to apply for technology funding through the Texas Infrastructure Fund (TIF). Responsibilities included leading district technology team through planning and network design for Internet connectivity to every classroom, laboratory, and library. District share of grant: \$96,000.

#### TENET Conference Moderator/Facilitator (1993-1999)

A computer conference on the Texas Education Network (TENET) was established as part of the TENET mini-grant program with me serving as the moderator/facilitator. I moderated the conference (later called a *forum*) on TENET until 1999.

#### Professional Development School (1991-1995)

Wilson ISD, Region 17 Educational Service Center, and Texas Tech University worked together to provide field-based instruction for pre-service teachers and internships for educational counseling graduate students. I served as the district liaison.

#### Global Laboratory Project (1992-1993)

Sponsored by the National Science Foundation, this project included schools from around the world in environmental studies that utilized electronic mail, computer conferencing, and mentors from various field of science. *Agriscience 101* students collaborated with scientists and other students via telecommunications.

### **Committee Assignments**

2023	Member-Search Committee for Director of Student Career Readiness
2023	Member-Search Committee for Veterinary & Biomedical Technology
2022	Member-Search Committee for Interim Dean of Honors College
2009	Chair-Search Committee for Assistant Professor of Agribusiness
2008	Department Head Search Committee in Agricultural Sciences
2008	Blacklands Agronomist Search Committee

2007-Present	University Honors Council
2007-2020	Council on Educator Preparation
2006-2011	Bachelor of Liberal Studies Oversight Committee, Sciences Representative
2004-2020	Teacher Education Admission, Retention, and Appeals Committee
2003	Chair, <i>ad hoc</i> Proposal Review Committee for PhD in Science Education
2002-2003	<i>SMART</i> (Science and Math Advancement in Research & Teaching) Committee
2002	Science Building Advisory Team
2001	Chair, Agricultural Economics Faculty Search Committee
1999-2001	EXCET Task Force, Texas A&M University--Commerce
1998	Fiscal Agent/Chair, Rolling Plains Educational Technology Consortium
1996-1998	Chair, Sulphur Bluff ISD Site-Based Decision-Making Committee
1995	Workforce Development Advisory Board, Abilene Region
1992-1995	Wilson ISD Site-Based Decision-Making Committee
1994	Texas Tech University--Secondary Education Restructuring Committee
1992-1994	Steering Committee, South Plains Tech-Prep Consortium
1992-1994	Advisory Committee, Texas Tech Professional Development Schools Project
1990-1991	Administrative and Instructional Councils, Cedar Valley College
1991	Member, Search Committee for Communication Division Chair, CVC
1990	Chair, Math Faculty Search Committee, Cedar Valley College
1988-1992	Dallas District Advisory Committee, Texas Department of Agriculture

### **Professional Development**

#### **An Analysis of Examples and Opportunities in Urban Agriculture in Dallas & Collin Counties**

This is the abbreviated title of my proposal for Faculty Development Leave for the Fall 2019 semester. During that semester, I identified existing examples and potential opportunities for urban food production using qualitative research methods. I developed proposals for one new graduate course, a graduate certificate, and a grant proposal related to sustainable food systems. During this leave from instructional and service obligations, I also assisted with recruiting and outreach efforts at the State Fair

of Texas, FFA events, and collaborated with community college representatives on the expansion of courses in food and agriculture on their respective campuses.  
National Collaborative for Food, Energy, & Water Systems Education (NC-FEW)

This multidisciplinary group of university professors, postsecondary instructors, and K-12 teachers communicates and collaborates through conferences and online communities regarding the teaching and research about the intersectionality and interdependence of food, energy, and water and their essential roles in human survival. Support for the national collaborative is grant-funded through NSF and USDA. Disciplines involved include earth science, geography, biology, chemistry, agricultural sciences, and teacher education. I attended two sharing and planning conferences and co-presented a workshop with the project PI at the 2024 the North American Colleges and Teachers of Agriculture research conference. Engagement in this collaborative has complimented my instructional and research transition from agricultural education to sustainable agriculture and food systems and helped me to better understand environmental issues from the perspectives of researchers and educators in other disciplines. I have been active with this group since 2018.

#### Experiential Learning through Student Farming at Selected College and Universities

I spent the Fall 2013 semester on Faculty Development Leave and during this time visited five college and university campuses that had been recognized for having active student farming programs. I interviewed faculty, staff, and students from the various institutions, collected photographs, videos, and documents for further analysis regarding how the student farming programs were established, funded, delivered, and assessed regarding academic credit (if applicable). I developed a presentation for general academic audiences and presented at the 2015 NACTA conference of over this research. This research and professional development inspired my current teaching, research, and outreach agenda, which focuses on strengthening university student, faculty, and community understanding of issues related to food security, quality, and sources. The BS in Sustainable Agriculture and Food Systems and the Graduate Certificate in Sustainable Food Systems are long-term outcomes of that agenda.

#### Master Trainer: National Safe Tractor and Machinery Operation

During the summer of 2004, I attended a USDA sponsored workshop to become qualified as a master trainer of secondary agricultural science teachers and county extension agents who wish to implement the National Tractor Safety and Machinery Operations certification program for their students. This led to a state-wide initiative on tractor and machinery safety that I coordinated in collaboration with the SW Ag Center and the Agriculture Teachers Association of Texas that is still ongoing.

#### Academy for Educator Development

The Academy was a component of the TAMUS Regents' Initiative. Participation included attending workshops and discussion sessions related to teacher preparation issues, educational research methods, and grant writing. Also included were attendance and presentation at TAMU system-wide conferences related to teacher preparation and school-university partnerships. During the FY 2004, I presented

research in agricultural education and strategies for serving special populations through career-technical education.

#### United States Department of Agriculture, Natural Resources Conservation Service

Served a 40-hour internship in Collin, Fannin, and Hunt counties under the direction of Sam Stewart, Natural Resources Conservation Manager. Expanded knowledge and skills related to conservation planning and land management resulting in the development of AMC 423 (now AG 423) Natural Resources Management, which is in such demand that it is offered every semester. Internship was funded through a professional development grant from Upper East Texas Tech Prep. (May 2002)

### **Service to Industry and Education**

Member—Northeast Texas Career and Technical Education Consortium Advisory Committee

Member—Dallas County Extension Citizen Gardening Advisory Committee (2017-2023)

Advisor—Collegiate FFA @ Texas A&M University-Commerce. (1999-2018)

Advisor—Latino Agriculture Student Speakers' Outreach. (2011-2018)

Advisor—Twin Oaks Farm for Experiential Learning. (2017-2024)

Agricultural Science & Technology Teacher Standards Committee, State Board for Educator Certification (2002-2010).

Coordinator—Annual Reception for Agricultural Education Alumni. Ongoing

Coordinator—Invitational FFA Leadership Development Events (2005-2016)  
Area V FFA Leadership Development Events, Texas FFA (1999-2004)  
Area V and VI Career Development Events, Texas FFA (2000-2019, 2024)

Director—Speaking Events, Regional University Interscholastic League Meet (2004-2008)

Family and Consumer Sciences Certification Standards Committee, State Board for Educator Certification/Texas Education Agency (2009).

Human Capital Crisis Task Force, USDA-NRCS South Central Region (2002).

Judge-Agricultural Mechanics Contest, Ft. Worth Stock Show/State Fair of Texas (Ongoing).

### **Master's Theses Advised**

Richardson, Clanci. (2022). *Preparing and piloting a sustainable agriculture career development event*. Master's thesis: Texas A&M University-Commerce.

Duerst, Cherish. (2022). *Barriers to Household Gardening Among Food Pantry Customers*. Master's thesis: Texas A&M University-Commerce. (Farmer-Bemidji, MI)



- Martinez, Sofia. (2021). *Teachers' perceptions of sustainable agriculture*. Master's thesis: Texas A&M University-Commerce. (Academic Advisor-TAMUC)
- Lopez, Jennifer. (2019). *An assessment of College of Agricultural Sciences and Natural Resources student interest in study abroad*. Master's thesis: Texas A&M University-Commerce. (ERP Business analyst-University of North Texas System)
- Pearson, Camilla. (2013). *Concerns of early career agricultural science teachers and the perceived effectiveness of educator preparation programs in addressing those concerns*. Master's thesis: Texas A&M University-Commerce. (Small business owner)
- Brenes, Baleshka. (2013). *Needs assessment for prospective Hispanic farmers and ranchers*. Master's thesis: Texas A&M University-Commerce. (PhD Agricultural Education, Texas Tech; Director of Agricultural Programs at UA-Yuma)
- Clubine, Wendie. (2011). *Principals' perceptions of school gardens*. Master's thesis: Texas A&M University-Commerce. (District Extension Agent for Kansas State University)
- Perry, Dustin. (2010). *Comparison of safety conditions and practices in selected secondary agricultural mechanics programs*. Master's thesis: Texas A&M University-Commerce. (2014 PhD Agricultural Education, Iowa State; Professor-MSU)
- Rater, Kristal. (2009). *Teachers' perceptions of Agricultural Algebraic Extensive Exploration*. Master's thesis: Texas A&M University-Commerce. (USDA)
- Wilson, Erin. (2009). *Secondary agriscience teachers' perspectives and preferences regarding agricultural safety education and certifications*. Master's thesis: Texas A&M University-Commerce. (Agricultural Sciences teacher-Prairiland ISD)
- Durst, Amy. (2005). *Follow-up study of degree recipients from 1999-2004, Department of Agricultural Sciences at Texas A&M University-Commerce*. Master's thesis; Texas A&M University-Commerce. (Elementary teacher in Oklahoma)
- Phillips, Terri. (2004). *Strategies used to serve secondary students with disabilities by agricultural science and family consumer sciences teachers*. Master's thesis; Texas A&M University-Commerce.
- Anderson, Ryan. (2003). *Agricultural science teachers' attitudes toward information technology*. Master's thesis; Texas A&M University-Commerce.  
(2006 PhD Career-Technical Education, Virginia Tech; Assoc. Prof-Texas State U.)
- Arnold, Shannon. (2003). *Assessment of the demand for soybean forages by Northeast Texas dairy farmers*. Master's thesis; Texas A&M University-Commerce.  
(2007 PhD Agricultural Education, U of Florida; Professor-Montana State University)
- Taylor, Amanda. (2001). *Skills for agricultural sciences teachers: School administrators' perspectives*. Master's thesis; Texas A&M University-Commerce.
- Usselton, Joe C. (2001). *Prioritization of tool and equipment use for instruction in agricultural mechanics courses*. Master's thesis; Texas A&M University-Commerce.

(Agricultural Science teacher, Collinsville ISD)

### **Undergraduate Honors Theses Advised**

- Fincher, Laura. (2024). *Recent SNAP Participation in Farmers Markets: Market Representatives' Perspectives*. Thesis with Highest Honors.
- Cirkles, Megan. (2018). *An Analysis of Australian Shepherd Owners' Preferences for Dog Food Purchases*.
- Johnson, Hope. (2017). *Agriculture Teacher Couples: Opportunities and Challenges*
- Lopez, Jennifer. (2017). *Enrollment trends between traditional and non-traditional animal-related courses in secondary education*. Thesis with Highest Honors.
- Arnold, Chelsea. (2015). *A Financial Analysis of the Career Development Events hosted by Texas A&M University-Commerce for the years 2012, 2013, and 2014*.
- Calixto, Cristian. (2015). *Agricultural Teachers' Concerns: A Regional Perspective*.
- Wallace, Jaylen. (2015). *The Plow and the Pen: United States Farm Policy and the Northeast Texas Farmer*.
- Perryman, Ashly. (2008). *Secondary School Administrators Perceptions and Attitudes Toward Agricultural Safety Education Programs*.
- Thompson, Amanda. (2005). *Assessment of secondary agriscience teachers' attitudes towards and strategies used for reading enrichment*. Thesis with highest honors.

### **Doctoral Committee Service**

- Talat, Madiha. (2020). *Comparing board member and administrator perceptions of the effectiveness of Islamic school boards in America*. Doctoral Dissertation: Texas A&M University-Commerce
- DuBus, Lyle W. (2013). *The role of the superintendent in district technology planning*. Doctoral dissertation: Texas A&M University-Commerce.
- Bryant, Alan C. (2010). *Funding equity in Oklahoma public schools and its impact on student achievement on Algebra I end of instruction tests*. Doctoral Dissertation: Texas A&M University-Commerce.
- Davis, Rhonda L. (2009). *A study of high school scheduling models' effect on student achievement*. Doctoral dissertation: Texas A&M University-Commerce.
- Anderson, Ryan G. (2006). *Attitudes of outstanding Virginia agricultural education teachers toward mathematics integration*. Doctoral dissertation: Virginia Polytechnic Institute and State University.

## Graduates Advised for Master of Education in Agricultural Education

Elizabeth Rudd	David Henderson	Melissa Broussard
Shannon Luttrell	Michael Hinsley	Amanda Cornhel
Jerri Banister	Shannon Galbraith	Brodrey Tindol
Rowdy Akins	Lindsay Dick	Virginia Gatewood
Alisha Chapman	Jaquayla Dotson	Joan Macewich
Amber Anderson	Doug Weir	Michelle Jones
Melissa Wood	Rochelle Ragan	

*(Master of Education was phased out in 2013 and merged with the Master of Science)*

## Professional Organizations

- Agriculture Teachers Association of Texas (1978-1996, 2000-Present)
- American Association for Agricultural Education (since 2005)
- American Association of Family and Consumer Sciences (1998-2004)
- Texas Association of Family and Consumer Sciences (1998-2004)  
Chair, Education and Technology Division (2002-2003)
- Texas Association of Secondary School Principals (1993-1998)
- Association of Career and Technology Education (formerly AVA, 1990-2006)
- North American Colleges and Teachers of Agriculture (since 2012)
- Southern Rural Sociological Association (2018-2024)
- Texas/National Rural Education Association (1997-1999)
- Texas Junior College Agriculture Association (1985-1991)

## Recognition

- 2024 Forty Year Service Award-Agriculture Teachers Association of Texas
- 2023 **William L. Mayo Professorship**-Texas A&M University-Commerce
- 2018 Excellence in Teaching Award-National Society for Leadership and Success TAMUC
- 2018 Thirty-five Year Service Award-Agriculture Teachers Association of Texas
- 2015 **Investigator of the Year**-Office of Research and Sponsored Programs at TAMUC
- 2014 **Chancellor's Academy of Teacher Educators**-TAMUS
- 2013 Thirty Year Service Award-Vocational Agriculture Teachers Association of Texas
- 2012 **Trezzie Pressley "Ceaseless Industry" Award**-TAMUC Faculty Senate
- 2011 **Richard Lampe Award for Integrity in Education**-TAMUC Faculty Senate
- 2008 Twenty Five Year Service Award-Vocational Agriculture Teachers Assn. of Texas
- 2003 Twenty Year Service Award-Vocational Agriculture Teachers Association of Texas
- 2001 **Outstanding Dissertation** (National), AAFCS Education and Technology Division
- 1998 **Principal and Campus Recognition**, *Texas Successful Schools Awards Program*
- 1997 *Lifetime Commitment to Agricultural Education*--presented by Sulphur Bluff FFA
- 1993 Principal and Campus Recognition, *Texas Successful Schools Award Program*
- 1992 Fifteen Year Service Award--Vocational Agriculture Teachers Association of Texas

## **Courses Taught**

### University Courses at Texas A&M University-Commerce

Agricultural Economics (Occasionally until 2011)  
Agricultural Policy I (Occasionally until 2011)  
Agricultural and Youth Leadership (Fall until 2019)  
Agricultural Safety (Summers)  
Agricultural Systems Technology Management (Fall until 2012)  
Agricultural Structures and Materials Handling Systems (Fall-Even Years until 2012)  
Agricultural Power and Energy Systems Management (Fall-Odd Years until 2012)  
Agroecology (Fall)  
Applied Ethics: U.S. and World Agriculture (Fall and Spring)  
Assessment and Evaluation in AST/FCS\* (Summer II until 2014)  
Community Food Systems\* (Winter-mini)  
Community Leadership & Development (Summers, Odd Years)  
Contemporary Issues in Sustainable Agriculture (Fall)\*  
Cowboys & Cowgirls (University Signature Course)  
Grant Writing\* (Spring)  
Foundations of Family and Consumer Sciences  
Field Experience in Teaching\* (Spring until 2020)  
Food: Choices, Challenges, and Consequences (University Signature Course until 2019)  
Food in Social Context\* (Summer I)  
Food Production and Processing\* (Occasionally, Summers)  
Food Systems: Farm to Fork (Spring)  
Gardening Across the Curriculum\* (Spring)  
Housing & Home Improvement (Fall)  
Instructional Management in AST/FCS\* (Summer I)  
Instructional Techniques in Family and Consumer Sciences  
Introduction to Sustainable Agriculture (Fall)  
Laboratory Management in Agricultural Mechanization (Summer until 2012)  
Methods of Teaching Agricultural Sciences and Technology (Spring until 2019)  
Models of Experiential Learning\* (Spring until 2016)  
Natural Resources Management (Occasionally until 2016)  
Principles of Food Science (Fall)  
Program Development in AST/FCS\* (Summer II-Even Years)  
Practicum in Teaching AST/FCS\* (Fall until 2020)  
Program of Instruction in Agricultural Sciences and Technology (Spring until 2015)  
Research Literature and Techniques (Occasionally until 2017)  
Special Populations in AST/FCS\* (Spring)  
Student Teaching in the Field-Based Environment (Spring until 2018)  
Urban Agriculture  
Water Issues and Ethics\* (Summer I)  
\*Denotes graduate course.

### Community College Courses (Previously taught at Cedar Valley College)

The Agricultural Industry	Introduction to Agricultural Economics
General Animal Science	Computer Applications in Agriculture
Dairying (Introductory)	Poultry Science (Introductory)
General Horticulture	Agromony (Introductory)
Agricultural Entomology	Farm Shop
Farm Power and Machinery	Agricultural Construction

## **Graduate Courses Completed in Teaching Content Areas**

### **AGRICULTURAL EDUCATION** (24 sem hrs)

AGED	5305	Program Development in Agricultural & Extension Education-TTU-1995
AGED	5001	Contemporary Issues: Alternative Agriculture-TTU-1995
AGED	5307	Methods of Technological Change-TTU-1994
AGED	597	Special Topics: Problems in Ag Mechanics Education-A&M-C-1986
AGED	579	History and Principles of Vocational Education-A&M-C-1984
AGED	595	Research and Literature Techniques-A&M-C-1981
AGED	570	Teaching Farm Mechanics-A&M-C-1980
AGED	529	Workshop in Agricultural Education-A&M-C-1979

### **FAMILY & CONSUMER SCIENCES EDUCATION** (33 sem hrs)

HEED	5311	Evaluation in Family and Consumer Sciences-TTU-1997
HEED	5311	Problems in Home Economics Education-TTU-1996
HUSC	6307	Professional Issues in Home Economics-TTU-1995
HEED	5301	Administration in Home Economics Professions-TTU-1995
HEED	5304	Techniques of Research in Home Economics-TTU-1995
HEED	5346	Methods of Cooperative Extension Education-TTU-1995
HEED	7000	Research-Independent Study (6 sem hrs)-TTU-1995
HEED	5309	Occupational Home Economics-TTU-1994
HEED	5345	History and Philosophy of Vocational Education-TTU-1994
HEED	5302	Curriculum Development-TTU-1994

### **AGRICULTURAL MECHANIZATION & TECHNOLOGY SYSTEMS** (18 sem hrs)

VOED	597	Methods of Organizing the Vocational Shop-A&M-C-1987
AG	530	Agricultural Structures-A&M-C-1987
AG	531	Agricultural Power-A&M-C-1981
AG	525	Advanced Farm Shop-A&M-C-1980
IT	505	Problems in Industrial Education-A&M-C-1981
IT	509	Problems in Adult Industrial and Technical Education-A&M-C-1980

### **APPLIED ECONOMICS (Agricultural, Consumer, & Economics)** (24 sem hrs)

FS	5803	Time and Energy Management-TWU-1996
FS	5833	Family Economics-TWU-1995
ECO	5300	The Economic Environment-TTU-1992
AECO	5313	Microcomputer Applications in Agriculture-TTU-1992
AECO	5304	Farm Business Analysis and Management-TTU-1991
ECO	568	Free Enterprise: Concepts and Principles-A&M-C-1987
ECO	569	Free Enterprise: Materials and Techniques-A&M-C-1987
AG	557	Economics of Farmers' Movements-A&M-C-1978

### **ANIMAL SCIENCE** (18 sem hrs)

RW&M	5312	Conservation of Natural Resources (Wildlife)-TTU-1991
AG	520	Advanced Sheep and Goat Production-A&M-C-1984
AG	521	Advanced Poultry Production-A&M-C-1981
AG	511	Advanced Farm Meats-A&M-C-1980
AG	517	Advanced Swine Production-A&M-C-1980
AG	527	Advanced Dairy Production-A&M-C-1978

### **EDUCATIONAL LEADERSHIP** (33 sem hrs)

EPSY	5381	Intermediate Educational Statistics-TTU-1997
EPSY	5382	Qualitative Research in Education-TTU-1996
EDAD	5320	School District Resource Management-TTU-1995
EDAD	5340	Educational Law-TTU-1995
EDHE	5322	Institutional Planning-TTU-1994
EDAD	6001	Organizational Communication-TTU-1993
EDAD	5392	Mid-Management Internship-TTU-1993
EDAD	5310	General Supervision-TTU-1992
EDAD	5330	Organization and Administration of School Improvement Programs-TTU-1992
EPSY	5380	Introduction to Educational Statistics-TTU-1992
EDIT	5319	Advanced Educational Computing-TTU-1991