



## Final Annual Report

### Tennessee Tech University

#### President

#### Provost

#### College of Agriculture and Human Ecology

#### School of Agriculture



#### Definition of Unit

**Department/Unit Contact:** Dennis Duncan

#### Mission/Vision/Goal Statement

##### I. School of Agriculture's Mission Statement:

Our mission is to prepare students for leadership roles in the food, fiber, and natural resource professions by providing state of the art experiential learning through agriculture. The School of Agriculture (SOA) mission statement flows from the TTU Mission Statement "to provide leadership and outstanding programs in . . . agriculture and human ecology, nursing, music, art and interdisciplinary studies." The SOA mission statement additionally supports the TTU Flight Plan to improve the undergraduate experience.

The SOA offers a Bachelor of Science degree in Agriculture focusing on one of 11 concentrations. Those concentrations span across the broad discipline of Agriculture including: Agribusiness Management, Agritourism, Agricultural Communications, Agricultural Education, Agricultural Engineering Technology, Agronomy and Soils, Environmental Agriscience, Animal Science/Pre-Veterinary Science, Horticulture, Nursery & Landscape Management, and Turfgrass Management.

We prepare our students to, upon graduation, enter a multitude of fields in the agricultural industry or to continue their education through graduate school. Previous graduates can be found across Tennessee and the United States in such roles as park rangers, veterinarians, golf course superintendents, government officials, business owners, county agents, conservationists, university professors, military officers, high school teachers, consultants, agricultural product/equipment sales, bankers, farm managers, landscape developers and the list continues to grow.

The School of Agriculture is blessed with two unique farms. In 1965 the Shipley Farm (300 acres) was acquired and houses the Hyder-Burks Pavilion, horticultural greenhouses, the organic farming operation, sheep, hogs, beef cattle, poultry, varied forage and row crops. Finally, in 2009, the Oakley Farm (1800+ acres) expanded the



possibilities for research and teaching with access to 700 plus cows and calves with additional cropland and potential locations for greenhouses and other agricultural enterprises. These facilities are not supported by direct line funding by the state and therefore must pay their own way, however, all facilities are dedicated to the overall educational experience of our students.

Our vision states, "We are the hallmark program of experiential education in agriculture."



### **Program Goal 1.1- Increase undergraduate student enrollment**

#### **Define Goal**

Increase undergraduate student enrollment.

#### **Intended Outcomes / Objectives**

Meet or exceed our annual enrollment from 2006 - 2013. The School of Agriculture (SOA) will use a combination of the following to meet this goal: 1) Strive to increase the number of freshmen enrolled each fall; 2) Strive to maintain at least an 90% retention rate Fall-to-Spring and 85% Fall-to-Fall; 3) Assist any student interested in transferring to make the process easy, and try to have at least 20 transfer students per year 4) As funds allow maintain a strong, focused recruitment program.



### **Program Goal 1.2 - Encourage external funding and increase interaction of faculty and students**

#### **Define Goal**

Encourage external funding and increase interaction of faculty and students.

#### **Intended Outcomes / Objectives**

Tennessee Tech University (TTU) is a non-land grant university, which makes it more difficult for the School of Agriculture (SOA) to procure grant funds. Because of this over the years the SOA has migrated to more of a teaching unit than a research unit. In the past 3 years a renewed emphasis has been put on securing grant funds - at local, state and national levels.

The goal is to have at least as many grant applications as there are faculty members. One of the purposes of the grants are to include undergraduates in the research process. The grant/s can be URECA, QEP, or other grants offered through national, state, or local



organizations. Most recently faculty have secured multiple QEP, Farm Credit Services, and a Tennessee Department of Agriculture grants.

As a result of undergraduate research, the SOA would like to have at least 5 students to present a poster at the TTU Campus Research Day. Student participation in at least one of the student organizations is strongly encouraged. The faculty serve as advisors to these organizations.

### **Program Goal 1.3 - Promote and enhance faculty and staff development**

#### **Define Goal**

Promote and enhance faculty and staff development to the extent resources permit.

#### **Intended Outcomes / Objectives**

Funds have been secured for each faculty member to attend 1 National Professional meeting a year. Also, if additional funding and resources are available the staff will be encouraged to attend a professional development meeting each year.

### **Program Goal 1.4 - Strengthen curriculum and increase resources and opportunities for student learning**

#### **Define Goal**

Strengthen curriculum and increase resources and opportunities for student learning.

#### **Intended Outcomes / Objectives**

Use the various tests and interviews listed in Assessment 1.4 to review the curriculum and make necessary changes. Additionally, SOA administration plans to conduct a thorough needs assessment of industry leaders across Tennessee.

### **Student Learning Outcome 1.1**

#### **Define Goal**

Students will be prepared for employment and to advance in Agricultural careers.

#### **Intended Outcomes / Objectives**

The ACAT score is an indication of how well prepared the student is for his or her chosen



profession. Strive to be above the National average on the ACAT.

### Student Learning Outcome 1.2

#### **Define Goal**

Beyond the classroom, students will engage in high quality scholarly activities and service learning activities designed to enhance the food, agriculture, and natural resource system.

#### **Intended Outcomes / Objectives**

The SOA students will actively participant in one or more of the clubs/organizations available to SOA students, whether in the SOA or university wide. Also the students will have interest in attending state or national student organization meetings to interact with students from other universities. Lastly, SOA has developed new study abroad programs and a leadership certificate program.

### Student Learning Outcome 1.3

#### **Define Goal**

Students will participate in activities and programs that enhance their leadership and social development.

#### **Intended Outcomes / Objectives**

The SOA will strive to offer study aboard tours, opportunities for service with Ag in the Classroom, competitive teams, recruiting events, and other such events that will enhance the outside student experience. Additionally, the SOA is developing a certificate in leadership and service, and is developing new service-learning courses.

### Student Learning Outcome 1.4

#### **Define Goal**

Students will sharpen critical thinking skills and problem solving abilities through a variety of situations structured to meet the demands of the individual concentrations.

#### **Intended Outcomes / Objectives**

The SOA student will score at or above TTU's student body average on the **California Critical Thinking Skills Test**.



## Assessment for Student Learning Outcome 1.1

**Goal/ Outcome/ Objective:** Student Learning Outcome 1.1

**Type of Tool:** Exit Exam, Survey

### **Rationale**

1. Area Concentration Achievement Test (**ACAT**) results
  
2. Conversations with stakeholders (Tennessee Farm Bureau, National Resources Conservation Services, and United States Department of Agriculture).
  
3. Alumni Survey (Biennial)

**Frequency of Assessment:** Annually, Biennial

## Assessment for Student Learning Outcome 1.2

**Goal/ Outcome/ Objective:** Student Learning Outcome 1.2

**Type of Tool:** Survey, Other

### **Rationale**

1. Review of faculty **Annual Reports** for involvement with student organization service projects and competitions.

**Frequency of Assessment:** Annually

## Assessment for Student Learning Outcome 1.3

**Goal/ Outcome/ Objective:** Student Learning Outcome 1.3

**Type of Tool:** Annual Unit Report, Tracking Spreadsheet, Other

### **Rationale**

1. Number of students taking advantage of study aboard trip opportunities
  
2. Participation in annual Ag-in-the-Classroom Days co-sponsored by Tennessee Farm Bureau and other similar activities.
  
3. Number of students involved in student organizations, attending state or national meetings for the organizations or their field of study.
  
4. Number of students participating in recruitment events



5. Number of students attending other outside events such as factory tours, field days, judging clinics, and competitive events.

6. Alumni Survey (Biennial)

7. Senior Exit Interviews

**Frequency of Assessment:** Annually



#### **Assessment for Student Learning Outcome 1.4**

**Goal/ Outcome/ Objective:** Student Learning Outcome 1.4

**Type of Tool:** Exit Exam, Survey

#### **Rationale**

Assessment of this Outcome utilized:

**CCTST (California Critical Thinking Skills Test) results**

**Senior Exit Interviews**

**Frequency of Assessment:** Annually



#### **Assessment: Program Goal 1.1 - Enrollment Data**

**Goal/ Outcome/ Objective:** Program Goal 1.1

**Type of Tool:** FTE Enrollment, Graduation Rate, National Accrediting Agency Requirements and Standards

#### **Rationale**

Assessment for Goal 1.1:

1. **Enrollment data** by semester

2. **Monitor recruitment work**

3. **Alumni Survey** to rate the effectiveness of the academic, extra-curricular opportunity, and career placement program.



**Frequency of Assessment:** Annually/Biennially

 **Assessment: Program Goal 1.2 - Annual Faculty Reports, Grants applied, Interaction through student organizations, Poster presentation at Campus Research Day**

**Goal/ Outcome/ Objective:** Program Goal 1.2

**Type of Tool:** Annual Unit Report, National Accrediting Agency Requirements and Standards, Other

**Rationale**

Assessment for Goal 1.2:

1. Review of **Annual Faculty Reports** in the research completed and research pending areas.
2. Monitor number of grants applied for.
3. Monitor number of students participating in the SOA student organizations
4. Monitor the number of students presenting at Campus Research Day

**Frequency of Assessment:** Annually

 **Assessment: Program Goal 1.3 - Annual Faculty Reports**

**Goal/ Outcome/ Objective:** Program Goal 1.3

**Type of Tool:** Annual Unit Report

**Rationale**

Assessment for Goal 1.3:

1. **Annual Faculty Reports** in participation in research conferences and trainings.
2. **Monitor budget increases** in available funding to support research related and other professional training opportunities

**Frequency of Assessment:** Annually

 **Assessment: Program Goal 1.4 - California Critical Thinking Skills Test, ACAT**

**Goal/ Outcome/ Objective:** Program Goal 1.4

**Type of Tool:** Exit Exam, National Accrediting Agency Requirements and Standards, Survey

**Rationale**

1. **ACAT results** (Area Concentration Achievement Test-national comprehensive agriculture knowledge exam);



2. **CCTST results** (California Critical Thinking Skills Test—General Exit Exam);
3. **Senior Exit Interviews**
4. **Alumni Survey**

**Frequency of Assessment:** Annually, Biennial



**Results: CCTST, ACAT Program Goal 1.4**

**Goal/Objective/Outcome Number:** Program Goal 1.4

**Results**

See **ACAT** results under heading **ACAT; SLO 1.1**

See **CCTST** results under heading **California Critical Thinking Skills Test; SLO 1.4**

**Attachments**

No items to display.



**Results: California Critical Thinking Skills Test SLO 1.4**

**Goal/Objective/Outcome Number:** Student Learning Outcome 1.5

**Results**

**CALIFORNIA CRITICAL THINKING SKILLS TEST RESULTS**

Domain	2012-2013		2013-2014		2014-2015		2015-2016	
	Mean	N	Mean	N	Mean	N	Mean	N
AGRI	16.5	45	19.1	61	17.1	55	17.2	59
TTU	17.6	1551	17.7	1410	17.3	1411	16.9	1485





Domain	2016-2017		2017-2018		2018-2019		2019-2020	
	Mean	N	Mean	N	Mean	N	Mean	N
AGRI	18.7	46						
TTU	17.1	1776						

### Attachments

 CCTST results



### Results: Enrollment, Retention, Graduation Program Goal 1.1

**Goal/Objective/Outcome Number:** Program Goal 1.1

#### Results

A summary of the 2015-2016 School of Agriculture (SOA) efforts are presented in the following two tables:

#### Sources of Recruiting Funds

2016-2017

School of Agriculture	\$6,392.50
Agriculture Fund of Excellence	\$500.00
Tennessee Tech Agricultural Foundation	\$2,953.03
FFA Foundation	\$4,000.00
US Poultry	\$6000.00
<b>TOTAL:</b>	<b>\$19,845.53</b>

#### RECRUITING EVENTS

2016-2017

Events coordinated or attended	35
Faculty Involved	8
Tech Students Involved	101

Current Available Retention Rates of Freshmen Cohorts



	Fall-to-Spring Retention	Fall-to-Fall Retention
2016 Cohort	96%	81%
2015 Cohort	92.4%	NA
2014 Cohort	97.1%	81.4%
2013 Cohort	92.5%	83.6%
2012 Cohort	85.1%	67.6%
2011 Cohort	92.2%	71.4%
2010 Cohort	92.0 %	68.0%
2009 Cohort	95.2 %	80.9 %
2008 Cohort	89.4 %	68.2%
2007 Cohort	88.6 %	77.4%
2006 Cohort	88.7%	63.6%
2005 Cohort	84.3 %	72.5%
2004 Cohort	83.3 %	66.7 %

### Overall and Freshmen Enrollments



	Fall Overall	% Change from prev. year	Fall Freshmen	Spring Overall	% Change from prev. year	Spring Freshmen
2016-17	319	1.0	72	288	-2	47
2015-16	317	-7.0	53	293	-8.7	51
2014-15	341	4.6%	70	321	7.4%	74
2013-14	326	0.6%	67	299	-1.0%	62
2012-13	328	1.5%	74	302	-4.4%	63
2011-12	323	5.2%	77	316	6.4%	71
2010-11	307	15.1%	75	297	23.2%	69
2009-10	267	4.0%	63	241	1.7%	60
2008-09	257	13.7%	66	237	10.7%	59
2007-08	226	7.1%	62	214	9.7%	55
2006-07	211	-2.7%	44	195	-0.5%	39
2005-06	217	-2.7%	51	194	-2.5%	43
2004-05	223	-	48	199	-	40

There are 22 transfer students in the overall enrollment numbers.

### School of Agriculture Graduation Results

	Total number of Graduates
2016-2017	69
2015-2016	65
2014-2015	60
2012-2013	57
2010-2011	55
2009-2010	48
2008-2009	44
2007-2008	37
2006-2007	46
2005-2006	50



### Attachments

No items to display.



### Results: Faculty and Staff Development Activity Program Goal 1.3

Goal/Objective/Outcome Number: Program Goal 1.3

### Results

Faculty and staff development activity

Year	Professional Meetings or Trainings Attended	Professional Organization Membership	Peer-reviewed presentations and publications	Professional Organization Appointments or Offices Held
2016	30	28	11	6
2015	39	34	8	4
2014	33	31	8	15
2013	27	39	14	15
2012	17	39	3	10
2011	26	38	4	34
2010	19	26	4	31
2009	13	20	4	11
2008	15	20	6	10
2007	9	20	3	7
2006	9	20	2	4
2005	6	19	4	5
2004	25	44	0	18

### Attachments

No items to display.


**Results: Grant Proposals Written, Student Organizations, Campus Research Day**  
**Program Goal 1.2**
**Goal/Objective/Outcome Number: Program Goal 1.2**
**Results**
**School of Agriculture Grant  
Activity**

Year	Grants	Faculty
2016	16	6
2015	28	8
2014	20	9

3 SOA students presented research posters at the spring undergraduate research symposium. 1 SOA student received 2 awards during the symposium. 6 SOA faculty received over \$2.2 in grant funds!

**Attachments**

No items to display.


**Results: Student organizations and state or national meetings SLO 1.2**
**Goal/Objective/Outcome Number: Student Learning Outcome 1.2**
**Results**
**School of Agriculture Student  
Organization Involvement**

Year	Organizations	Students
2016	14	287
2015	13	326
2014	15	331



**School of Agriculture State and  
National Meetings Attended**

Year	Organizations	Students
2016	8	72
2015	9	98
2014	NA	126

**Attachments**

No items to display.



**Results: Study Abroad, Ag in the Classroom, Competition Events, Recruit SLO 1.3**  
**Goal/Objective/Outcome Number: Student Learning Outcome 1.3**

**Results**

There were two study abroad trips offered: Costa Rica (11 students, 2 faculty) and the Netherlands (10 students, 2 faculty).

**RECRUITING EVENTS**

Year	Events	Students	Faculty
2016	41	122	8
2015	39	114	11
2014	15	81	NA

**STUDENT COMPETITIVE EVENTS**

Year	Events	Students	Faculty
2016	9	41	5
2015	10	33	4
2014	3	20	NA



**School of Agriculture State and  
National Meetings Attended**

Year	Organizations	Students
2016	10	109
2015	9	98
2014	NA	126

**AGRICULTURE IN THE CLASSROOM**  
**Cooperation with Putnam County Farm Bureau**  
**Event to expose 900 first graders from Putnam and Jackson**  
**Counties to agriculture**

Year	Students	Faculty
2016	125	9
2015	130	6
2014	103	NA

**OTHER OUTSIDE EVENTS**  
**Factory visits, Field trips, etc.**

Year	Events	Students	Faculty
2016	37	302	6
2015	34	317	5
2014	13	261	NA

**Attachments**

No items to display.



**Results:ACAT, Conversations with Major Stakeholders SLO 1.1**  
**Goal/Objective/Outcome Number: Student Learning Outcome 1.1**

**Results**

**ACAT Scores**



	2006- 2007	2007- 2008	2008- 2009	2009- 2010	2010- 2011	2011- 2012	2012- 2013	2013- 2014	2014- 2015	2015- 2016	2016- 2017
National Average	486	507	521	512	424	454	527	497	N/A	NA	N/A
TTU - SOA Average	518	517	496	474	364	397	487	445	519	508	493

#### ALUMNI SURVEY RESULTS

##### Adequacy of School of Agriculture Experience in Preparation for subsequent Educational or Career Endeavors

Item	Benefit (%)				
	Excellent	Great	Average	Little	No
Agriculture Courses in Discipline	35	33	15	8	8
Agriculture Courses outside Discipline	23	33	33	2	8
Seminar Course	33	15	20	11	22
Work Experience	46	15	19	4	17
Internships	26	11	19	9	36
Lab/Field Experience	38	10	29	15	8
Agricultural Clubs	35	23	19	8	15
Non-agricultural Clubs	17	6	29	21	27
Academic Advisement	42	23	19	4	13
Special Topics Courses	36	23	25	4	13

#### Attachments

No items to display.