

# UNIVERSITY OF ARKANSAS

## **Departmental Summaries**

## Phase II Summer Review Committees + Timeline

Purpose: To determine institutional priorities/needs at a very high level, which will form the basis of campuswide goals, for which the colleges and units will then map on with their plans.

- Establish 3 summer review groups of faculty and staff
  - Teaching and learning 10 | 2
  - Research and discovery 10 | 2
  - Outreach and engagement 10 | 2
- Deans were asked for suggestions to participate, weighted by # faculty in college + 2 staff:
- Set three meetings for each group
  - Initial charge meeting (1 hour) w/ chancellor early June
  - Working group meeting (2-2.5 hours) July, August
  - Results/inform meeting (1.5 hours) September
  - Student review group to evaluate and share observations
- Provost to conduct strengths assessment over cross-cutting units
- Deans to review material packets in parallel with groups. Executive summary and trend material will be provided to aid in review.

### □ Teaching and learning

1. Molly Rapert (WCOB)
2. Frank Jacobus (ARCH)
3. Michael Hevel (COEHP)
4. Richard Cassady (ENGR)
5. Donna L. Graham (AFLS)
6. Tim Zou (Library)
7. Tim Tarvin (Law)
8. Lori Holyfield (ARSC)
9. Valerie Hunt, (ARSC & GSIE)
10. Luis Fernando Restrepo (ARSC)
11. Susan Slinkard (VCFA)
12. Marsha Norvell (STUAFF)

### □ Research and discovery

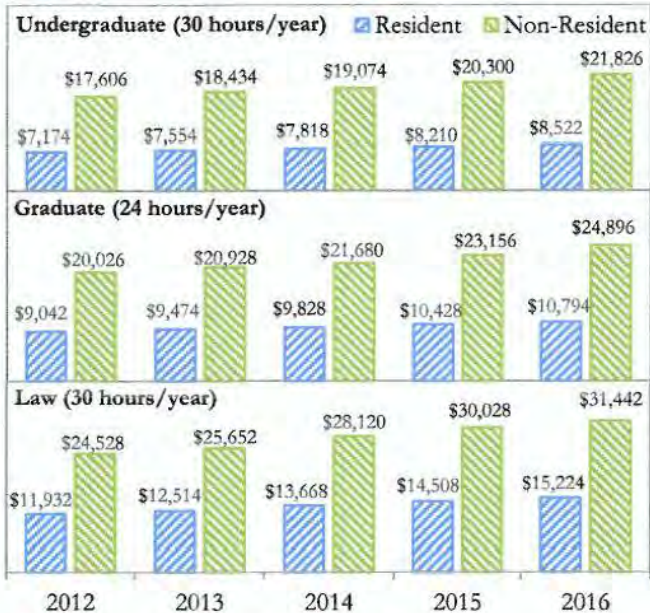
1. Scot Burton (WCOB)
2. Jennifer Webb (ARCH)
3. Conra Gist (COEHP)
4. Paul Millet (ENGR)
5. Dan Rainey (CAFLS)

6. Melody Herr (library)
7. Sara Gosman (Law)
8. Lynn Jacobs (ARSC)
9. Doug Rhoads (ARSC & GSIE)
10. Julie Stenken (ARSC)
11. Chris Frala (VCFA)
12. Amy Schlesing (VCAD)

### □ Outreach and engagement

1. Mark Arnold (ARSC & GSIE)
2. David Joliffe (ARSC)
3. Patricia Herzog (ARSC)
4. Carl Smith (ARCH)
5. Tom Kippenbrock (COEHP)
6. Scott Osborne (ENGR)
7. John Kent (WCOB)
8. Kalli Vimr (Library)
9. Jeremy Powell, (CAFLS)
10. Cyndi Nance (Law)
11. Terrance Boyd (HNRC-STAFF)
12. Angela Oxford (CLCE-Staff)

## TUITION AND FEES



## INSTRUCTIONAL FACULTY (FALL 2015)

	Male	Female	Total
<b>Total</b>	<b>778</b>	<b>542</b>	<b>1,320</b>
Full-Time	686	451	1,137
Part-Time	92	91	183
<b>Ethnicity</b>			
African American	16	19	35
American Indian/Alaska Native	3	6	9
Asian	67	25	92
Caucasian	599	403	1,002
Hispanic	15	25	40
Non-Resident Alien	35	29	64
Two or More Races	7	9	16
Unknown	36	26	62
<b>Academic Rank</b>			
Distinguished Professor	32	1	33
University Professor	19	4	23
Professor	224	59	283
Associate Professor	143	85	228
Assistant Professor	137	86	223
Instructor	111	173	284
Lecturer	112	134	246
<b>Tenure Status</b>			
Tenured	407	145	552
On Tenure Track	138	90	228
Not Tenure Track	233	307	540
<b>College</b>			
Agricultural Food and Life Sciences	108	49	157
Architecture	19	13	32
Arts and Sciences	369	259	628
Business	91	49	140
Education and Health Professions	66	125	191
Engineering	99	27	126
Law	26	20	46

## ENROLLMENT BY LEGAL RESIDENCE STATE



### Enrollment

- 1 - 20
- 21 - 50
- 51 - 500
- 501 - 15,237

### Enrollment not shown on map:

Alaska - 4; District of Columbia - 3; Hawaii - 11; US Territory - 1 International - 1,545

### RANKINGS

(public institutions only)

#### 2016 U.S. News & World Report

Supply chain/logistics (graduate)	9 <sup>th</sup>
Supply chain management/logistics (undergraduate)	12 <sup>th</sup>
Rehabilitation counseling (graduate)	12 <sup>th</sup>
Biological/agricultural engineering (graduate)	18 <sup>th</sup>
Online graduate engineering program	25 <sup>th</sup>
Industrial/manufacturing/systems engineering (graduate)	26 <sup>th</sup>
Undergraduate business program	27 <sup>th</sup>
Graduate business school	32 <sup>nd</sup>
Online bachelor's program	32 <sup>nd</sup>
Law school	41 <sup>st</sup>
Online graduate education program	43 <sup>rd</sup>
Best colleges for veterans	50 <sup>th</sup>
Nursing school	51 <sup>st</sup>
Electrical/electronics/communications engineering (graduate)	52 <sup>nd</sup>
Online graduate nursing program	54 <sup>th</sup>

- ◆ School of Law ranked 6<sup>th</sup> in nation in preLaw magazine's annual "Best Value Law Schools" issue (5<sup>th</sup> year in a row as a top 20 "Best Value")
- ◆ Fay Jones School of Architecture and Design ranked 26<sup>th</sup> on the 2015 DesignIntelligence list of America's Best Architecture and Design Schools
- ◆ Clinton School of Public Service ranked 33<sup>rd</sup> in the "50 Most Innovative Public Service Schools" by Best Value Schools
- ◆ University of Arkansas ranked 34<sup>th</sup> on the "Best for Vets: Colleges 2016" list in the Military Times
- ◆ Walton College of Business' MBA program ranked 47<sup>th</sup> in the "List Of The Top 100 U.S. MBA Programs of 2015" by Poets and Quants
- ◆ University of Arkansas ranked 55<sup>th</sup> in the "2016 Best College Values" report by Kiplinger's Personal Finance magazine
- ◆ University of Arkansas listed among 'Best Colleges' in 2016 Princeton Review's annual college guide, "The Best 380 Colleges" (About 15% of America's 2,500 4-year colleges and universities are profiled in the book)

Information compiled by:  
Office of Institutional Research and Assessment  
ADMN 125, Fayetteville, AR 72701  
Phone: (479) 575-5252, Fax: (479) 575-6766  
<http://oir.uark.edu>



# UNIVERSITY OF ARKANSAS

## 2015 — 2016 MINI FACT BOOK

<http://oir.uark.edu/factbook.pdf>

### QUICK FACTS

- ◆ Founded in 1871
- ◆ Students, female/male: 52 percent/48 percent
- ◆ Average freshman high school GPA: 3.64
- ◆ Average ACT: 25.9
- ◆ Instructional faculty: 1,320
  - ◆ Full-time: 1,137
  - ◆ Part-time: 183
- ◆ Student-to-faculty ratio: 19 to 1
- ◆ Research expenditures (fiscal year 2014): \$128,634,378
- ◆ Annual University scholarship and fellowship expenditures (fiscal year 2014): \$24,340,455
- ◆ Academic programs: 236 degrees and certificates, with 85 major fields of undergraduate study, 81 master's degree programs, 40 doctoral programs, 2 specialist degrees, and 26 certificates

### Carnegie Classification

**Very high research university**

### Fall 2015 Enrollment

**26,754**  
(♣ by 2%, since Fall 2014)  
➔ **22,159 Undergraduate**  
➔ **4,220 Graduate**  
➔ **375 Law**

### PRIDE POINTS

- ◆ University of Arkansas (UA) ranked 7<sup>th</sup> fastest growing public research university in a survey published by the national Chronicle of Higher Education
- ◆ Prestigious, nationally competitive awards in 2015—1 Truman Scholar, 1 Goldwater Scholar, 2 Udall Scholars, 10 NSF GRFPs, and 7 Fulbright Scholars
  - ◆ Goldwater Scholars – All-time total of 50 scholars ranks UA 1<sup>st</sup> in SEC & 16<sup>th</sup> among public universities (20<sup>th</sup> consecutive year with at least one Goldwater Scholar)
  - ◆ Truman Scholars – All-time total of 19 scholars ranks UA 1<sup>st</sup> in SEC & 14<sup>th</sup> among public universities
  - ◆ Rhodes Scholars – All-time total of 10 scholars ranks UA 38<sup>th</sup> among public universities
  - ◆ UA among one of eight schools in the nation with winners of the three major junior awards (Truman, Goldwater, and Udall), and one of seven schools with two or more Udall scholars in 2015

"Fayetteville's southern charm, modern arts scene and innovative business schemes create a place that draws young families who crave a unique yet traditional small-town vibe"  
- *Livingly.com*

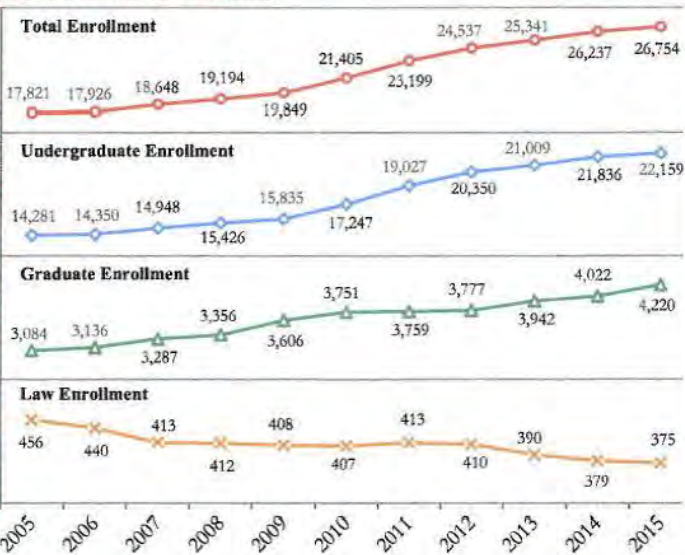
## ENROLLMENT (FALL 2015)

	Undergraduate	Law	Graduate	Total
<b>Total</b>	<b>22,159</b>	<b>375</b>	<b>4,220</b>	<b>26,754</b>
<b>Gender</b>				
Male	10,588	223	2,144	12,955
Female	11,571	152	2,076	13,799
<b>Ethnicity</b>				
African American	1,052	18	264	1,334
American Indian/Alaska Native	245	10	60	315
Asian	551	7	87	645
Caucasian	16,988	301	2,774	20,063
Hawaiian/Pacific Islander	18	1	20	39
Hispanic	1,660	21	193	1,874
Non-Resident Alien	829	3	713	1,545
Two or More Races	721	10	87	818
Unknown	95	4	41	140
<b>Current Legal Residence</b>				
Arkansas Resident	12,740	310	2,187	15,237
Non-Arkansas Resident (U.S.)	8,590	62	1,320	9,972
Foreign	829	3	713	1,545
<b>College</b>				
Agricultural Food and Life Sciences	1,811	-	357	2,168
Architecture	481	-	-	481
Arts and Sciences	6,957	-	913	7,870
Business	5,432	-	446	5,878
Education and Health Professions	4,089	-	1,321	5,410
Engineering	3,331	-	927	4,258
Independent Study	58	-	-	58
Interdisciplinary	-	-	256	256
Law	-	375	-	375
<b>Student Level</b>				
Freshman	6,322	-	-	6,322
Sophomore	4,613	-	-	4,613
Junior	4,730	-	-	4,730
Senior	6,485	-	-	6,485
Master	-	-	2,533	2,533
Doctorate	-	-	1,321	1,321
Professional Year 1	-	131	-	131
Professional Year 2	-	115	-	115
Professional Year 3	-	107	-	107
Master of Law	-	22	-	22
Master's Certificate	-	-	10	10
Graduate Non-Degree	-	-	285	285
Graduate Specialist	-	-	21	21
Undergraduate Certificate	9	-	-	9
Graduate Certificate	-	-	50	50

## DEGREES AWARDED, 2014-2015

	Male	Female	Total
<b>Total</b>	<b>2,812</b>	<b>2,929</b>	<b>5,741</b>
<b>Level</b>			
Baccalaureate	2,016	2,190	4,206
Master's	612	596	1,208
Specialist	1	1	2
Doctoral - research/scholarship	97	76	173
Doctoral - first professional	79	55	134
Graduate certificate	6	9	15
Post-master certificate	1	2	3

## ENROLLMENT TRENDS



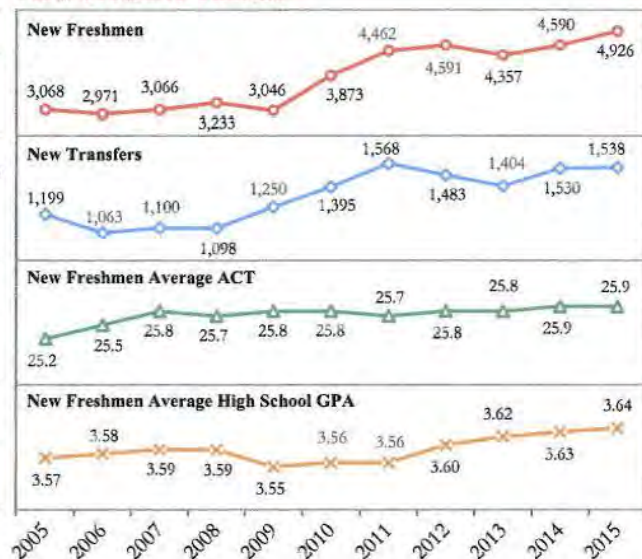
## CREDENTIALS AWARDED TRENDS



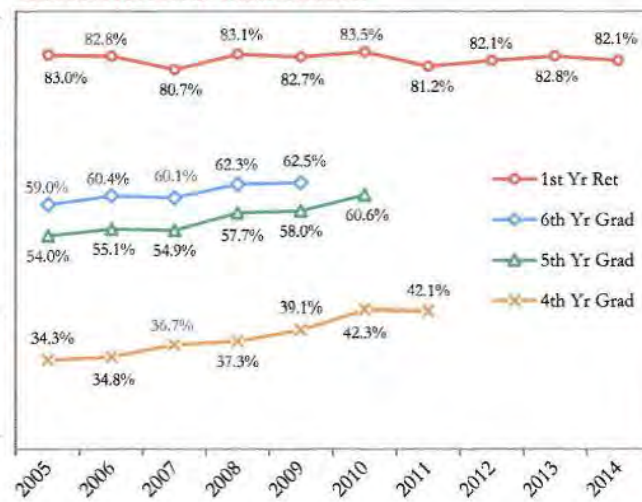
## DEGREES AWARDED, 2014-2015 (contd...)

	Male	Female	Total
<b>Ethnicity</b>			
African American	120	132	252
American Indian/Alaska Native	38	37	75
Asian	87	70	157
Caucasian	2,122	2,274	4,396
Hawaiian/Pacific Islander	2	-	2
Hispanic	139	169	308
Non-Resident Alien	209	161	370
Two or More Races	85	78	163
Unknown	10	8	18

## NEW STUDENT TRENDS



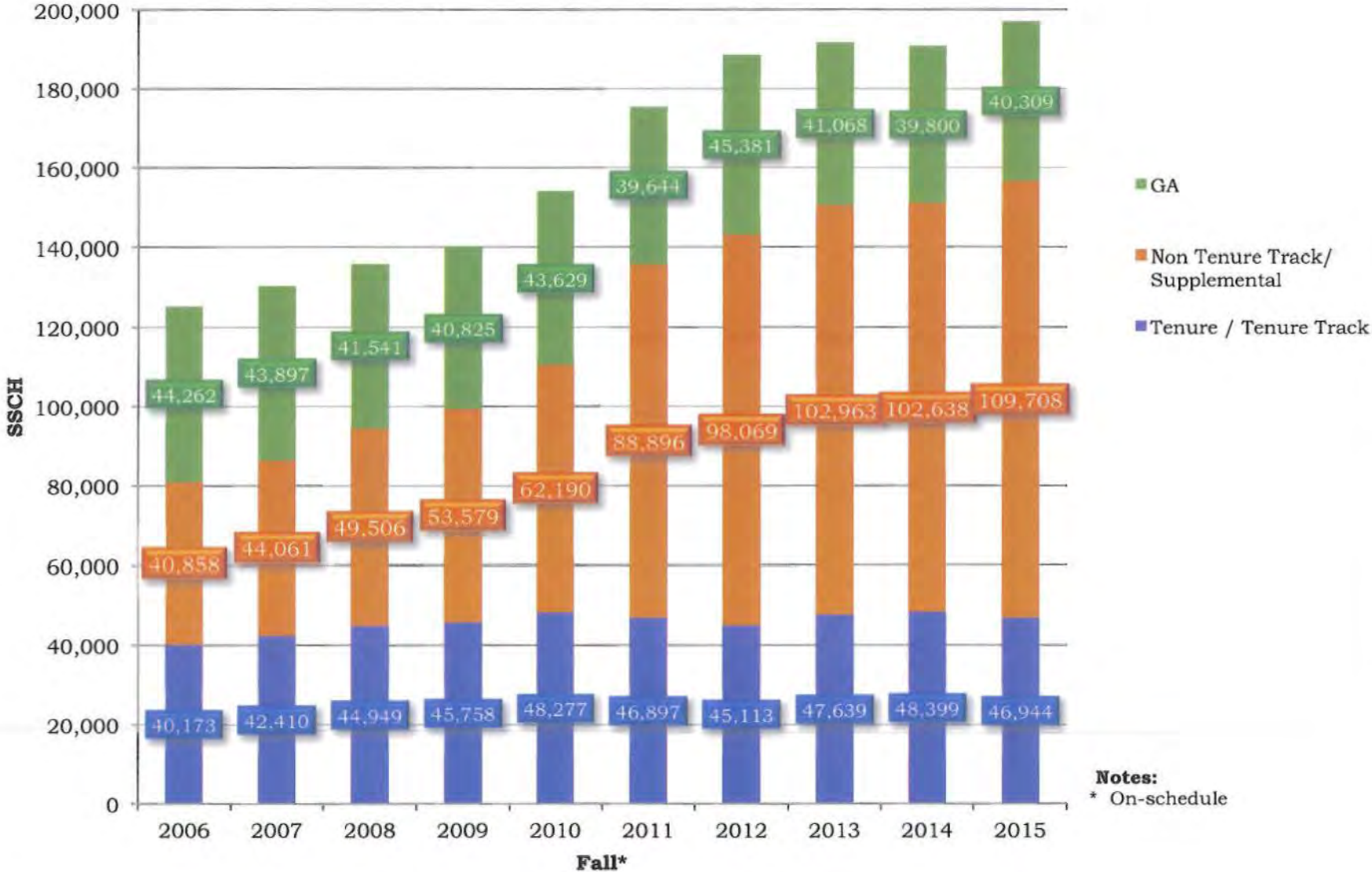
## RETENTION AND GRADUATION



## DEGREES AWARDED, 2014-2015 (contd...)

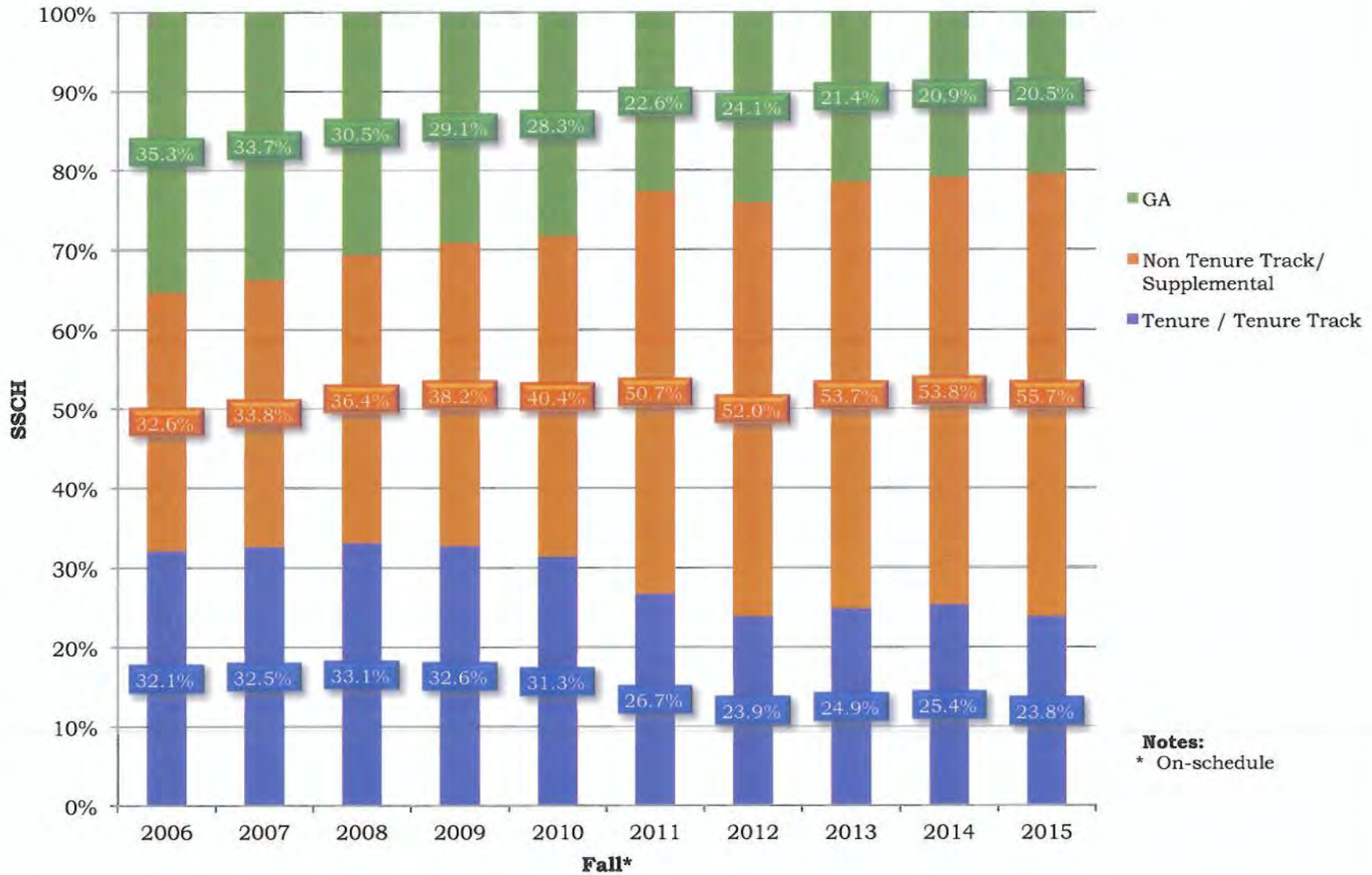
	Male	Female	Total
<b>College</b>			
Agricultural, Food and Life Sciences	214	333	547
Architecture	40	41	81
Arts and Sciences	815	965	1,780
Business	694	372	1,066
Education and Health Professions	288	945	1,233
Engineering	635	188	823
Interdisciplinary	41	26	67
Law	85	59	144

# Fall 2006-15 1000-2000 level SSCH By Faculty Category All Colleges

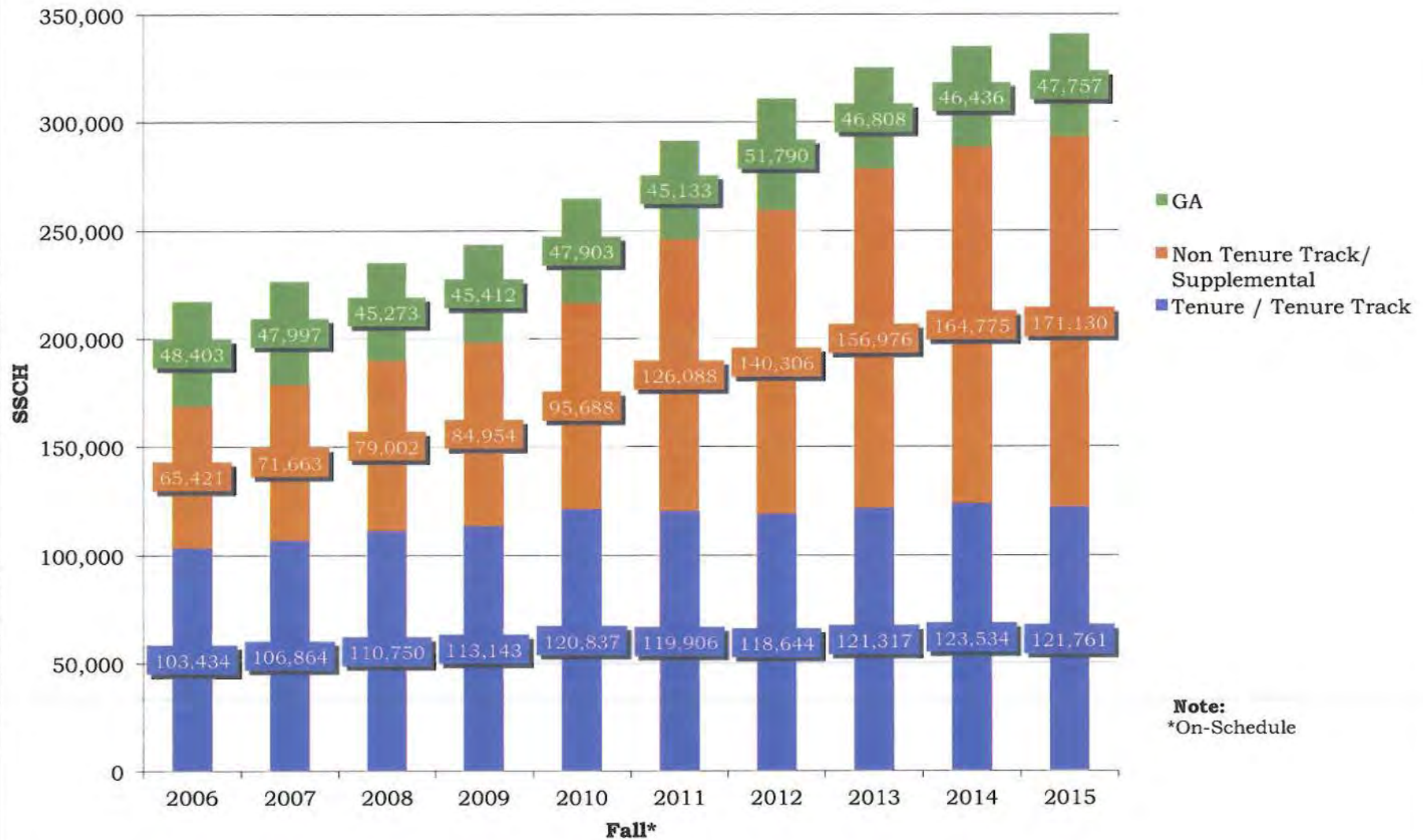


**Notes:**  
\* On-schedule

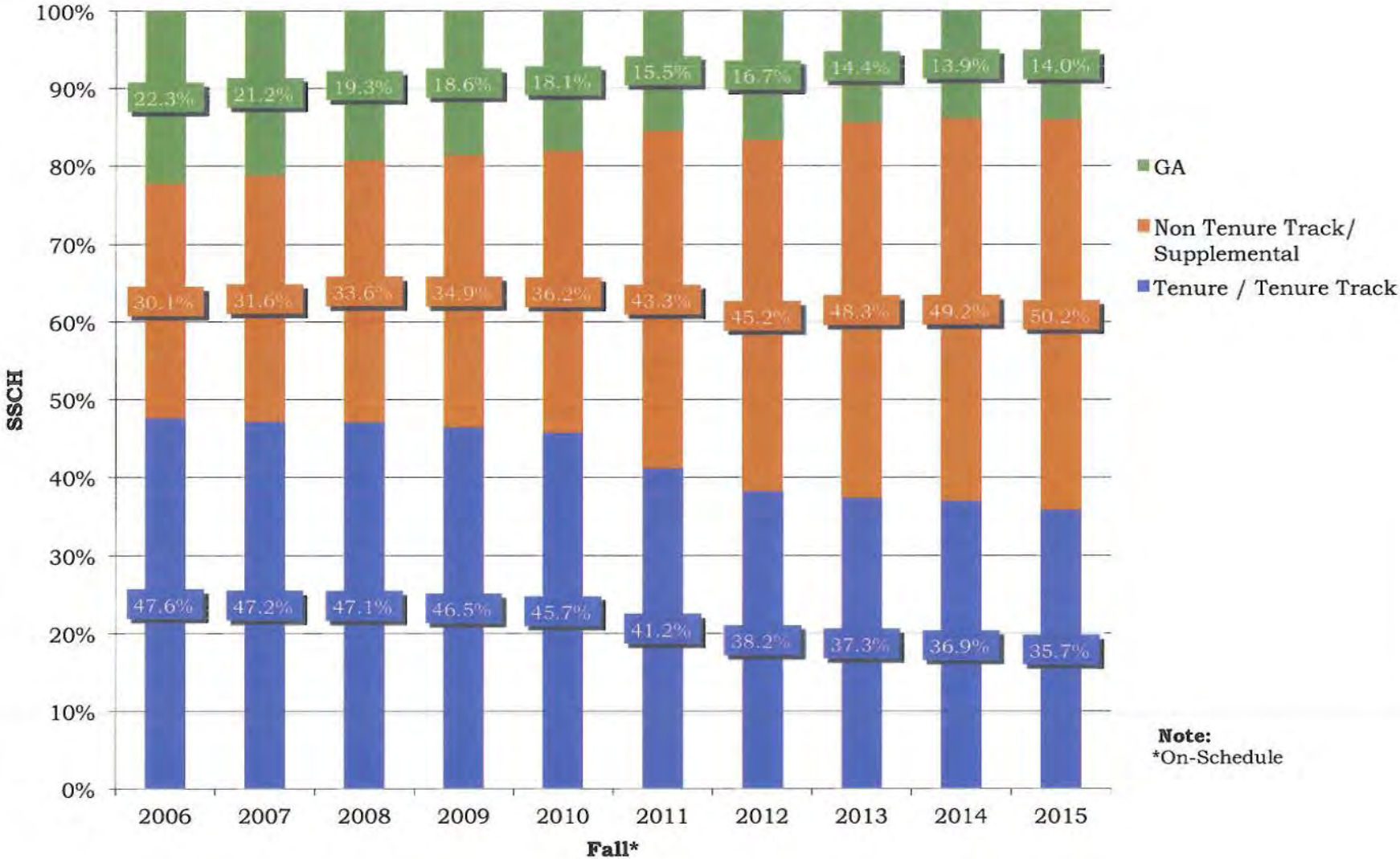
## Fall 2006-15 1000-2000 level SSCH By Faculty Category All Colleges



## Fall 2006-15 SSCH By Faculty Category All Colleges



## Fall 2006-15 SSCH By Faculty Category All Colleges





# Architecture

# REPORT

## Department of Architecture Report to the Chancellor

Prepared by Dr. Winifred E. Newman, Prof. and Head of Department of Architecture

May 23, 2016

**Executive Summary:** The department is a core part of the preeminent Fay Jones School of Architecture and Design with 22 faculty and 323 students - 75% percent in the school. Our mission is the education of professional architects in the 5-year accredited Bachelor of Architecture and the 4-year Bachelor of Science in Architectural Studies for students with interest in a liberal arts education with a concentration in architecture. We are the only professional architecture program in the state of Arkansas and are currently ranked 26 in the US by Design Intelligence. Our 'normal time to completion' rate is 85% and first year retention is 84%. Our long-term goal is for the department to be ranked among the top five undergraduate programs in the country. This goal builds on achieving the following objectives: 1) increase in funded research through scholarly and creative projects, 2) participate in graduate programs as developed by the Dean, 3) increase faculty and student diversity, and 4) be creative and aggressive about cross-disciplinary collaboration.

**Introduction:** This report outlines specific goals addressing our strengths and weaknesses in three areas of the department: *teaching, research and creative activities, service and outreach and engagement.* Department priorities are given afterward. The order does not reflect importance.

### Goals by area:

**Teaching:** a) Address implementation of new pedagogy in visualization and fabrication technologies and their transformative role in the design and organization of buildings. Addressing how we incorporate new software and tools into our ecology of fabrication and visualization tools is one challenge to the department. New tools allow new knowledge creation, but to successfully do this, we need to consider how best to teach this in the professional curriculum. Teaching and research align on the launch pad of instrumentation and software in a discipline dependent on visualization and fabrication technologies. To address our deficit in teaching new tools is also to address the deficit in classroom spaces supporting these uses, equipment, and infrastructure. As we develop new teaching methods we are working with the school on specific requests for classroom spaces and equipment. We do not currently have any infrastructure needs; b) Utilize cross-discipline teaching to address curricular needs. *Currently we engage lecturers to teach an area of the curriculum of significant importance in our building technology and digital technology sequence.* As a remedy, we are exploring sharing faculty with other departments. In order to identify any creative approach to faculty sharing work, however; there needs to be a way for junior (and senior) faculty to receive credit for teaching in two curriculums. Tenure-track considerations tend to nullify work done outside of departmental and school structures; and c) Develop cross-disciplinary undergraduate and graduate degree programs and certificates. Utilizing the expertise of our faculty we look to develop additional degree paths to address the increasing demand for specialized and advanced knowledge in professional and allied fields in the building industry. These areas share common episteme with other fields that work across traditional disciplinary boundaries. Examples include sustainability, digital design, and fabrication.

**Research and Creative Activities:** a) Increase our research profile across the campus through collaboration and grants. We plan to develop a stronger **research and creative activities portfolio** as a professional school to attract undergraduate and graduate students to our program and keep them for the post-professional Masters and increase our profile as knowledge producers. Our potential for collaboration is a currently underutilized strength in developing research and creative projects, but we are working to build

partnerships and produce work that will lead to funding. If available we would use university-wide funding for competitive seed grants for cross-disciplinary projects.

*Service, Outreach and Engagement:* a) Increase our service-learning profile through projects addressing local and regional community partnerships on real-world problems. To that end we are working with the university service learning unit and the EPA CUPP program to develop targeted projects with five local communities. One goal is to develop a community of scholars working on real-world problems to foster methods of addressing challenges in human environments and their locales.

**Priorities:**

- 1) *Increase diversity among faculty and students* - We are 72% male faculty, 28% female, one underrepresented minority (American Indian) and one foreign national. This does not reflect the more equitable gender balance (59% male, 41% female) or higher numbers of underrepresented minorities (18%) or foreigners (10%) in our student body. To remain competitive in the global education market, this needs to be actively addressed. We have to model what we profess to believe.
- 2) *Increase faculty and staff salaries* – The first is a major departmental concern even as both are in the purview of our Dean. Both are important for our long-term viability. Our faculty is underpaid across the board. Salaries lag on average 20% behind peer institutions. To compel a successful leap into the future, the body of the institution must have strong limbs – if we cannot develop, support, and recruit faculty through equitable pay, we won't be able to grow.
- 3) *Increase faculty hires in digital technologies and structures considered to be essential pillars for research development at the department of architecture.*
- 4) *Increase research and creative project funding* - Last year our total applications for research increased by 350%. We will continue to partner with other departments, foster collaborations across the university with departments and centers and develop new grant applications.
- 5) *Build our study abroad programs* – The department has two study abroad programs: the UA Rome Center, and the Mexico City Program. Building on these two options by strengthening research and topical areas between UA faculty and our peer partners in these locales will help foster long-term stability for these programs. Our objective is to increase shared research with our partners abroad and infuse this new scholarship into the curriculum offered in the study abroad programs.
- 6) *Increase scholarships for undergraduates* – Our scholarship funding for undergraduates enables many of our students to attend the Study Abroad programs. Stronger support is needed to keep pace with our increasing enrollment numbers. Our Dean manages this, but we are committed to contributing to alumni belief in, and awareness of, the program to help build this area.

Interior Design Department Summary Report  
Fay Jones School of Architecture and Design  
Prepared by Carl Matthews, Professor, Department Head  
Submitted to Chancellor Steinmetz  
May 25, 2016

## **Departmental Overview**

### **Enrollment**

Average over past 5 years is 102 students – approximately 22% of Fay Jones School  
(School averages approximately 455 total students)  
Fall 2015 was the highest at 123 students  
10-20% increase since we moved into renovated Vol Walker Hall

### **Retention**

1<sup>st</sup> year retention is similar to University at an average of 84.4% over the past 4 years.

### **Graduation Rate**

6 year graduation rate is similar to the University at 63.4% average over the past 6 years.

### **Faculty**

1 Department Head (50% teaching load)  
4 Tenured or tenure track faculty lines  
2 Part-time Clinical Assistant Professors (1 shared with Architecture, 1 shared with Landscape Arch)  
1 Full-time Instructor

### **Budget**

\$71,030 per year  
30% expended for faculty & staff support  
70% expended for student & curriculum support  
(approximately 50% supports external critics and specialty teaching consultants)

## **Departmental Strengths**

Student preparedness for professional practice.  
Students complete paid internships between the 3<sup>rd</sup> & 4<sup>th</sup> year and they are working for top design firms locally, regionally and across the country (Chicago, St. Louis, Dallas, Florida, New York, San Francisco, Los Angeles, etc)  
100% employment rate upon graduation.  
Interdisciplinary first and final year studios (with architecture and landscape architecture).  
All students are required to study abroad.

## **Faculty Areas of Research**

Niche market senior housing  
Impact of international education experiences on student's cultural intelligence  
Inclusive environments for underserved populations  
Aging and health in the built environment  
Accessibility in retail spaces

Preservation and adaptive reuse of mid-20<sup>th</sup> century modernist buildings  
Innovation and interior application of materials  
Intersection between interiors and exteriors  
Lighting design in mid-20<sup>th</sup> century architect designed houses  
Pedagogy of lighting design education

### **Untapped Resources and Opportunities**

Development of a stronger relationship with the University of Arkansas Community Design Center

### **Challenges and Issues**

Although interior design is the second largest department in the Fay Jones School it has the least amount of scholarship money available to students.

Although our student enrollment numbers are up, we have experienced a higher attrition rate in first year since combining with architecture and landscape architecture for a common first year. In 2014 we lost a total of about 30% of students between Fall and Spring semester. This year we lost about 20%. Most of this loss is attributable to first year students changing majors to other disciplines in the university. Improving public knowledge and perception of the discipline of interior design is critical to reducing first year attrition and recruiting.

Recruiting a more diverse and gender balanced study body. Interior design students are currently 95% female and 84% Caucasian.



Department of Landscape Architecture  
Fay Jones School of Architecture and Design

### **Department Summary Report**

Submitted to Chancellor Steinmetz, May 30, 2016

Submitted by Ethel Goodstein-Murphree, Interim Department Head and Associate Dean  
on Behalf of the Landscape Architecture Faculty

### **Overview of the Department**

Since its creation in 1975, the Department of Landscape Architecture has taken pride in being the only university in Arkansas to offer the Bachelor of Landscape Architecture Degree, an undergraduate five-year professional degree (accredited by the Landscape Architecture Accreditation Board {LAAB}) that provides our students with critical thinking abilities and disciplinary knowledge that prepares them to enter and gain licensure in the practice of Landscape Architecture. In addition to attaining employment in nationally prominent landscape architectural firms, our graduates also assume roles in cultural resource management, city and community planning, and environmental stewardship, including contributions in the public sector. In 2003, to respond to the needs of students with broader career goals in environmental and landscape stewardship, the Bachelor of Science in Landscape Architectural Studies was created. Our students are prepared to design, shape, and steward the land, from the scale of intimate garden design to city planning, and to do so from a perspective of best practices in sustainability and resiliency. During academic year 2015-16, the department was engaged in intensive self study as we entertained our cyclical review by the LAAB, review of our four-year program, and a national search for a new department head. At this time, the department is not nationally ranked, but we aspire to gain recognition by *Design Intelligence*, the industry standard for ranking academic programs in the design disciplines.

### **Enrollment**

*Our greatest challenge is recruiting and enrolling students.*

Consistent with national trends, as reported by the American Society of Landscape Architecture (ASLA), we have seen a steady drop in enrollment over the course of the last five years.

- 2015-16 Enrollment: 35 students, the majority of whom 29 students) are matriculated in the five-year professional program.
- Gender Equity: 17 male students; 16 female students

### **Faculty**

*Our greatest resource is our faculty*, the majority of whom are licensed landscape architects, with significant national and international experience in a broad range of landscape architectural and planning practices. The faculty includes two designers who also hold the Ph.D., and a certified city planner.

- 1 Department Head, tenured full professor (50% teaching load)
- 5 Tenured or tenure track faculty lines
- 1 Clinical Assistant Professor

### **Budget**

Total:	\$47,073 per year
Maintenance:	\$22,230
Dean's Reserves:	\$ 6,843
Telefees:	\$18,000
	55% expended for faculty & staff support, including research and creative activity
	45% expended for student & curriculum support, including distinguished, external critics

### **Department Strengths—Teaching and Learning**

- Demonstrated record of interdisciplinary research and teaching, including productive relationships within the Fay Jones School through shared design studios at foundation and upper-levels with architecture and interior design; established relationships with horticulture and campus sustainability initiatives; emerging relationship with bio-engineering and horticulture; and partnership with political science in creation, teaching and administration of the planning minor.
- Significant relationship with Fay Jones School outreach centers, the University of Arkansas Community Design Center and especially, Garvan Woodland Gardens.
- Partnership with National Parks Service Woodlands and Trails Program, a division of which is housed in the School, which facilitates faculty and student research opportunities as well as design studio projects.
- International education opportunities through required study abroad programs, including those of the Rome Center and initiatives in Istanbul and Copenhagen.
- Student preparedness for professional practice and graduate education, including award recognition of student design work by ASLA.
- Faculty leadership in professional and scholarly organizations, including ASLA and the Council of Landscape Architecture Educators. The department enjoys a strong and mutually supportive relationship with the professional community in the state and in the region.

### **Department Strengths—Areas of Excellence in Faculty Creative Practice and Research**

- Landscape Architectural History, Historic Preservation and Cultural Landscape Management, including externally supported research in collaboration with C.A.S.T. of Japanese World War II internment camps in Arkansas, and documentation and research for the National Parks Service Historic American Landscapes Program.
- Sustainable Practices in Housing
- Land-use, Urban, and Environmental Planning
- Greenways and Trails
- Productive Urban Landscapes and Urban Agriculture
- ANCRC supported landscape design for Hollywood Plantation, Taylor House.
- Award-winning landscape architectural design practices, including recent design team member for US World War I Memorial Competition, (Assistant Professor Lickwar).

### **Untapped resources and opportunities**

- The potential of the B.S. in Landscape Architectural Studies degree to serve a wider community of young men and women interested in sustainability, resilience and the environment.
- Taking better advantage of our relationship with Garvan Woodland Gardens both to deepen learning opportunities for our students and to enhance outreach education with constituents in central Arkansas.

### **Challenges and issues**

- We must improve student enrollment in both the five-year professional program and the four-year landscape studies program through enhanced recruiting, public programming and advocacy of the profession. This is the first priority of the department for the coming academic year. Our accreditation visit made clear that this is an essential ingredient for maintaining professional accreditation for the program.
- Support for faculty research and assuring nationally competitive salaries for our faculty, to assure retention of our excellent and nationally distinguished professors at all ranks, are continuing sources of concern. The department is on the precipice of national and international recognition for the creative and scholarly work of its faculty and we must be in a position to provide financial support to realize that potential.
- Identity for and "branding" of landscape architecture as a design discipline remains a challenge for the department, with direct ramifications on student recruitment.

**Bumpers College**



## AGRICULTURAL ECONOMICS AND AGRIBUSINESS

### MISSION STATEMENT

The Department of Agricultural Economics and Agribusiness serves the citizens of Arkansas and the global community by applying economic principles to the critical issues facing agriculture, the food system, natural resources and communities, through path-breaking research, innovative academic programs and focused outreach initiatives that provide knowledge, encourage critical thinking and bring new understanding of markets and the allocation of resources.

### Objectives

- Provide comprehensive applied economic programming that integrates research, teaching and Extension
- Enhance the economic sustainability of Arkansas, U.S. and global agriculture through research and outreach that always looks beyond the current crisis to the fundamental forces of change
- Expand our national and international reputation for applied scholarship
- Equip students with economic theory, quantitative tools and critical thinking skills necessary for career/academic success
- Communicate the power of economic principles applied to the critical issues of our time in ways that allow business leaders, public officials and citizens to apply this knowledge in day to day decision-making

### ACADEMIC PROGRAMS

Ten years ago, the Department was suffering enrollment decline. The Department responded by implementing substantial curriculum changes to provide flexibility to students and assure quality teaching in lower division courses. Since 2004, the Department has experienced steady growth in undergraduate enrollments as shown below. Spring 2016 enrollment was 268 majors.

#### AEAB Student Data

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Entering Freshmen - Fall	17	21	15	16	20	21	27	35	32	35	53
BSA Majors - Fall	102	127	133	154	165	149	156	195	222	234	252
MS enrolled - Fall	25	30	24	28	39	37	37	43	31	32	33
Degrees - academic year											
BSA	19	28	31	27	41	50	46	44	46	50	62
MS	9	19	13	16	16	18	21	23	25	20	13
SSCH - academic year	2036	2595	3073	3225	3545	4097	3857	4248	5128	5727	5728

Our faculty take great pride in being accessible to students and providing one-on-one assistance. This attention to student needs is affirmed in exit interviews with graduate and undergraduate students who indicate that what they liked best about their time in our Department was access to faculty who care. Three faculty member received College and University teaching awards during the past year.

## **RESEARCH PROGRAMS**

Research initiated by faculty members tends to focus on issues of importance to Arkansas agriculture and the citizens of the state. While some faculty members have contributed to advancing methodological frontiers, much of the research has been undertaken to address specific concerns of industry or the people of Arkansas.

Research productivity is increasing and faculty members are working on issues important to stakeholders and citizens. Our work on rice and poultry is not duplicated anywhere. We are building significant bodies of work in resource sustainability, bioenergy, and food choice. And we are doing this without a Ph.D. program. Our faculty do mentor Ph.D. students in the Public Policy and Environmental Dynamics programs. To sustain this progress, we will need to find ways to provide more research support for faculty through program associates, post-docs, Ph.D. students or career research scientists. Office and work space for graduate students and research support staff is a challenge. We have no space in the Agri Building for grad students and visiting scholars, and our space in the Ag Annex is undesirable and inadequate

## **EXTENSION PROGRAMS**

Agricultural Economics and Agribusiness Extension programs are based on strong partnerships with stakeholders and focus on the traditional agricultural sectors in the state, row crops, livestock and poultry, and specialty crops. Our Extension faculty members maintain working relationships with Arkansas Farm Bureau, agribusiness firms and other stakeholder organizations. These stakeholders help us identify priority areas for our Extension programs.

Historically, most Extension programs in Arkansas have been directed toward the row crop sector. *MarketMaker* allows us to serve specialty crop producers. The Southern Risk Management Education Center has added a new dimension to our Extension programming. Our new dynamic budgets and decision tools are being well received. The major hole in our Extension programming remains livestock. We need to find a way to better serve this major industry. In addition, the policy move toward more reliance on insurance products will present a challenge to our Extension program.

Our Farm Bill Education Team won the Division of Agriculture team award for 2015.

## **SUMMARY**

The Department of Agricultural Economics and Agribusiness has experienced significant growth in our graduate and undergraduate programs. Research productivity is up. Extension programs such as risk management, *MarketMaker* and enterprise budgets and whole farm decision tools are serving broader audiences.

## **CHALLENGES**

1. Space – office, classroom, graduate student, research
2. Serving growing undergraduate and graduate programs while maintaining quality, diversity and our traditional “family atmosphere.”
3. Supporting a growing research portfolio without a Ph.D. program
4. Providing Extension programs for the livestock industry

AEAB Budget Summary  
FY 2016

<b>AES</b>			
Faculty	\$ 1,176,000		
Staff	\$ 397,000		
Operating	\$ 274,000		
		\$ 1,847,000	55%
<b>AFLS</b>			
Faculty	\$ 777,000		
Staff	\$ 29,000		
Operating	\$ 116,000		
		\$ 922,000	27%
<b>CES</b>			
Faculty	\$ 517,000		
Staff	\$ 27,000		
Operating	\$ 45,000		
		\$ 589,000	18%
		\$ 3,358,000	
Faculty	\$ 2,470,000		74%
Staff	\$ 453,000		13%
Operating	\$ 435,000		13%
		\$ 3,358,000	

AES operating funds include some funding for graduate student stipends. AFLS operating funds include some funds for graduate student stipends and one-time funds for special projects. CES operating funds are mainly travel and equipment.

AEAB Faculty Summary

<b>Fayetteville</b>		<b>Rank</b>	
AES Lines		<i>Prof</i>	16
12-month	9	<i>Assoc</i>	4
9-month	1	<i>Assist</i>	3
AFLS Lines		<i>Inst</i>	3
12-month	3		26
9-month	5		
	18		
<b>DownState</b>	6		
<b>Affiliated</b>	2		
<i>(in state)</i>			
<b>TOTAL</b>	26		

**Department of  
Agricultural Education, Communications, and Technology  
Prepared for Chancellor's Report, University of Arkansas, 2016**

**Our Vision:** The Department of Agricultural Education, Communications and Technology (AECT) aspires to build sustainable communities through human capital development in agriculture.

**Our Mission:** AECT prepares people with the technical expertise in agricultural science and technology-related disciplines with the human science skills necessary to provide transformational leadership in the agricultural industry and within their local communities. Specifically, we prepare educators for both formal and non-formal teaching roles in agriculture, communications specialists for diverse agriculturally related disciplines, agricultural technology managers, and rural community leaders.

To accomplish the AECT mission, our priorities are consistent with the newly proposed "most critical strategic priority areas" for the Bumpers College (2016). The AECT application of the AFLS priorities include:

1. Provide career ready graduates in sufficient numbers to meet industry and societal needs, at both the graduate and undergraduate levels, as agricultural educators and agricultural communicators, as agricultural systems technology managers, and as leaders in the agricultural professions and in rural communities.
2. Enhance and expand the graduate program through creative partnerships within the college and the university, and with our business partners to provide research professionals who will become leaders in the agricultural education and communications, agricultural technology systems, and rural communities.
3. Elevate the national reputation of faculty and AECT by increasing emphases on scholarship, extramural funding and enhanced faculty scholarly productivity to result in significant impact on our respective disciplines and for our stakeholders.

While no national ranking or rating system exists in the profession, a stated goal of the faculty is for the department to be widely recognized as the best unit in the nation that does not have a PhD program. A recent 10-year external review of the department (2016) by a panel of distinguished reviewers noted that, in their opinion, the department had achieved that status.

**Strengths:**

**Teaching**

- Recent department external review identified AECT as possibly the top non-PhD producing program in the US.
- Undergraduate enrollment is stable as we transition from a freshman admitting program to primarily a transfer program.
  - Having students for 2 years rather than the traditional 4 years exerts negative pressure on total numbers of majors while increasing numbers of graduates.
- Maintained accreditation for ASTM and AGED programs.
- Maintained undergraduate graduation rates higher than campus average.
- Experiential learning is required for all undergraduates.
  - Internship is required.
  - Department seeks to provide a 50% balance of theory and laboratory experience in each course. This represents a challenge in maintaining reasonable enrollments and/or graduate student support to assist with laboratory teaching.
- Excellent placement rates for AECT graduates at both BS and MS levels.
- Graduate enrollment is more than 200% of base year (2007).
  - We acquired a campus "enrollment growth" faculty position 3 years ago, and our enrollment responded.
  - Added an on-line option to our MS.

- Joined Great Plains consortium to enhance efficiency of course offerings.
- International teaching activities.
  - Increased faculty-led student travel in Scotland Agricultural College, Ghent University and several locations in Africa.
  - Added adjunct instructor at the UA Rome Center.
- Department had an Executive in Residence.
- Faculty are among the best teachers on campus and nationally.
  - 7 of the 9 full-time faculty (including 1 instructor) are Faculty Fellows in the UA Teaching Academy.
  - 3 are Senior Fellows in the AAAE, the national professional society; 1 is a fellow in the AIAEE, the international society of agricultural and extension education.
  - 1 is a recent recipient of the APLU/USDA New Teacher Award; 2 are recent recipients of the APLU/USDA Regional Teacher Awards.
  - 1 recipient of NACTA teaching scholar award.
  - 1 is a UA distinguished Alumna; 1 is a UA Distinguished Teacher.
- Faculty leadership roles in professional societies.
  - Past president of American Association for Agricultural Education (AAAE).
  - President of Southern Section of AAAE and National vice president of AAAE.
  - Past chair of national AgEd chairs group.
  - Editorial boards of at least 4 journals.
  - Past external reviewers at Virginia Tech University and Utah State University.
- Students received numerous competitive national and regional research and student project awards, as well as campus recognitions.

#### Research

- Extramural grant activity is healthy.
  - Faculty wrote 32 grant proposals, with successful total funding exceeding \$2.6 million (\$189,000 AECT faculty share).
  - 7 full-time faculty wrote 14 refereed journal articles and made 43 research presentations at research conferences.
  - Faculty increased collaboration with researchers across the UA and across the profession.

#### Service

- Excellent outreach to such groups as the Arkansas Agriculture Teachers Association, sustainable energy working groups across Arkansas, Arkansas Farm Bureau, agricultural equipment industry, etc.
- High levels of faculty participation in College and UA committees.
- High levels of faculty participation to appointed committees within their respective professional organizations.

#### **Weaknesses:**

##### Teaching

- Department lost services of 1 faculty member who was appointed to serve as Assistant Dean.
  - A portion of those salary funds were retained to hire temporary instructors.
- 6 years ago faculty were assigned heavy teaching loads. While loads have been adjusted, this has caused a cultural shift among the faculty. This takes time to implement.
  - Transition from faculty assignments that were near 100% teaching to significant research assignments.
  - Faculty need time to build research capacity.
  - Has caused collapsing of course sections and increasing section sizes.
- Department seeks to provide a 50% balance of theory and laboratory experience in each course. This represents a challenge in maintaining reasonable enrollments and/or graduate student support to assist with laboratory teaching.

- A significant need identified by a recent departmental external (10-year) review was a PhD program. They identified as possibly the top non-PhD producing department in the US and noted that, based on the need for trained PhDs, our department was best prepared to fill that niche.
  - Transitioning to a PhD program would require changes in faculty staffing patterns and at least one additional graduate faculty member.
- As the Agricultural Systems Technology programs (teaching as well as research), we have only 1 faculty member primarily assigned to this program.

#### Research

- 6 years ago faculty were assigned heavy teaching loads. While loads have been adjusted, this has caused a cultural shift among the faculty. This takes time to implement.
  - Transition from faculty assignments that were near 100% teaching to significant research assignments.
  - Faculty need time to build research capacity.
- Need to identify resources to fund research in emerging issues to be proactive rather than reactive to trends.
- Need to increase stakeholder awareness in our research capabilities
- Need to better collaborate with researchers across the UA and across our profession.
- Even though AECT is a unit within the Division of Agriculture, its potential to support research across the Division, including Extension, is not fully realized or utilized.

#### Service

- AECT has no formal appointments within the Arkansas Extension Service, as do other units within AFLS and the Division of Agriculture.

### Priorities and Directions:

#### Teaching

- Need to explore possibilities of adding a PhD program.
- While numbers of faculty and graduate students have increased since 2007 (benchmark), M&O support has not kept pace. Traditional teaching-related expenses are being increasingly funded through dollars generated through Global Campus partnerships.
  - Faculty teaching of courses through Global Campus must continue, as well as the current shared revenue model, for us to maintain operations.
- Scholarship funds. AECT has virtually none.
- Net new faculty position in agricultural systems technology, to keep pace with increasing demands of stakeholders.
  - Precision agriculture and electronics and instrumentation.
- Increase the number of MS graduates by increasing the assistantship pool. This will require more campus-funded assistantships as well as faculty-generated research assistantships.

#### Research

- Need to assist faculty to continue to transition from historically heavy teaching loads to increasing research assignments. This includes support for continuing to change the culture of the unit.
- With diminishing federal research funds, some faculty find it increasingly difficult to fund their research.
- Even though AECT is a unit within the Division of Agriculture, its potential to support research across the Division, including Extension, is not fully realized or utilized.
- Net new faculty position in agricultural systems technology, to keep pace with increasing demands of stakeholders.
  - Precision agriculture and electronics and instrumentation.
- Increase the number of extramural grants. Requires focused faculty time.
- Develop a PhD program through internal partnerships within UA.
-

Agricultural Statistics Laboratory  
Edward Gbur  
Professor and Director

The Agricultural Statistics Laboratory has a three pronged mission of teaching, statistical and collaborative research, and statistical consulting and service. The majority of our funding is from the Agricultural Experiment Station. Our campus home is in the Bumpers College. Since we do not have a degree program our faculty home for tenure and promotion purposes is in the Department of Crop, Soil and Environmental Sciences.

Laboratory personnel currently consists of two tenured faculty at the Professor level and three support staff (an Administrative Specialist II, a Program Associate, and a Systems Analyst.). Beginning in August, two entry level Assistant Professors (one tenure track and a non-tenure track spousal hire) will be added to the faculty.

Our teaching efforts are focused at the graduate and upper division undergraduate level. The vast majority of the audience consists of students from Bumpers College departments with a small minority from applied areas within the Biological Sciences Department. The examples used in these courses are based on agricultural applications to which the students can relate. Often the examples come from the instructor's collaborative research or consulting activities. Our goal is to enable these students to carry out basic statistical analyses for their thesis or dissertation research as well as over the course of their careers. We regard the usefulness of our courses to those students as the greatest strength of our teaching mission.

With our limited faculty we have not been able to add new courses to our curriculum that are important as the Statistics discipline has and continues to evolve over time. There are several important theoretical and methodological areas that are becoming critical for these students to be familiar with now and in the future. This represents a definite weakness in our program. The addition of the two new faculty members in the Fall will provide us with an opportunity to expand our course offerings in some of these areas to better serve our target audience. It will also allow us the option of creating additional offerings of our current courses that have seen increasing enrollments. This expansion represents our top teaching priority over the next several years.

Multi-disciplinary research teams are common in agriculture and statistics plays a key role in nearly every project. Our definition of a collaborative research project is based on the statistician being accepted as equal with all of the other scientists in the group. This equality extends to the rewards associated with coauthorship on publications, presentations, and grants.

Laboratory faculty spend a large portion of their research efforts on these collaborations which enable faculty and staff in other disciplines within the College and the Experiment Station to produce stronger research outputs. Our faculty's extensive collaborative work is a strength of our Laboratory. It is also a weakness because it reduces the time available for their personal statistical research and creates a tendency at times to treat it as a lower priority, especially when trying to keep a reasonable work-life balance. The addition of two new faculty members in the Fall, one of whom has a majority Experiment Station appointment, will provide us with an opportunity to bring more balance to the collaborative-personal research part of our mission.

Laboratory faculty and staff provide statistical assistance and advice to faculty, staff and students in the College and Experiment Station that does not rise to the level of collaboration. Requests for these services are dealt with on a first come, first serve basis and include requests such as programming assistance, data management advice, study design, and in some cases,

data analyses that the client is unable to do himself/herself. A large portion of the routine type requests that are made to the faculty are referred to an appropriate staff member. This service is considered as a unique and valuable asset within the College and Experiment Station.

Our faculty serve on a large number of graduate student committees in various departments in the College. These activities are viewed as both service and research. More recently our services have been utilized by students in the Bumpers College Honors program who are working on their Honor theses. Our faculty also serve on various faculty committees in the College and on occasion have served on campus faculty committees.



## Department of Animal Science

### **Vision**

The Department of Animal Science aspires to be a leading authority of animal agriculture by means of innovative teaching, research, and Extension programs. The Department will maintain a strong and diverse portfolio of programs that will not only continue to serve stakeholders within Arkansas, but also earn regional, national, and international recognition.

### **Mission**

The Department of Animal Science will recruit, educate, and prepare for the future, a new generation of citizens that will provide expertise in food production, animal health/well-being, as well as human health and nutrition; perform research from discovery to application that benefits the production efficiency, animal health/well-being, food safety/security, and sustainability of animal agriculture; and provide research-based livestock and forage information through non-formal educational methods for the sustainability and management of agricultural production systems to improve Arkansans quality of life.

### **Strengths**

#### ***Teaching***

- Undergraduate enrollment is strong; increase of 67% in last decade.
  - Growth attributed to strong interest in pre-veterinarian and equine science.
  - Department has an 85% acceptance rate into veterinary medicine schools.
- Relevant and reflective coursework for both traditional and non-traditional students.
  - Three concentration (general animal science, equine science, pre-professional) areas to provide clear curriculum selection for students.
  - Numerous group/club opportunities (i.e., competitive teams, Block and Bridle, Pre-veterinarian club).
- Largest number of students in Honors Program of any department in Bumpers College.
- Endowments to support scholarships totals just over \$1.1 million.

#### ***Research***

- Faculty recognized nationally for strong applied research programs, as it pertains to a systems approach from birth of an animal to end product.
  - Areas of expertise include physiology, ruminant nutrition, forage agronomy, health/veterinary/parasitology, meat science/muscle biology, genetics, and monogastric nutrition - research strengths in beef cattle/forages and swine.
  - Recent strategic hires of basic research expertise compliment the robust applied research program.
- An experienced staff committed to the research mission. Adequate research facilities and animals in four locations throughout the state.

### ***Extension***

- Excellent Extension support to Arkansas stakeholders; Extension faculty recognized regionally and nationally in their field of expertise.
- Numerous educational and electronic methods (county presentation, videos, electronic newsletters, field days, demonstrations, etc.) to assist Arkansas livestock producers and related commodity groups.

### **Weaknesses**

#### ***Teaching***

- How to continue serving students with changes in faculty makeup.
- Improve recruitment of quality undergraduate and graduate students.
- Need to broaden educational/experiential learning opportunities.
  - Underdeveloped internship/externship and international experience program.
- Need to increase number of Honors sections and online course offerings.

#### ***Research***

- Enhance research productivity with increased publications and extramural funding.
  - It is difficult to find funding for whole animal research.
- Continued backfilling of faculty positions.
  - Strategic hires in focused areas of need include animal behavior; equine science; meat product enhancement; and sustainable production systems.
- Increasing challenge for graduate student assistantship funding.
- Upgrades to aging facilities in order to maximize research productivity and attract top-caliber new faculty hires.
  - How do we sustain strong and competitive research performance with critical space limitations?

#### ***Extension***

- Adapt to electronic age without loss of face-to-face contact with stakeholders.
- Continued backfilling of faculty positions; specifically, in beef cattle management.

### **Priorities and Direction**

#### ***Overall Departmental***

- Create new and enhance existing partnerships with industry stakeholders, Departments within and outside the UA.
  - Revitalize/enhance advisory committee, and fully establish departmental alumni association.
- Enhance the stature of faculty and department within and outside the state.
  - Define metrics for performance evaluation in accordance with UA, Bumpers College, and Division of Agriculture personnel document.
  - Pursue opportunities for endowment of faculty positions.
- Continued backfilling of faculty positions.
  - Development of continuous five-year plan for anticipated replacements.

- Areas of expertise include animal behavior; equine science; meat product enhancement; beef cattle management, and sustainable production systems.
- Enhance the comprehensiveness of faculty in Fayetteville, Hope, and Little Rock.
- Enhance the management efficiency and aesthetics of farm units.
  - Development of a five-year plan for prioritizing equipment and maintenance needs for laboratory and off-campus research facilities.

### ***Teaching***

- Increase undergraduate student enrollment while maintaining/increasing quality of students.
  - Enhance recruiting efforts/activities for STEM as well as traditional ANSC students (align with College efforts)
    - Increase number of faculty involved in recruiting activities.
- Continuous assessment of overall curriculum and modernize outdated course offerings that supply required knowledge for career placement.
  - Enhance 'science'-base of equine program.
  - Initiate service learning initiatives and enhance study abroad opportunities (some designed as interdisciplinary offerings).
- Continue to search for permanent funding for equine program.
- Increase amount of departmental scholarships and competitive teams; secure funding for teaching herds.
  - Exploration and submission of external teaching grants.
- Implementation of what we learned from direct and indirect student assessments to best prepare our graduates for careers and grad school.

### ***Research***

- Leverage our scientific expertise and vast animal/land resources with collaborations between Departments and other groups (within and outside UA).
  - Develop research programs that maintain flexibility to address emerging issues as well as new funding opportunities.
- Increase number of refereed publications; and increase number and diversity of grant submissions (integrated grant submissions that include all three missions).
- Increase recruitment of graduate students; specifically, Ph.D. candidates.
  - Enhance graduate student assistantship funding; develop partnerships with industry.

### ***Extension***

- Provide timely/pertinent information to state, regional and national stakeholders.
- Enhance Extension's role of outreach for the department at the county and state levels.
  - Use of Fayetteville faculty to provide Extension programming to western Arkansas.
- Enhance educational and experiential learning opportunities for youth in animal and forage sciences.
  - Enhance recruitment of undergraduate students through Extension activities.

Department of Crop, Soils, and Environmental Sciences  
May 2016

Although some of the faculty and mission of the Department are structurally outside the Fayetteville campus, this report considers all of the members of the Department and their contributions. This is particularly relevant on outreach since there are several Division-line faculty members that have a primary extension appointment which can be listed as outreach. Because of the difference in our structure, service has been separated into a fourth category.

## **RESEARCH**

Research in the department is diverse representing many aspects of the 3 areas mentioned in the Department's name. There are approximately 20.5 FTE's assigned to research and the Agricultural Experiment Station accounts for 80.2% of the M&O budget.

### Strengths

- Strong funding (\$8.9 million in grants, gifts and contracts in 2014)
- Excellent publication output (106 refereed journal articles, 8 book chapters in 2014)
- Relevant research for Arkansas
- Faculty have strong collaborations nationally and internationally
- 9 faculty are Fellows in 1 or more of their Professional Societies
- 6 faculty hold chairs or professorships

### Weaknesses/Challenges

- Lab facilities in the Agriculture Building and Alzheimer Lab are antiquated
- Limited salary programs weaken morale and reduce the effectiveness as a management tool
- Flat budgets for several years have eroded M&O
- Filling positions can be difficult because of differing Division (research) and Campus (teaching) priorities

### Priorities and directions

- Replace water quality position
- Add expertise in precision agriculture
- Add expertise in pasture weed science

## **TEACHING**

Teaching effort in the Department is engaged at both the undergraduate and graduate levels. There are two undergraduate majors Crop Science (CPSC) and Environmental Soil and Water Science (ESWS). Graduate degrees at the MS and PhD level are offered. There are approximately 4 FTE's assigned to teaching and the Bumpers College contributes 5.2% of the M&O budget.

### Strengths

- Undergrad enrollment last 10 yrs has increased 94% (CPSC 34→66; ESWS 63→132)
- SSCH last 10 yrs has increased 3 fold
- Robust grad program – largest in the College (49 MS, 19 PhD students)

Involvement in CEMB and ENDY interdisciplinary program (2 MS, 8 PhD students)  
Excellent placement of graduates  
Departmental culture of dedication to teaching

Weaknesses/Challenges

Limited teaching FTEs  
Heavy advising responsibilities  
Off-campus location of Alzheimer Lab faculty makes classroom instruction challenging  
Have not participated in ENDY and Sustainability programs as much as desired  
Filling positions can be difficult because of differing Campus (teaching) and Division (research) priorities  
Limited salary programs weaken morale and reduce the effectiveness as a management tool

Priorities and directions

Continue growth in undergrad majors, SSCH generation, and across campus relevance  
Increase undergraduate student involvement in international study  
Increase emphasis on training PhD students in graduate program

**OUTREACH**

Typically in our Department we refer to outreach efforts as those efforts that fall under extension. There are approximately 9 FTE's assigned to extension and the Cooperative Extension Service accounts for 15.6% of the M&O budget.

Strengths

Location of faculty allows better integration with Division stakeholders  
Faculty serve as board members and officers for several organizations in the state  
CSES Extension outreach highly respected by stakeholders in the state

Weaknesses/Challenges

Physical separation of faculty makes a cohesive, integrated extension effort challenging  
Limited salary programs weaken morale and reduce the effectiveness as a management tool  
Limited influx of new energy (no assistant professors)

Priorities and directions

Continued push for electronic based outreach (website & social media)  
Increase and strengthen efforts in soil and water resources and environmental issues  
Add expertise in forage and roadside weed management

**SERVICE**

Since in our Department we often define Outreach as Extension efforts, we have listed Service as a fourth category to separate outreach efforts from those that can be defined as extension. All faculty members are expected to have a service component in their job assignment, up to a maximum of 10%.

There is no formal number of service FTE's since FTE's in the Department are calculated on budgetary source and there is no budget for service.

Strengths

Leadership positions on campus (TFSC, Faculty Senate, Graduate Council)

Leadership in professional societies (12 associate editors, 2 editors-in-chief, 2 society presidents)

Leadership on state issues (C&H Farm, Arsenic in rice, Governor's AR/OK Joint Commission)

Weaknesses/Challenges

Limited time allocated for service activities

Priorities and directions

Leadership at the national level to raise the Department's visibility

## ENTOMOLOGY

### Departmental Statistics

Faculty and Student Data											
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Faculty FTE</b>	17	17	17	18	18	16	15	14	15	14	14
<b>Campus Funded FTE</b>	1.26	.98	1.16	1.5	1.5	1.15	1.1	1.1	1.1	1.1	1.1
<b>AES Funded FTE</b>	11.34	11.72	11.54	12.17	12.17	10.52	9.57	8.57	9.32	8.57	8.57
<b>Extension Funded FTE</b>	4.4	4.3	4.3	4.33	4.33	4.33	4.33	4.33	4.58	4.33	4.33
<b>MS Enrolled - Fall</b>	10	7	9	8	9	8	10	10	12	10	8
<b>PhD enrolled - Fall</b>	3	7	8	5	8	9	9	11	8	10	11
<b>Degrees - academic year</b>											
<b>MS</b>	6	4	6	1	8	1	2	3	5	2	5
<b>PhD</b>	2	0	1	2	1	2	3	0	1	1	2
<b>SSCH - academic year</b>	603	637	697	546	532	490	597	503	564	955	1018

**Our graduate programs** provide students with a broad foundation in basic and applied entomology. Through coursework and oral examinations, all entomology students graduate with a strong knowledge of core subjects: insect diversity, physiology, ecology, and pest management. Students can choose from an array of specialty areas (eg. pest management, biocontrol, systematics, plant-insect interactions, molecular genetics) in which to complete their thesis or dissertation project. All students gain experience in experimental design through preparing and presenting a research proposal followed by a thesis or dissertation. They receive feedback not only from their advisory committee, but also from presenting their proposal and thesis/dissertation to the entire department.

In a nationwide comparison to other Entomology programs, time to degree for PhD students averages 48 months, which is 12 months less than 20 peer programs, and time to degree for MS students averages 30 months, which is 3 months less than 10 peer programs.

#### **Our students are outstanding in their field**

- Receiving regional and national awards (eg. USDA SARE Graduate Student Research Grant, Conference of Southern Graduate Schools thesis award, Monsanto Graduate Student Research Fellowship, Outstanding Graduate Student in Forest Entomology from the Southern Forest Insect Conference, and numerous awards from the Entomological Society of America (ESA), including the Society's most prestigious graduate student award, the John Henry Comstock Award
  - Since 2010 three Department students have been selected for the John Henry Comstock Award for all the Southeastern Branch, consisting of 12 states. No other university has had more than one Comstock Award winner in that time.

- Since 2010, 11 of 18 PhD students have been awarded graduate fellowships – 2 Distinguished Doctoral Fellowships, 8 Doctoral Academy Fellowships and 1 Leggett - Chancellor's Fellowship.
- 33% of all graduates (MS and PhD) since 2010 have been females
- Retention of PhD students since 2010 exceeds 90% (>85% for MS).
- Graduates of our programs are highly sought. Employment of PhD graduates in the field since 2010 exceeds 90% (>85% employment or placement in PhD programs for MS graduates). Recent graduates have gone on to positions at the University of Tennessee, Texas Tech University, research and regulatory positions with USDA-ARS, Florida Department of Agriculture, Arkansas State Plant Board, State Forestry Commission, the US Army, industry (Bayer Crop Science, Syngenta, DuPont-Pioneer and Twister Biotech), and post-doc or graduate programs at Rutgers, Purdue, University of Maryland, Texas A&M University.
- Department students average making 3+ presentations per year at professional meetings

**Our faculty** are recognized for excellence in research, teaching, and extension, as evidenced by:

- Positions of leadership in professional organizations. Our faculty include a former president of the Entomology Society of America (ESA), a Board member of the Council of Scientific Society Presidents, a former president of the Nearctic Section of the International Organization for Biological Control, a soon-to-be Program Officer for 2016-2018 at the NSF, and members of several editorial boards (eg. Journal of Chemical Ecology, Annals of the Entomological Society of America, Bulletin of Entomological Research, Journal of Parasitology, Journal of Medical and Veterinary Entomology, Acarologia.)
- Regional and national professional awards. Our faculty include an ESA Fellow, and have received regional awards such as the SEB-ESA Outstanding Extension Entomology Award and the Award in Insect Physiology, Biochemistry, and Toxicology. National recognition for research awarded by the Entomological Society of America for IPM. I DO NOT KNOW WHAT THIS ONE IS
- University of Arkansas mentoring awards for advising undergraduate SURF projects. Our faculty have also received the Outstanding Undergraduate Mentor Award.

### **Our research programs**

- Are well-funded through a diversity of competitive federal and regional sources (eg. NSF, USDA-NIFA, commodity board funding, and support from industry. Despite our small faculty, we obtained \$1,696,888 in extramural research funding in the past 5 years.
- Generate publications in leading journals in entomology, plant science, systematics, and general biology. Over the last 5 years, our faculty and students have published an average of 29 papers per year in peer-reviewed journals.

Address basic and applied questions of importance to Arkansas, the nation, and the world. Our research programs have developed into diagnostic services for a variety of clientele in Arkansas, the Midsouth, and Southeast states.

### **Our extension and outreach programs**



- Support a large and diverse clientele. Despite the small size of our extension group (8 faculty divided among 6 locations) this group supports a diversity of agricultural commodities and industries (crops, poultry, beef and dairy cattle, forestry, apiary) and public concerns (urban and landscape pest management, including fire ants).
- Provide effective solutions for state needs. Our faculty teach producers about pests, vectors of diseases and how to manage each in an economical/ecological/socially sustainable manner.
- Support the university's mission in STEM education. Through our popular biennial Insect Festival and frequent outreach events at local schools and farmer's markets, the department reached >3,000 students, teachers, and other citizens each year for the past 21 years. These outreach events not only provide the public with information about insects, but also attract students to science and technology and showcase the public benefits the university provides.
- A well-curated arthropod museum widely used for outreach, service identifications, teaching and research

### **Challenges**

- Facilities: space for offices, classrooms, laboratories, and graduate students
- Maintaining graduate programs with declining faculty numbers and losing domain expertise linked to faculty resignations and retirements.
- Today's leadership model is not sustainable if the department is to grow in all aspects of the land grant mission

### **Opportunities**

- Recruiting a new department head
- Securing new faculty positions
- Expand undergraduate course offerings

## Department of Food Science

### Vision

We, the Department of Food Science in the Bumpers College of Agricultural, Food and Life Sciences and the University of Arkansas System Division of Agriculture, will be a national and international leader for education, research, service and transfer of knowledge associated with the food sciences and nutrition. We aspire to be known as a top 10 food science program in the United States.

### Mission

Food Science involves the development and application of scientific principles and technologies to convert agricultural commodities into safe, nutritious and appealing food products.

The mission of the Department of Food Science is to serve as the primary source of higher education, fundamental and applied research, and public service associated with enhancing the wholesomeness, quality and availability of food, improving the health of Arkansas residents, and adding value to raw agricultural products with particular emphasis on products relevant to Arkansas. The Department of Food Science promotes programs for achieving regional, national and international recognition of excellence while contributing to the advancement of the quality of life and professional development for Arkansans.

### 1. Strengths

#### 1.1. Teaching

- One of 40 undergraduate programs in the United States accredited by the Institute of Food Technologists.
- Student to teacher ratio remains small with class sizes between 25 and 35.
- Hands-on experiential learning and required internship for all food science undergraduate students.
- Good student services within the unit including high quality staff advising and assistance with job and internship placement.
- Good student-faculty interactions and faculty mentoring.
- Outstanding student placement post-graduation (BS, MS, PhD).
- Distance education MS in food safety is a unique and growing program.
- PhD program in top 5 nationally according to the National Academy of Sciences (2010).

#### 1.2. Research

- Extramural funding is healthy (\$2.3M in 2015).
- Outstanding publication output by faculty (82 peer-reviewed publications in 2015).
- Good relationships with and impact on industry.
- Food system approach to research portfolio resulting in excellent multidisciplinary research.

#### 1.3. Service/Outreach

- Excellent outreach to the food industry with the Ozark Food Processors Association, the Arkansas Association for Food Protection, the Rice Industry Alliance, the Arkansas Food Innovation Center (AFIC) for food entrepreneurs and the Better Process Control School.
- Departmental based service centers for the food industry (sensory, microbiology, analytical chemistry).

- Strong service to professional organizations.

## **2. Weaknesses**

### **2.1. Teaching**

- Food Science is the only academic department not located on campus. As a result, faculty have to commute to campus to teach lower level courses and students have to commute to Food Science for classes requiring the use of the Food Science facilities (teaching lab). With growing student numbers, the specialized teaching space (teaching lab) is insufficient.
- Our approach to training food scientists is hands-on and many of our upper level classes have a time consuming lab component. With the increase in class sizes and sparse teaching resources (faculty time and operating \$), it is increasingly difficult to maintain the same level of experiential learning within the food science curriculum.
- Although the food science program has grown drastically in the past 10 years, we are probably not graduating enough students to meet the regional and national demands for food scientists.
- Our PhD student numbers (18 current PhD students) are too low to meet demand and adequately serve our research needs. We need to implement better strategies for PhD recruitment and continue to grow resources to financially support graduate assistantships.

### **2.2. Research**

- Although research inputs and outputs are very strong, extramural funding has tended to shift from competitive federal funding to industry funding in the past 8 years. This shift has an impact on the type of research performed in that the research is becoming more applied and less forward thinking. However, our research has the potential to have greater immediate impacts on our stakeholders.
- Some of our faculty find it increasingly difficult to fund their research.
- Our research infrastructure (equipment) is aging and its replacement is increasingly problematic. We have also research space challenges with regards to both quantity and quality.

### **2.3. Service/Outreach**

- The department lost its only predominantly extension faculty in 2016. Without a replacement for this position, our outreach to the food industry will be crippled. We will be faced with having to eliminate or phase out outreach programs such as the Better Process Control School, food safety training and the Arkansas Food Innovation Center (AFIC).

## **3. Priorities and Direction**

Overall, our goals and priorities are set to further enhance our national reputation as a top tier food science program.

### **3.1. Teaching**

- Increase the number of undergraduate students to 100 and increase the quality of the credentials of students entering the program.
- Increase the proportion of PhD candidates within our graduate program.

- Improve our laboratory teaching facilities to increase capacity and equipment available to student.
- Increase the teaching resources available to departmental faculty (TAs and operation \$).
- Finalize a world class assessment program to improve teaching and learning.

### 3.2. Research

Our current research is focused mostly on poultry, grains, oilseeds and specialty crops. We anticipate further developing our national and international reputation in those areas.

Specifically, our topic specific goals are to:

- Expanding our research on rice and rice derived products to create a world class center for rice processing and rice utilization.
- Further develop our research on food and health, and nutrition as the impact of diet on health continues to be an important societal issue in Arkansas and the United States.
- Continue our research on foodborne pathogens associated with poultry and specialty crops, and toxins in grains to make progress toward ensuring greater safety in the food supply.
- Continue to innovate food, food ingredients and food processes to add value to the food industry in Arkansas and the United States.

We will employ the following strategies to support and enhance our research mission:

- Further enhance our relationships with the food industry to grow funding sources.
- Increase and diversify federal competitive grant funding success, including NIFA, NIH, NSF, DOE, DOD and others as appropriate.
- Develop collaborative research to address commodity boards and associations (e.g. Rice, Soybean, Corn, U.S. Poultry and Egg Association, etc.)
- Actively seek funding from foundations and NGOs in research topics relevant to their respective missions.
- Maintain the departmental research productivity by ensuring that peer-reviewed publications and measurable research impacts are top priorities for every faculty member in the department.

### 3.3. Service/Outreach

- It is vital for the department to maintain a high level of outreach to our stakeholders and the community. The department needs to expand its educational outreach in our areas of strength in Food Processing and Food Safety. To this end, we need to expand industry focused educational programs beyond mandated programs such as the Better Process Control School.
- The departmental involvements in local and national organizations and the organization of educational and research conferences is paramount to our regional and national reputation.
- The Department has the desire to grow its service and outreach to local entrepreneurs to stimulate economic development in the state providing that the AFIC can be appropriately staffed.

Department of Horticulture  
Summary Report  
May 20, 2016

The Department of Horticulture summary report is as follows. It is organized by program strengths, weaknesses, and opportunities. Within each section, the traditional mission areas are covered for research and service, teaching and learning, and outreach and engagement.

**Horticulture Program Strengths:**

Faculty in the Department of Horticulture have national and world renowned research and teaching programs, outstanding service in national scientific societies, and significant recognition for their work. The following list provides details of departmental research, service, teaching, and outreach strengths.

- Research
  - Hydroponics for fresh leafy greens and strawberries in the greenhouse
  - Local Food Systems for horticultural crops
  - Nursery Production and Landscape management
  - Plant breeding
    - Leader in small fruit breeding especially blackberries where U of A genetics are used worldwide.
    - Vegetable breeding in spinach and southern pea – source of white rust disease resistance in commercial spinach cultivars
  - Sustainable and organic production systems of fruit crops for the south
  - Turfgrass
    - Soil management and stress tolerance
    - Turfgrass management and physiology
  - Federal, state, corporate, and industry grant support
    - USDA
      - SCRI, OREI, ORG
    - Walmart, Syngenta, etc.
  
- Teaching
  - Online education – The Alliance for Cooperative Course Exchange in the Plant Sciences (ACCEPTS Program) is a consortium of the University of Arkansas, Louisiana State University, Mississippi State University, and Oklahoma State University. It provides a mechanism for participating universities to share undergraduate and graduate courses to increase the number of courses offered to students. This is a one of a kind course sharing program that is being looked at by other universities to increase student opportunities.
  - International teaching activities – University of Padova, Ghent University

- Service
  - Scientific societies service and leadership roles
    - Presidential service: American Society for Horticultural Science (ASHS) – Clark, Rom; Southern Region ASHS – Clark, Mackay, McDonald, Rom; Plant Growth Regulation Society of America – Mackay
    - Journal Editors – Clark, Evans, Mackay, Rom, Richardson
  - Significant College, U of A Campus, and Division of Agriculture service
  - International activity– Clark, Evans, Mackay, Richardson, Rom (Fulbright)
  - Collegiate Program Reviewers – Clark, Evans, Mackay, Richardson, Rom
  - Nationally recognized faculty
    - Scientific Society Fellows – Clark, Mackay, Richardson, Rom
  
- Outreach and Engagement
  - Master Gardener Program – one of the strongest in the United States with 3200 Master Gardeners reporting 154,537 volunteer hours and 84,556 education hours
  - Regularly held Extension Field Days – blackberries, grapes, spinach, southern pea, pecans, turfgrass management, ornamentals and landscape management
  - Faculty work with Arkansans in the areas of fruit and vegetable production, ornamentals and landscape management, sustainable and local food production, turfgrass management, and hydroponics

#### **Horticulture Program weaknesses:**

- Research Infrastructure
  - Laboratory space is at a premium with greater needs than space available
  - Controlled plant growth facilities is inadequate
- Teaching faculty numbers have decreased while departmental teaching loads remain the same or increased in some areas.
- Recognition of the horticulture discipline is low among K-12 students and is low among students in the university. As a result students have low awareness of the careers that are possible with a horticulture degree.
- Unfilled extension turfgrass faculty position for outreach to the turf industry.

#### **Horticulture Program Priorities and Opportunities:**

- Increase enrollment with current emphasis on local food, sustainable food production, food security – we are a “Found Major”
- Focus on environment and environmental services – pollinators, water quality and quantity, habitat restoration through horticulture sciences
- New fruit and vegetable varieties and/or crops along with new production methods
- Genomics and application to cultivar development
- Faculty position for extension turfgrass management

## **OVERVIEW OF THE DEPARTMENT OF PLANT PATHOLOGY**

The Department of Plant Pathology has comprehensive programs in both applied management of plant diseases and emerging areas of science providing quality training of graduate and undergraduate students. Research is recognized nationally and internationally, and information is extended to serve the state of Arkansas through Cooperative Extension and outreach in areas of plant protection. The Department of Plant Pathology participates in four graduate programs leading to a Master of Science (M.S.) Degree in Plant Pathology (PLPA), Doctor of Philosophy Degree (Ph.D.) in Plant Science (PTSC), and M.S. and Ph.D. in Cell and Molecular Biology (CEMB). The focus of the undergraduate program in the department is to provide a quality background in plant pathology and molecular biology to students in other departments and provide independent research opportunities for undergraduate students.

### **DEPARTMENTAL STRENGTHS**

- Comprehensive research program that is recognized nationally and internationally.
  - Focus on diseases of importance to Arkansas agriculture; research and extension activities directly serving citizens of Arkansas.
  - Strong molecular focus with collaborative efforts in CEMB and campus-wide.
- Strong record of student and postdoctoral placement.
- Collaborative, cross-disciplinary research within the department, college, nationally and internationally.
- Collegial and productive faculty.
- Consistent, diverse, and sustainable funding.

### **DEPARTMENTAL WEAKNESSES**

- Maintaining/advancing excellence in teaching, research, and service in the face of recent and looming faculty retirements.
  - Maintaining graduate student numbers.
  - Maintaining comprehensive research programs that serve all areas of plant pathology.
  - Limiting competitiveness for certain grants.
- Critical research space limitations and support services (core labs, bioinformatics) on campus to maximize research productivity and attract top-caliber faculty.
- Identifying resources to fund emerging issues and stakeholder concerns.
- Communication could be improved, especially among faculty at different locations.
- Stakeholder awareness of our department.

- Lack of seed and equipment grants to assist funding competitiveness.
- Limited ability to provide teaching experience to graduate students.
- Domestic graduate student recruitment is limited.

### **PRIORITIES AND DIRECTION OF THE DEPARTMENT**

- Maintain sufficient flexibility to address emerging diseases, as well as new funding opportunities.
- Develop alternative methods of delivering course content to nontraditional students.
- Increase pool of quality graduate students from Arkansas and the United States, especially from 4-year colleges.
- Increase role in undergraduate research and education.
- Integration of expertise from off-campus faculty to allow substantial contributions to teaching and mentoring students.
- Strengthen competitive grant funding.
- Grow faculty numbers with strategic hires.





Department of Poultry Science (POSC) and Center of Excellence for Poultry Science (CEPS)  
Summary for Chancellor Joseph E. Steinmetz

22 April 2016

**Overview**

The Center of Excellence for Poultry Science (CEPS) is the only one of its kind globally and houses the Department of Poultry Science (POSC) and USDA-ARS. There are five other universities globally with a Poultry Science Department that award a baccalaureate poultry science degree. We support Arkansas's largest agriculture commodity (broilers, turkeys, and eggs) which provides over 40% of Arkansas's agriculture economic contribution.

**Teaching**

Strengths

- Relationship and dialog with commercial poultry and allied poultry industry: Undergraduate curriculum enhancement and workforce development training and placement (100% placement opportunities)
- Infrastructure: CEPS space and equipment for recruitment, retention, and education/learning needs
- Faculty and staff: Dedicated to academic program success
- Proven models to recruit, educate, and place students from other Arkansas universities (e.g., 3+1 with University of Arkansas at Pine Bluff)
- Undergraduate scholarships: POSC endowments and The Poultry Federation scholarships

Weaknesses

- Undergraduate enrollment: Although our graduation numbers met or exceeded our national peers in the 2014-2015 academic year, a much larger enrollment would support industry hiring needs
- Gaps in Curriculum: capstone classes in first and second processing, feed milling, and reproductive physiology are needed
- Infrastructure: Restrictions on classroom availability per centralized scheduling resulting in POSC student/industry representative hardships
- Current allocation for teaching (2.2 FTE)

### Priorities and Direction:

- Strategically allocate teaching FTE with new faculty hires and balance current FTE's as faculty retire
- Link 3+1 programs with in-state universities with poultry industry need/support
- Establish poultry industry funding mechanisms for Arkansas two-year college students to transfer to UAF poultry science: (e.g., endowments, gifts, loan forgiveness programs)
- Explore unique academic programs (joint college, i.e., Bumpers poultry science & Walton supply chain management) that increase student placement in the Arkansas poultry industry
- Explore non-traditional programs (2+1+1 and 3+2) with universities globally
- Explore distance learning development that fosters two-year college transfers, 3+1 transfers, and poultry education in 3<sup>rd</sup> world academic institutions
- Increase recruitment in Arkansas high schools and two-year colleges, especially in underserved areas of the state
- Increase recruitment messaging to all areas of the state so parents understand that their "first generation college bound student" can have a fruitful career in the Arkansas poultry industry after obtaining a B.S. in poultry science
- Better establish advising mechanisms for first year college students, at two-year colleges, for ease of transfer to UAF poultry science

### **Research**

#### Strengths

- Nationally and internationally recognized faculty with robust research programs (14.2 FTE)
- Infrastructure: CEPS campus laboratories, Division of Agriculture animal facilities, and colocation with USDA-ARS
- Multidisciplinary research programs: Array of collaborations involving industry and USDA-ARS
- Grantsmanship: CEPS faculty obtain in excess of \$3million annually
- Strong connection to industry: Proximity to state's largest agriculture industry
- Graduate student output: CEPS support for students and faculty student output exceeds peers (100% placement opportunities)
- Undergraduate research projects: Robust undergraduate student pool allows for training and faculty screening for graduate school
- Internationally recognized venues: The Poultry Federation venues allow for dissemination with industry and scientific leaders, globally

#### Weaknesses

- Infrastructure: Division of Agriculture "Poultry Research Farm" facilities are diverse, but have aged do not meet research space needs
- Retiring faculty: Significant loss of faculty in the next 5 years

- Graduate student support: Faculty support will be modified in the face of budget restraints
- Federal funding: Establish Federal Funding links to research poultry industry needs
- Industry research: Explore partnerships that allow for more industry collaborative research

**Priorities and Direction**

- Poultry industry research synergies
- Renovate Poultry Research Farm with current and future gifts
- Balancing basic and applied research for successful funding and industry impact
- Balancing new faculty hires with infrastructure (farm facilities, laboratory support, and equipment support)
- Balancing new faculty hires with industry relevance synergies that are fundable

**Extension**

**Strengths**

- Faculty: Nationally and internationally recognized faculty with a devotion (time and effort) to support Arkansas's largest industry with minimum FTE's (2.7)
- Impact areas: production, breeder/hatchery, processing, HACCP, animal welfare, and other niche efforts impact Arkansans (poultry industry, K-12, public citizens)
- Undergraduate education: Extension faculty have significant teaching loads resulting in up-to-date curriculum

**Weaknesses**

- Meeting industry needs: Faculty are thinly staffed and critical mass does not allow for coverage of some industry impact areas such as environmental issues, applied nutrition, and food safety
- High teaching loads also reduce industry coverage

**Priorities and Direction**

- Strategic hires to better serve industry needs
- Explore alternative dissemination technology

## **SCHOOL OF HUMAN ENVIRONMENTAL SCIENCES**

### **Mission**

The School will inspire people and organizations to reach their full potential through delivery of innovative research, education, and service focused on individuals, families, communities and their environments.

### **Vision**

The school will be a nationally recognized leader in innovative research, student learning and professional services across the disciplines of human sciences.

### **Strengths**

Commitment to (a) solidarity as a School with three Areas and within Bumpers College, (b) excellence and (c) collaboration and cooperation

Thematic Research Areas (some with extramural or Agricultural Experiment Station support; in alphabetical order):

- Alcohol Use, Interpersonal Relationships and Sexual Assault
- Childhood Obesity
- Emergency Management, Family and Community Resilience and Health, particularly in rural areas and with an aging population
- Entrepreneurship in two Populations—Latina Young Women and Encore Entrepreneurs
- Human Nutrition
- STEM learning, including rural girls

Some of our teaching laboratories and facilities, particularly in Apparel Merchandising and Product Development

Increasing extramural support

Undergraduate programs, in terms of quality, student enrollment, retention and graduation rates, and placement

Undergraduate teaching, including contributions to International Programs, the Honors Program, Experiential Learning, Undergraduate Research, Executives-in-Residence, Visiting Scholars and Service Learning

Effective Advisory Boards in some Areas

### **Weaknesses**

Limited visibility and identity ambiguity

Recruitment and retention of research faculty, staff and graduate students

Promotion of faculty

Research productivity, especially without a PhD program and better facilities and more staff support

Most of our research laboratories and facilities, particularly wet laboratories

Space for faculty and graduate student offices and dry laboratories, as well as a dedicated men's restroom in the HOEC building

Undergraduate to graduate student ratio and graduate student to graduate faculty ratio

Website and communications

Relationships with alumni

Less effective or non-existent Advisory Boards and Friends' Groups

Debt service of the Jean Tyson Child Development Study Center (JTCDSC)

### **Priorities and Directions**

Continue to increase our contributions to the University's goal of becoming a top 50 public research university and provide opportunities for faculty that support this effort

Increase visibility and reduce identity ambiguity, particularly through more new and high caliber faculty hires, participation in, and on national boards and committees (e.g., APLU's Board of Human Sciences and Social Sciences Subcommittee), more collaborations with the Arkansas Cooperative Extension Service and other community and industry partners, and more and better communications about these efforts

Become an UA leader in both the assessment of student learning outcomes and evaluating the effectiveness of teaching, including faculty advising

Maintain and regularly review our current academic programs; obtain state approval for our new Birth to Kindergarten program with licensure

Manage undergraduate and increase graduate enrollment within our resources, including space

Improve and expand momentum started with alumni relations, advisory board members and stakeholders support, and student-centered benefit events, e.g., 'Metal and Shine' Fashion Show and SMASH (Students Mastering the Art of Southern Hospitality)

Continue to operate in the black at the JTCDSC and add a Kindergarten classroom

# **College of Education**

## THE DEPARTMENT OF CURRICULUM & INSTRUCTION

The history of the Department of Curriculum & Instruction reaches back to the origins of the University of Arkansas and is currently one of the largest departments on campus. Unique among land grant institutions, the University of Arkansas organized teacher education programs from the beginning and offered teacher preparation classes starting in 1872. The Department houses most teacher education programs on campus and provides specialized courses for those programs housed outside the department. All teacher/administrator education programs are accredited by the Council for the Accreditation of Educator Preparation. The Department includes 50 full-time faculty, 17 adjunct faculty, 8 staff members, and 1164 students—of which 369 are graduate students. The Department offers 8 programmatic areas, 19 degree options, 7 graduate certificates, and numerous additional teacher licensure plans.

### Recent CIED Achievements

- During 2015, CIED faculty published 2 books, 14 book chapters, 49 refereed articles in national journals, 11 national conference proceedings, 91 refereed presentations at national conferences, 41 invited and keynote presentations, submitted 17 external grants, and received funding for an additional 18 externally funded grants for more the \$1.5 million in new grant funds. This is addition to continuing grants from previous years.
- The educational leadership program secured a grant to move the University Council for Educational Administration *Center for Law and Educational Leadership* to the University of Arkansas in a cooperative arrangement between EDLE and the Law School.
- Several CIED faculty members have been elected to serve as officers in national professional associations (three serve as president).
- Several CIED programs hold the distinction of being nationally ranked by U.S. News and World Report and other ranking agencies.
  - EDLE online graduate education programs rank No. 53 (No. 43 among public institutions).
  - ETEC online graduate programs ranked No. 18 on The Best Schools website, THEBESTSCHOOLS.org. 2015. Ranked #53 Best online graduate education programs in U.S. News, 2016
  - SPED online special education master's degree ranked No. 10 on The Best Schools website, THEBESTSCHOOLS.org. and ranked #53 by U.S. News in Best Special Education online programs.
  - CIED Ed.S. and Ph.D. ranked No. 68 in public institutions on U.S. News Graduate Schools, 2016. Online graduate education programs No. 53 (No. 43 among public institutions) in U.S. News, 2016.
- CIED faculty continue to sponsor numerous symposia, conferences, and clinics that serve students/candidates, the community, the State, and the profession, including:
  - The Arkansas Literacy Symposium
  - The Autism Symposium
  - The International STEM Education Conference
  - The English as a Second Language Symposium
  - The Arkansas Multicultural Symposium
  - The Arkansas Clinic for Literacy (new in 2016)
  - The Center for Children and Youth
  - The National Writing Project
  - The Arkansas Center for Autism Research and Education
  - The Arkansas New Teacher Academy
  - The Laundry and Literacy Project

- The Walton Principal Fellows Program
- The Arts and Literacy Institute
- The Arkansas Autism Outreach Center
- The Arkansas Autism Partnership Clinical Consultative Service

### **Areas of Distinction**

- The CIED faculty take pride in the quality of the courses offered and generally excel in the classroom (both traditional and online). This is evidenced by very high Purdue student assessment scores and extremely positive written feedback from students in courses and degree programs.
- The CIED faculty are very service-oriented. They value providing service to students and candidates, fellow faculty members, the community, the institution, and their respective professional associations and fields of study. This can partly be evidenced by the extensive lists of symposia, clinics, and conferences outlined above.
- The CIED faculty strive to work collectively to provide the highest quality learning experiences and valuable degree programs for students. This can be evidenced by the large number of degree/curriculum adaptations made in the various programs and candidate success rate approaching 100 percent in state licensure tests across all licensure areas. Faculty continually strive to improve programmatic offerings through the implementation of new technologies, teaching approaches, course offerings, degree tracks, and new degree programs.
- Graduates from degree programs in CIED continue to be highly sought after by high performing schools in Arkansas and surrounding states. Most degree programs experience almost 100 percent placement rates each year.
- CIED continues to attract large numbers of international students to our graduate programs. Currently, the Ph.D. program is one of the largest doctoral programs on campus and a little more than 50 percent of those candidates are international students—many supported by their national governments. The Ph.D. program continues to increase rigor and recently accepted its most accomplished class in recent memory. This can be evidenced by the fact that four of the 2016 candidates received Walton Fellowships.

### **Areas for Improvement and Goals**

- Goal: Increase External Funding: While the number of externally funded grants continue to increase each year, the majority of these grants are directed by a small number of CIED faculty. Many of our senior faculty do not have extensive backgrounds in external grants procurement. Most recent CIED external grants have been procured by faculty new to the University of Arkansas. Strategies are being developed/implemented to engage the senior faculty in external grants procurement.
- Goal: Encourage Faculty Leadership: A seemingly small number of senior faculty strive to assume administrative leadership positions beyond their immediate programmatic areas. This makes departmental leadership succession planning difficult to predict. We're encouraging small leadership teams in the department to augment leadership development among the faculty.
- Goal: Graduate Faculty Participation: Strategies need to be developed to engage a larger number of CIED faculty in the Ed.S. and Ph.D. programs. A large number of CIED faculty are deeply engaged in undergraduate and master's degree programs, while interacting little with doctoral candidates. Meanwhile, a small percentage of the faculty serve all of the specialist and doctoral candidates. To continue to expand the specialist and doctoral programs, we need an expanded pool of nationally recognized scholars who attract candidates to the University of Arkansas. We have started holding monthly graduate faculty meeting and events where faculty offered opportunities to engage more deeply.
- Goal: Expand the Diversity of Internship Placements: The childhood education bachelor's and master's degree teacher licensure programs are very large (~600 students). Due to our



professional development internship model that includes a year-long student teaching internship in an elementary school in Northwest Arkansas, we are limited in the type of school that we can place interns. Frankly, the model does not allow the interns to be placed in urban or international settings. We must identify alternative methods of completing the elementary education internships in more diverse settings. We have recently completed a major expansion of the secondary education internship program that allowed our students more diverse internship opportunities in rural school, urban schools, tribal schools, and international schools. This will serve as a model for our elementary and other teacher licensure programs.

- Goal: Expand Teacher Licensure Programs: Recently, enrollment in the secondary teacher education MAT program has dropped. This drop is largely attributed to competition from teacher licensure programs offered at the undergraduate level and non-traditional teacher licensure programs. During the summer of 2016, the faculty will be developing two new licensure programs. One will be an undergraduate humanities (foreign languages, social studies, English language arts, speech and drama) teacher licensure program and one will be a graduate certificate program designed for secondary teachers who desire to teach K-12 education on-line. We are also continuing efforts to move the UATeach undergraduate math and science teacher education program into CIED.

## **Department of Education Reform (EDRE) Planning Report**

**Department Primary Goal** – The primary goal of the department is to produce scholarship that will help policymakers, practitioners, and the general public improve the quality of K-12 education in Arkansas and nationwide.

**Department Secondary Goal** – The secondary goal of the department is to improve the academic stature and influence of the department, college, and university by recruiting, retaining, and encouraging faculty and recruiting and training graduate students who can earn national recognition for their accomplishments.

**Brief Department History** – The Department of Education Reform was created in 2005 with a \$20 million gift, establishing 6 endowed chairs, support for 10 doctoral students, and a pool of resources for research, projects, and dissemination of results. Jay Greene was recruited to head the department and Gary Ritter was transferred from another department to fill the first two endowed chairs. Patrick Wolf and Robert Costrell were added the next year, followed after that by Robert Maranto and Sandra Stotsky. With the faculty complete, the doctoral program was created and began admitting students in 2009. In 2012, Stotsky retired and was given emerita status. She was replaced in 2014 by Gema Zamarro.

**Strengths** – Our current set of faculty and graduate students are receiving national recognition for their work, which is having significant influence on efforts to improve K-12 education in Arkansas and nationwide. For example, our research has led the U.S. Department of Education to change how it calculates high school graduation rates and has led to the expansion of the DC Opportunity Scholarship Program. Our seminal research on teacher pension policy continues to stimulate wide-spread efforts, in policy, philanthropic, and think-tank venues, as well as further academic research to advance structural pension reform. Three of our six faculty members were recently recognized by a national ranking as being among the most influential education policy researchers. Recent graduates of our relatively new doctoral program have been placed in very prestigious jobs, including positions at Stanford, Texas A&M, North Carolina State, and Tulane Universities. One of our recent graduates serves as the education policy advisor to Governor Hutchinson. And other recent graduates have positions at leading think-tanks, philanthropies, and contract research firms. In our fourth year producing Ph.D. graduates, we have successfully placed all 16 completing students in desired jobs. New faculty projects, such as the Arkansas Teacher Corps, the Character Assessment Initiative, and experimental evaluations of the educational effects of art, theater, and other cultural activities have attracted considerable attention and support. The faculty and students continue to produce a high volume of quality research that is being placed in top journals and generates a large amount of external funding for the university. This external funding in addition to our endowment resources put us in a strong financial position to continue our successful efforts.

**Challenges** – Recruiting quality graduate students each year as well as attracting quality applicants for open faculty positions have proven difficult despite our record of accomplishments and offers of generous compensation. The overall reputation of the university and its geographic location have been a drag on our recruitment efforts. In addition, we've had difficulty recruiting quality staff to help operate our new research and service projects. There are shortages of people with the appropriate background and experience in the area and attracting people to relocate from other parts of the country is not easy. Even when we find qualified staff, bureaucratic delays often mean that hiring new people can take more than 6 months. While we are well-positioned financially to pursue existing projects, those funds have almost entirely been raised by our faculty with relatively little assistance or support from elsewhere in the university, and at times with undue administrative burdens. Expanding our resources to launch new initiatives without stronger support from development and sponsored projects staff may prove too burdensome on faculty and discourage their attempts to pursue those new projects.

**Opportunities** – Given our currently strong faculty, students, and research projects, we could significantly expand the scope of some of our new initiatives if we had greater confidence in our ability to recruit qualified staff and to receive greater support in our fund-raising efforts. In particular, we could greatly expand the Character Assessment Initiative, which addresses a policy issue that is especially salient among funders and researchers right now. In addition, we could create a center to conduct more and longer-term experimental evaluations of how the arts and culture affect students. Our Crystal Bridges study drew attention from the *New York Times*, NBC News, and a slew of national organizations but we will need an expanded infrastructure to do more of that work. Our staffing for the Arkansas Teacher Corps, the *Journal of School Choice* (which we house and one of our faculty edits), and for the School Choice Demonstration Project is currently adequate but without any flexibility to respond to growing needs or to take advantage of opportunities. In some cases, we compensate for the lack of sufficient internal capacity by collaborating with other universities and sharing credit. For example, the School Choice Demonstration Project has partnered with both the University of Wisconsin and Tulane University recently to assist in the final production, release, and publicizing of major school choice evaluations of Milwaukee and Louisiana.



## ELEANOR MANN SCHOOL OF NURSING – PROGRAM INFORMATION

### HISTORICAL BENCHMARKS

Program founded: 1969

*As an associate degree extension program of the University of Arkansas for Medical Sciences College of Nursing*

School of Nursing Established: 1992

### CURRENT DIRECTOR

*(Appointed 2015)*

Julie Anne Hoff, MPH, PhD, RN CNL  
Associate Professor and Director  
Eleanor Mann School of Nursing

### DEGREES OFFERED/AWARDED

*(2015)*

Bachelor of Science in Nursing  
(Traditional BSN) : 195  
Bachelor of Science in Nursing  
(RN-BSN): 33  
Master of Science in Nursing  
(MSN): 0  
Doctor of Nursing Practice  
(DNP): 4

### ENROLLMENT

*(2014-2015)*

Pre-Nursing: 672  
Traditional BSN: 394  
RN to BSN: 205  
MSN: 14  
DNP: 60

*Diversity in Nursing: 22% Not Caucasian*

**CLINICAL CONTRACTS: 150**

### FULL-TIME FACULTY

Professor: 1  
Associate Professor: 2  
Assistant Professor: 6  
Instructor: 21

### FULL-TIME FACULTY EDUCATION

Research Focused Doctorate: 5  
Doctor of Nursing Practice: 4  
Other Terminal Degree: 6  
No Terminal Degree: 17

### ADJUNCT FACULTY

Adjunct Instructor: 2  
Adjunct Clinical Instructor: 64

### ADJUNCT FACULTY EDUCATION

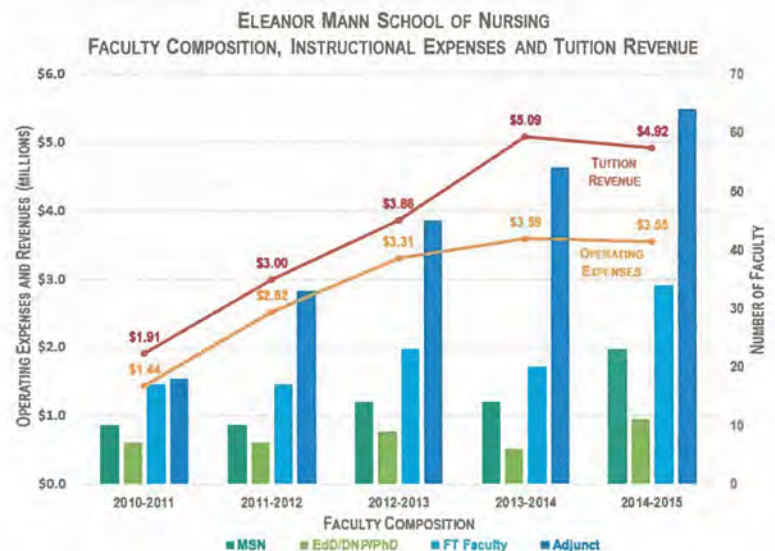
Research Focused Doctorate: 1  
Doctor of Nursing Practice: 2  
Other Terminal Degree:  
Masters Degree: 10  
Bachelors Degree: 53

**CLINICAL PRECEPTORS: 195**

### STAFF:

Graduate Assistants: 4  
Academic Counselor: 3  
IT Tech: 1  
Administrative Staff: 4  
Work-Study: 5

**BUDGET: \$3,547,463**  
*(FY 2015)*



## THE FUTURE OF ELEANOR MANN SCHOOL OF NURSING UNIVERSITY OF ARKANSAS COLLEGE OF NURSING

Nursing at the University of Arkansas was established in 1969 as an associate degree nursing extension program of the University of Arkansas for Medical Sciences College of Nursing. In 1987, Nursing became a department in the College of Education and Health Professions. The associate degree nursing program transitioned to a baccalaureate nursing program in 1994. Following a million dollar endowment, the Department of Nursing was renamed the Eleanor Mann School of Nursing in 1996.

Pre-Nursing is the most popular major among first year undergraduates at the University of Arkansas. In the last six years, undergraduate nursing enrollment increased more than 200%. One hundred upper-division undergraduates are admitted twice a year to the baccalaureate program. Today, there are approximately 850 undergraduate and graduate nursing students. Eleanor Mann School of Nursing offers three accredited degree programs, a Bachelor of Science in Nursing, a Master of Science in Nursing and a Doctor of Nursing Practice.

Enrollment growth at Eleanor Mann School of Nursing relies primarily on full-time master's prepared instructors teaching didactic courses and more than 60 adjunct faculty teaching clinical. Faculty composition limits student outcomes, curricular innovation and evaluation, graduate program growth and the integration of academic nursing into the University of Arkansas' enterprise of shared governance, research, innovation, service, and grant out-reach and engagement.

**CURRENT STATE OF ELEANOR MANN SCHOOL OF NURSING**  
5-YEAR NURSING ENROLLMENT BY DEGREE PROGRAM AND FACULTY COMPOSITION:  
FULL-TIME VERSUS PART-TIME FACULTY



As the demand for undergraduate and graduate nursing education continues to grow, the current organizational structure of the School of Nursing coupled with the long-standing nurse faculty shortage limits recruitment and retention of terminally degreed nursing faculty. A lack of terminally degreed faculty limits the capacity of Eleanor Mann School of Nursing to provide progressive undergraduate and graduate

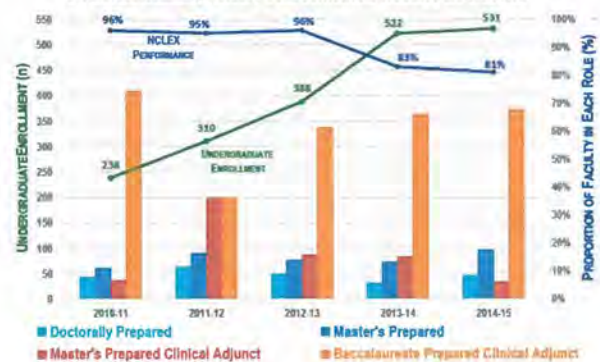
education, meaningful research experiences, test new models of instruction, participate in collaborative research within and beyond the University as well as explore and support improvements in health promotion, disease prevention and health services delivery.

**This proposal seeks to establish a College of Nursing at the University of Arkansas in Fayetteville to lead and transform nursing education, nursing practice, nursing research, and health care delivery systems to improve the health and well-being of the people of Arkansas and beyond.**

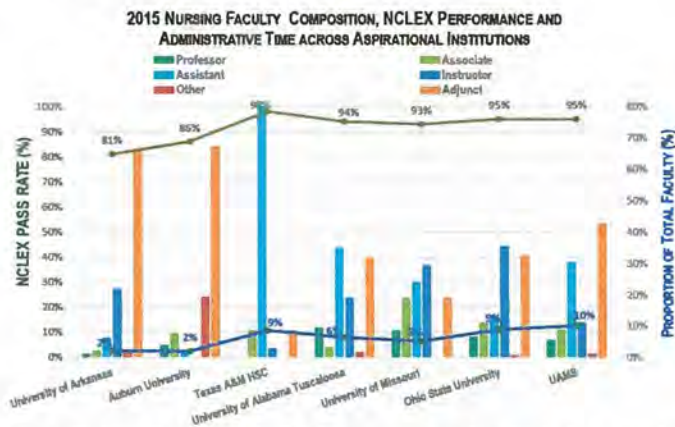
An independent College or School of Nursing is not a novel or new idea. Of the 12 SEC institutions with nursing programs, all but the University of Arkansas is organized as an independent college or school. Of the top 50 nursing programs ranked by U.S. News and World Report (2016), 49 are organized as an independent colleges or schools. The University of Arkansas is a Carnegie I research intensive institution and reorganizing nursing into an independent college will transform nursing students, faculty, academic programs and research foci to align with the rest of the university. Diversification of nursing faculty beyond master teachers will enhance the clinical, leadership and research potential of all faculty in leveraging the external research, training and education funding opportunities through the National Institutes of Health, Health Resources and Services Administration (HRSA) and other federal government agencies.

NCLEX is the national licensing examination for registered nurses. NCLEX pass rates are linked to institutional accreditation and often used by undergraduate students, parents and employers as an indicator of overall program quality. The 2015 pass rate for Eleanor Mann School of Nursing was 81% compared to the national passing rate of 88%.

**CURRENT STATE OF ELEANOR MANN SCHOOL OF NURSING**  
5-YEAR ENROLLMENT, FACULTY COMPOSITION AND NCLEX PERFORMANCE

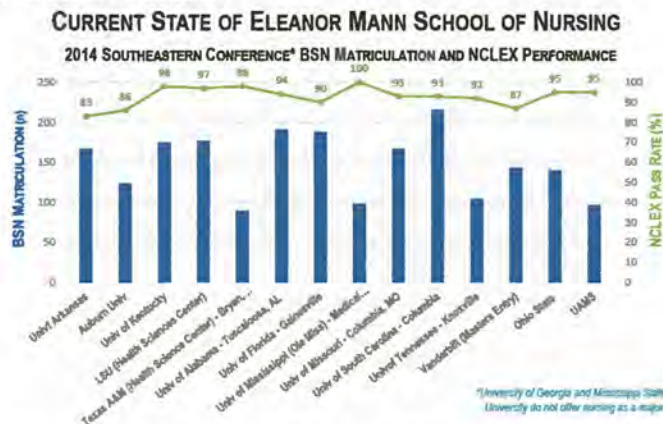


The academic preparation of upper division college students admitted to Eleanor Mann School of Nursing remains constant as evidenced by consistent prerequisite GPAs at or above 3.25. Faculty prepared to support curricular innovation and evaluation is believed to be the primary contributor to NCLEX performance. Master teachers and strong nurse clinicians are committed to teaching undergraduate students but they lack advanced knowledge and skill to develop, implement, evaluate and disseminate curricular innovations and teaching learning strategies relative to the desired student and program outcomes of a Carnegie I institution.



Currently less than 1/3 of all full-time nursing faculty hold a terminal degree and 90% of the clinical instructors are prepared at the baccalaureate level. When Eleanor Mann School of Nursing was founded, faculty composition consisted of only master's and doctorally prepared faculty. Requiring nursing educators to possess a master's degree in nursing is a standard mandated by many state boards of nursing for decades.

Across SEC and aspirational institutions, Eleanor Mann School of Nursing remains one of the largest and most popular undergraduate nursing programs despite having the poorest NCLEX pass rate in the SEC for the last three years. It is anticipated that enhancing the composition of nursing faculty to be more reflective of other SEC and aspirational institutions will improve NCLEX pass rates, national ranking, service to the community as well as other desired outcomes of a research I institution.



Nursing faculty with a research focused terminal degree are trained in the development, testing, evaluation and implementation of innovations in academic programming and basic science, clinical translational science, clinical practice, nursing education, population health and/or health services research. Scholarship in these areas

support improvements in nursing education, health promotion, disease prevention and health care delivery. Today, the professional formation of nurses goes beyond that of caregiver at the bedside. Nursing programs are expected to provide students with advanced knowledge and skills in care coordination, transition coordination, motivational interviewing, reengineering the full care trajectory, recognizing and implementing innovative clinical practices, utilization of evidence, team-based care, human factors engineering, patient safety, finance, health policy, ethics and knowledge of big data and data science to improve practice and drive health care change. Recruitment and retention of more terminally degreed faculty is needed to achieve the desired program outcomes for the many constituents they serve.

## What does a University of Arkansas College of Nursing Mean . . .

### For Students?

- Provision of a learning environment that is innovative, collaborative, and progressive.
- Create novel opportunities for student research, leadership, interprofessional education and specialization.
- Increased exposure to diversity of people, ideas, and career trajectories.
- Develop opportunities for seamless academic progression in nursing.

### For the University of Arkansas?

- Revolutionize nursing education via talent acquisition, curricula innovation and enhanced integration of technology.
- Increase extramural funding to support research and teaching.
- Acquire national and international recognition to advance the University and the region of Northwest Arkansas.
- Increase national ranking to draw the best students and faculty.
- Increase philanthropy to achieve strategic priorities.
- Explore novel academic programs in partnership with Colleges of Engineering and Business at the undergraduate and graduate levels.
- Increase extramural funding for education.
- Extend University nursing reputation beyond baccalaureate education.
- Enhance recruitment and retention of faculty.
- Collaborate to establish research centers in health promotion, disease prevention, gerontology, health services delivery.
- Leveraged the academic contribution of nursing beyond the classroom.

### For Northwest Arkansas and beyond?

- Through the generation, dissemination, implementation and evaluation of new knowledge advance the health and well-being of populations and the delivery of health services in Arkansas.
- Create employment opportunities and work environments that encourage graduates to remain Northwest Arkansas.
- Strengthen clinical relationships through faculty practice.
- Leverage the evidence-based practice and research capacity of nursing support environments of care, nurse residency programs, adoption of Magnet values.
- Collaborate to establish health service research centers in health promotion, disease prevention, and gerontology.
- Enhanced research partnerships with UAMS-Little Rock, UAMS-Northwest and other research partners.

## Departmental Assessment

### Background

The Department of Health, Human Performance, & Recreation (HHPR) is the largest and one of the fastest growing academic department on campus, with over 1,500 undergraduate and graduate students. Since 2009, HHPR has incurred a 74% increase in student majors. See Appendices A-C for enrollment and program data.

Housing 5 distinct program areas, we are a diverse department comprised of 29 faculty (21 tenured or tenure track; 8 clinical). HHPR is directed by a Department Head, who is supported by a Graduate Coordinator/Assistant Department Chair, Undergraduate Coordinator, Coordinators for each program, Administrative Assistants and Academic Advisors. The Department also includes research centers and labs, including The Human Performance Lab, the Office for Concussion Research, the Office of Studies on Aging, the Sexual Health Research Lab, the Study of Sport Consumers Lab, and the Hydration Science Academy. The organizational chart in Appendix D depicts our departmental structure.

### 5 Distinct Programs

- Exercise Science
  - B.S.
  - M.S.
- Recreation and Sport Management
  - B.S.
  - M.S.
- Community Health Promotion
  - B.S.-public health
  - M.S.
- K-12 Physical Education
  - B.S.
  - Online M.Ed.
- Athletic Training
  - MAT
- Departmental Ph.D. in Health, Sport & Exercise Science w/ concentrations in:
  - Exercise Science
  - Recreation and Sport Management
  - Community Health Promotion
  - K-12 Physical Education

### **Teaching, Research & Service**

1. Faculty and staff tend to be collegial.
2. Research productivity has increased during the past 5 years.  
See Appendix C
3. Teaching evaluations are consistently high across all program areas.
4. Historically, faculty in HHPR have been very active in service endeavors. Examples include serving in capacities as Chair of Faculty Senate, Chair of Campus Faculty, Directing the Teaching Faculty Support Center, Editorships of professional journals, leadership roles in professional organizations, and administrative search committees, to name a few.

### **Opportunities for HHPR**

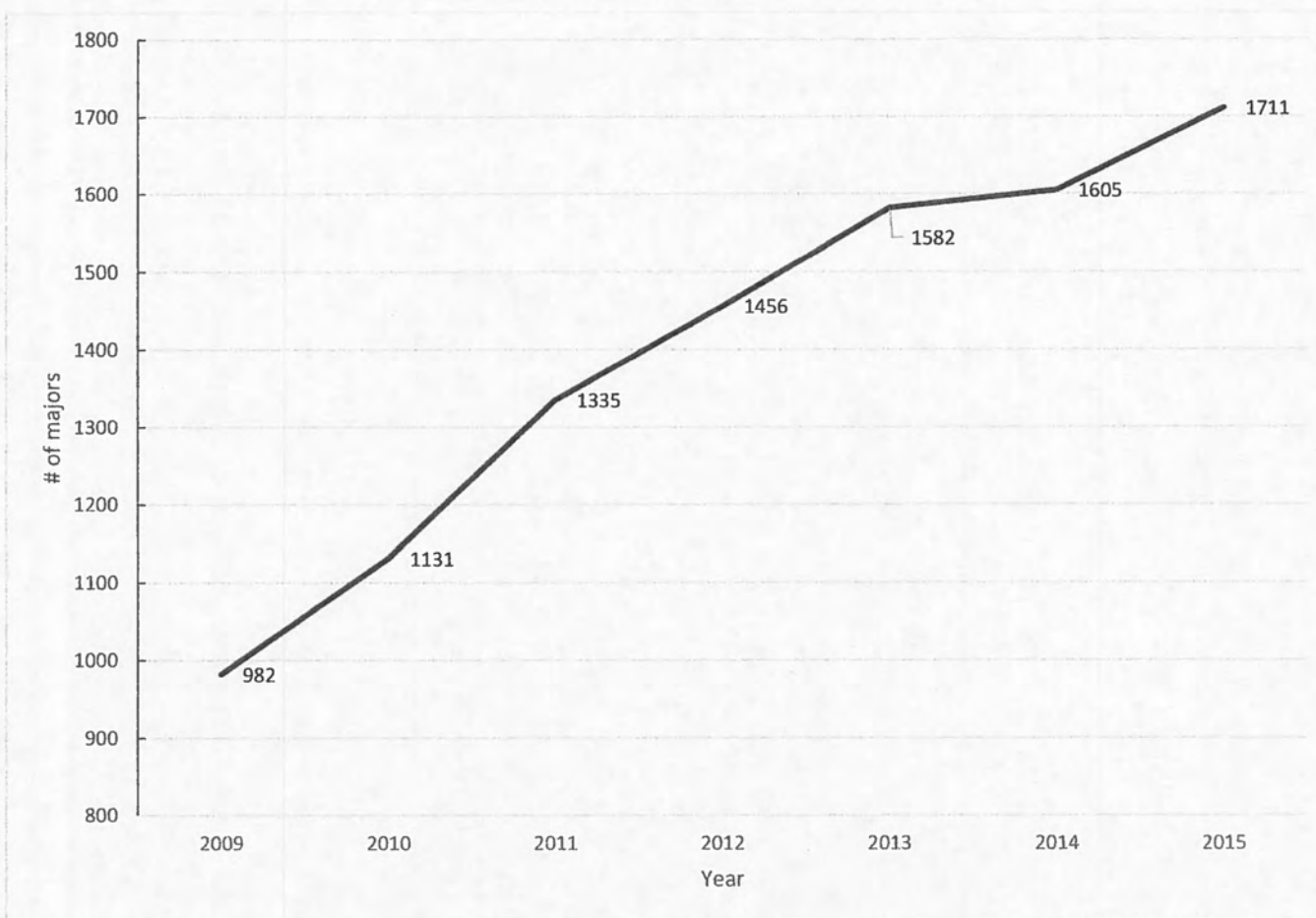
1. We would like to establish a Masters of Public Health Degree w/ concentrations in Community Health, Physical Activity and Public Policy. The MPH degree is the most widely recognized and respected degree in health and cuts across many discipline within the university.
2. Expand on attracting high quality doctoral students. Within the past 4 years, our faculty have become more targeted in their recruitment efforts of high quality and geographically diverse doctoral students.
3. Collaborations with other entities on and off campus. As the breadth of research has expanded in HHPR, we feel there are multiple opportunities to expand on research and curricular collaborations.

### **Challenges Facing HHPR**

1. Graduate Assistantships
    - HHPR has a total of 18 hard funded GAs.
    - COEHP has only 10% of its Ph.D. students funded on hard lines.
    - Class offerings have been eliminated due to lack of GA support.
    - We are at capacity with regard to office space and laboratory space
    - 6 year graduation rate
      - 53% in 2014 (first time, full time degree seeking freshman)
  2. Given the size of our department, we are understaffed with respect to faculty and staff.
    - Our academic advisors currently advise 450 students each, and faculty average 50 advisees each.
  3. Our current level of research productivity is unsustainable. With enrollment outpacing investment in departmental resources, our advising loads, class sizes, undergraduate honors student supervision, etc. have all increased substantially in the past 5 years.
-



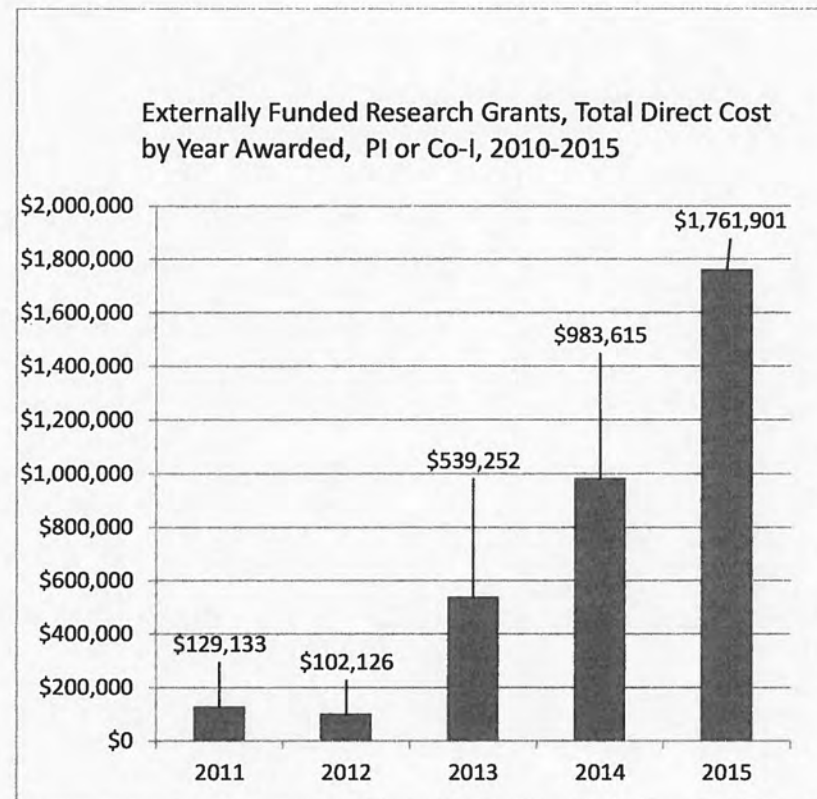
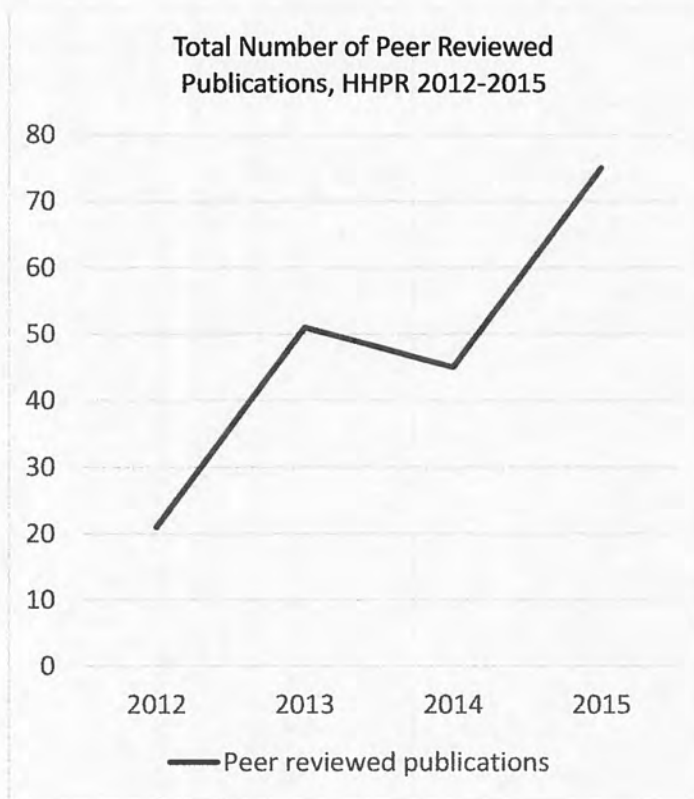
**Appendix A. Annual Enrollment HHPR, 2009-2014.**



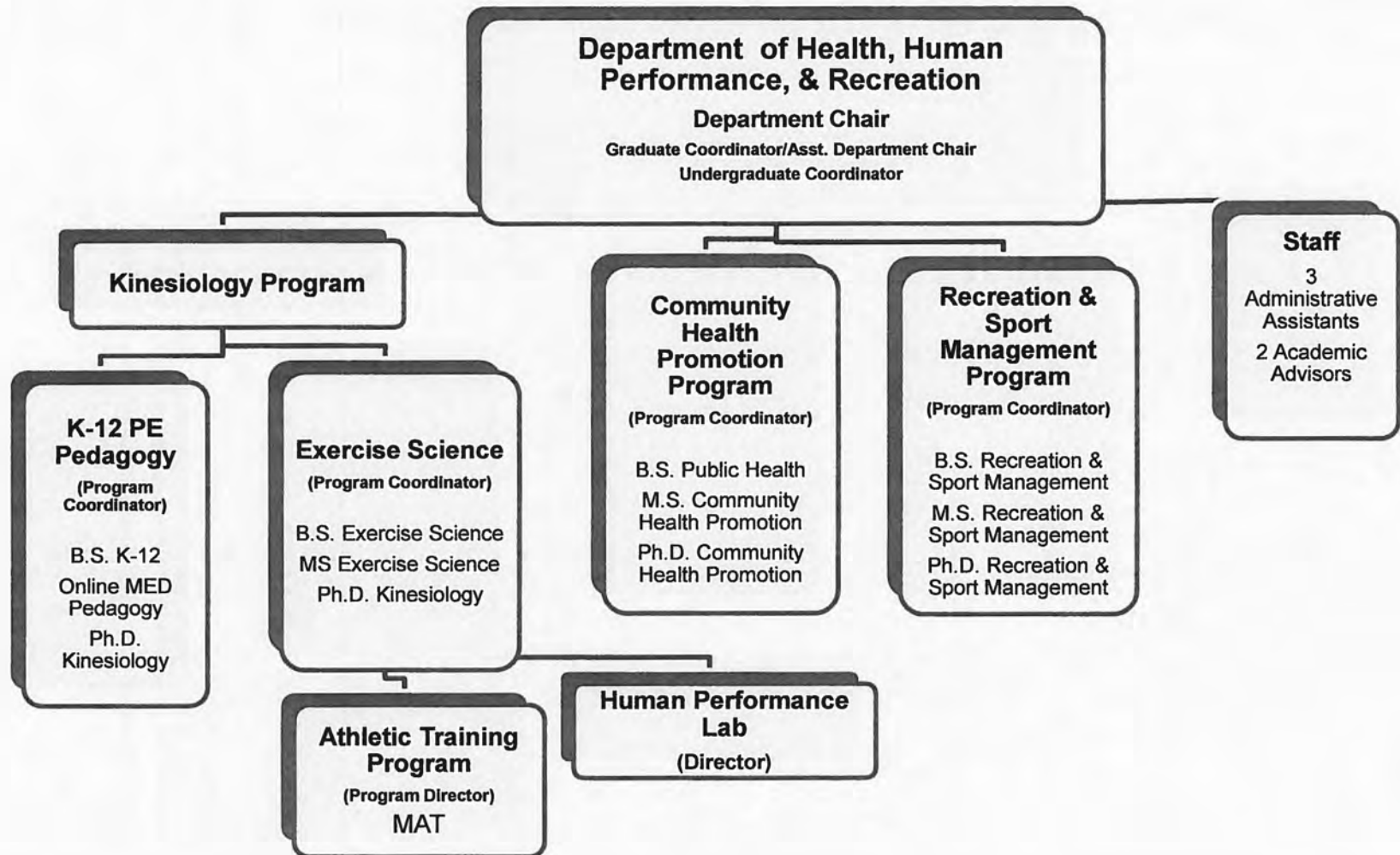
**Appendix B. HHPR Data, 2014**

<b>Department</b>	<b># Student Majors</b>	<b>Total # Faculty</b>	<b># T/TT Faculty</b>	<b>Faculty/Student Ratio 1:</b>
HHPR	1,711	29	21	59
Nursing	1,538	39	8	39
Curriculum & Instruction	1,062	44	28	24
RHRC	793	33	28	24
Education Reform	16	8	7	2
<b>HHPR Rank in Category</b>	1	4	3	5

**Appendix C. HHR Research Productivity**



Appendix D. HHPR Organizational Chart



## INTRODUCTION

The Human Performance Laboratory (HPL) is part of the Department of Health, Human Performance and Recreation within the College of Education and Health Professions at the University of Arkansas. It is housed in the HPER building and consists of a total of ~6,000 sq. ft.

The primary purpose of the HPL is to support and facilitate the research, teaching and service activities of the Exercise Science faculty (n = 13).

## TEACHING

Eight different classes utilize the resources of HPL (i.e., space and/or equipment). In 2015 a total of 21 class sections and 315 students were taught in the HPL. These numbers have progressively increased as U of A student enrollment has increased.

## SERVICE

The HPL provides numerous service activities to the University and community. These activities include outreach in the form of fitness testing and seminars/talks throughout the community. One major service component of the HPL is our Fitness for Fun Program. This program is a community- & learning-based fitness program designed to assist individuals in developing healthier lifestyles through education and a structured exercise routine. It provides a comprehensive fitness assessment, personalized exercise prescription, and a semester of personal training conducted by our students as an educational opportunity. Proceeds from this program feed back into the HPL entities (e.g., teaching and research).

## RESEARCH

Of the 13 Exercise Science faculty, 9 are tenured or tenure-track with ≥50% research appointment. Over the last 4 years we have had steady increases in peer review publications, research presentations, and grant funding. In the most recent Exercise Science national rankings, we ranked #11 and #16 in presentations and peer-reviewed publications, respectively, out of 52 programs.

## STRENGTHS

- Ambitious faculty
  - Persistent in pursuing funding
    - Our faculty are competing on the national level for federal funding (e.g., National Institutes of Health, National Science Foundation).
    - Faculty are collaborating with other investigators at the University and around the nation, forming stronger grant proposals.
  - Publishing high-caliber research in well-respected journals
    - Our faculty understand the importance of publishing and establishing their research in the scientific community. They have set high goals for themselves regarding number of publications each year, and are often meeting them. It is anticipated that by them establishing themselves as well-respected scientists they will be increasingly competitive for federal grants.

- Industry funding
  - Our faculty have partnered with a wide variety of industries such as start-ups to large, multi-national corporations. This has increased our research productivity while providing the large proportion of our total grant funding.
- State of the art equipment
  - The HPL has had 2 major equipment purchases that have taken our resources to the next level. The environmental chamber allows for multiple investigators to perform high level research in a very controlled environment, which is critical for their research. Our recent wet lab renovation has included the addition of a cell-culture hood and fluorescent microscopy.

#### UNTAPPED RESOURCES & OPPORTUNITIES

- Attracting Associate/Full professor level applicants for Assistant positions
  - In recent faculty searches for Assistant tenure-track positions, we are attracting high caliber individuals that already have established funding and research agendas. Given the higher costs of bringing such individuals in, we have been unable to hire them. Future position openings at the Associate and Full professor levels may attract researchers that, in the short-term cost more, but are more secure in their future potential for obtaining large federal grants.
- Research agendas are complimentary and conducive to collaboration
  - Currently we do a good job collaborating across the university and nation, but more avenues of opportunity for this to occur could make us more competitive for large federal grants.
- Multi-disciplinary research from mice to humans with a common tie to health and medicine
  - We have one of the most diverse Exercise Science programs in the country. Our ability to research mice to children to older adults provides an opportunity to do more translational research (i.e., from bench-side to bed-side).
- Fitness for Fun always has a wait list
  - Expansion of Fitness for Fun would increase our ability to reach more community members, provide more educational opportunities for our students, and financially increase our ability to do research. However an informal needs-assessment analysis revealed that, although we have increased demand to expand the program, we would need more infrastructure to expand the program. This includes increased workout facilities, graduate assistants (to assist in running the program), and support staff.

#### CHALLENGES & OBSTACLES

- Space
  - The last 4 years has seen an unprecedented increase in research activity. We have developed ways to accommodate our researchers (e.g., re-purposing space, provided online scheduling), but we fear that we have reached our capacity.
  - We still have some space that is being underutilized due to inefficient layouts and structure. Renovations of the space would increase our research capabilities.
- Federal Funding
  - Although we are consistently applying for federal funding, we do not have a steady stream of federal funding. Part of this may be explained by the fact that 8 of our 9 of “research faculty” are “early” in their careers. Unfortunately the facts are that the average age of a 1<sup>st</sup> time R01 recipient is 42 years old. In order for us to overcome this “hurdle” more opportunities such as teaching release, graduate assistant support (see below), and collaborations should be facilitated such that faculty are well-poised to obtain federal funding.

- Long term investment in keeping large equipment operational
  - The HPL has over 1 million dollars' worth of equipment. Several of these pieces of equipment are high-ticket items such that a catastrophic failure could not be covered by internal reserve funds. In the event that a catastrophic failure in equipment occurs, funds need to be available so that the research does not come to a halt. A long-term institutional investment that plans ahead for these possibilities may alleviate this possibility.
- Support staff
  - Our administrative assistant handles transactions for ~50 accounts. Due to some systemic inefficiencies, faculty often have to track their own grant budgets. Compounding this issue are policies that require us to spend down certain pots of money in a short time frame (i.e., RIF accounts have to be spent down every 12 months).
- Research dependent on graduate assistants (GA's)
  - We are 3rd from the last among U.S. Exercise Science programs in the number of GA's we provide our students. Faculty research, much like other hard science programs, is largely dependent on graduate students. It is the norm in our field to provide assistantships for at least doctoral students. By not having GA's available we are missing out on attracting great students, but importantly it is hampering our research productivity. If more of the hands-on research is occurring through properly trained Ph.D. students, faculty will have more time to apply for federal funding.
- Communication across campus limited
  - Although there has been improvement in communication, it is still a struggle to know what other resources are available around campus to our investigators.

#### PRIORITIES & DIRECTION FOR THE NEXT 5 YEARS

Our priority to support the research, teaching, and service of our Exercise Science faculty will not change. However, with that mission it is imperative that we provide the necessary resources and decrease hurdles such that professors can excel at their job.

Partly driven by an institutional focus on increased research productivity, we have followed suit by emphasizing research in our budgetary alignment, repurposing and renovating of space, and reducing day-to-day research burdens (i.e., providing supplies, handling compliance). Thus the priority will be to improve on our weaknesses outlined above. However, a few specific priorities include:

- Provide an environment conducive to applying for and executing large federal funding.
- Outline a plan for how to handle long-term maintenance of large research equipment.
- Work to modify policies that allow more flexibility in the timeline to spend down our RIF accounts.
- Advocate for more graduate assistantships.

**Department of Rehabilitation, Human Resources, and Communication Disorders (RHRC)  
College of Education and Health Professions (COEHP)  
Campus Planning Report**

**Departmental Overview**

The Department of Rehabilitation, Human Resources, and Communication Disorders is dedicated to advancing knowledge, empowering communities, and preparing highly qualified diverse professionals in health and education who are committed to improving people's lives through practice, scholarship, and leadership. The department is comprised of seven academic programs (i.e., Adult and Lifelong Learning, Counselor Education, Communication Disorders, Educational Statistics and Research Methods, Higher Education, Human Resource and Workforce Development, and Rehabilitation Counseling) and a Speech and Hearing Clinic. The department offers 14 degree programs, including 6 doctoral, 6 master's, and 2 bachelor's, five of which are fully online. With 40 fulltime faculty (i.e., 32 tenure-track/tenured and 8 clinical) and 6 staff members, our programs enroll over 800 degree-seeking students each academic year, almost evenly split between graduate and undergraduate students (i.e., 145 doctoral, 259 master's, and 394 bachelor's in spring 2016).

**Strengths**

*External Funding*

The department continues to be No. 1 in external grant funding in the College of Education and Health Professions. Much of this success is attributed to Arkansas PROMISE, a \$35.7 million grant considered to be the largest research grant in the history of the University of Arkansas. PROMISE, which stands for Promoting Readiness of Minors in Supplemental Security Income, is a joint initiative of the Department of Education (ED), the Department of Health and Human Services (HHS), the Department of Labor (DOL), and the Social Security Administration (SSA). Under the leadership of Dr. Brent Williams, PI, PROMISE has been a phenomenal success, currently employing over 70 people and enrolling over 2,000 teens with disabilities. Without a doubt, PROMISE is a source of pride for our department; however, success with external funding does not end with PROMISE. In 2014, *Rehabilitation Counseling* program was awarded three training grants totaling \$2.75 million from the Rehabilitation Services Administration. Several other faculty members have also received competitive grants to fund their research, including \$48,000 from the Spencer Foundation.

*Nationally Ranked Programs and High Quality Faculty*

Faculty with diverse specializations and expertise is the strength of our department. Our faculty members have regularly received national awards and recognition for their work, including Rehabilitation Educator of the Year, American College Personnel Association Emerging Scholar, Council for the Study of Community Colleges' Senior Scholar, National Academy of Education/Spencer Postdoctoral Fellow, and Eastern Educational Research Association's Emerging Scholar, just to name a few of the awards from last year. Thanks to the work of our



outstanding faculty, our programs boast high national rankings from the U.S. News and World report, including No.13 ranking in the nation for the *Rehabilitation Counseling* program.

#### *Pioneer in Online Education*

The department has a long history of online education, with five of its degree programs being offered fully online. Online delivery allows access to working professionals in the state of Arkansas and beyond to high quality education at the bachelor's, master's, and doctoral levels. Established in 1996 as a bachelor's degree completion program delivered by compressed interactive video broadcast, the B.S.E. in *Human Resource and Workforce Development* was the oldest online program at the University of Arkansas, and is now ranked No. 49 nationally (No. 32 among public institutions) by the U.S. News and World Report's "Best Online Programs."

#### *Speech and Hearing Clinic*

The Speech and Hearing Clinic, with its state-of-the-art facility, offers comprehensive speech, language, and hearing services to people of all ages and serves as the clinical training ground for graduate and undergraduate students in the *Communication Disorders* program. In the past year, the clinic has expanded billing potential from one provider credentialed with Medicaid to four providers credentialed with four payer sources, including Blue Cross/Blue Shield, Tricare, United Healthcare/UMR, and Medicaid. Further, the clinic has three more payer source applications in progress. As a result, revenue has increased by approximately 300% this past year.

### **Challenges/Issues**

#### *Limited Number of Graduate Assistantships*

With its enrollment of over 400 graduate students, our department is one of the largest graduate education providers on campus. Moreover, 145 of our graduate students are at the doctoral level; however, the department currently has only 16 centrally funded graduate assistantship positions. Limited graduate student funding not only restricts our ability to recruit top students nationally, but also impedes our ability to immerse our students in intensive research and teaching experiences alongside with our faculty.

#### *Challenges with Student Recruitment*

Increased competition from online educational providers coupled with limited graduate student funding presents challenges for our programs to recruit high quality students nationally. Additionally, the removal of in-state tuition benefit for doctoral students from contiguous states two years ago further hampered the ability of our doctoral programs to grow, and in some cases to sustain, enrollment of out-of-state students (e.g., Ed.D. in higher education).

#### *Limited Staff Support*

The growth in the number of students and external support has not been matched with adequate staff support at the departmental level. The department, including the advising functions and the Speech and Hearing Clinic operations, only has 3 centrally funded staff positions. Additionally, three staff members are being funded through program income that the department's online programs are generating, which creates the dependence on online funds and also stretches the department's resources. The department hired two additional work study students to offset the increased staff responsibilities, but limited support staff continues to be a challenge, which results in faculty taking on more responsibilities for administrative paperwork and grant management.

#### *Faculty Resources*

Limited opportunities to hire senior level tenured faculty replacements have presented challenges for advising doctoral students and directing dissertations, especially for the Adult and Lifelong Learning and Human Resource and Workforce Development programs.

#### **Opportunities/Untapped Resources**

##### *New Programs/Specializations*

Several of our programs are exploring opportunities for new programs and specializations. Examples include Ph.D. degree in Communication Disorders, Ph.D. concentration in Educational Psychology, master's concentration in substance abuse/addictions counseling, and an interdisciplinary Ph.D. in Statistics and Analytics.

##### *Honors Program in Online B.S.E. in Human Resource and Workforce Development*

Human Resource and Workforce Development (HRWD) program is exploring ways to develop an honors program in their online B.S.E. in HRWD. The honors program will not only enrich the educational experiences of their top students, but can also be used as a marketing tool to attract high quality students interested in the honors experience.

##### *Student Recruitment (out-of-state and international student markets)*

Our graduate programs are exploring ways to tap into our-of-state and international student markets. Limited options for graduate student funding and scholarships for out-of-state students impede these efforts, but we believe that for an aspiring top public research university, it is critical to recruit graduate students and scholars beyond the state borders.

##### *Expansion of Services in the Speech and Hearing Clinic*

The Clinic has a unique opportunity to provide professional development opportunities for speech-language pathologists in NWA area and offer free language, articulation, and hearing screenings in the community. The Clinic is working towards becoming a provider for Medicare (in addition to private insurances and Medicaid) that would improve and expand the services to adults across lifespan.

# **College of Engineering**

**Department of Biological and Agricultural Engineering**  
**[www.baeg.uark.edu](http://www.baeg.uark.edu)**

**Summary Report**

**Strengths:**

- Unique department in the College of Engineering and UA Division of Agriculture with a mission of providing engineering expertise to clients, industry and agencies to design and manage sustainable water, food and energy systems through education, research and outreach serving Arkansas and the world.
- ABET accredited undergraduate engineering program to support state's agricultural enterprise and interests in sustainable water, food and energy systems.
- Since 2007 BENG's rank among all other ENGR departments is:
  - Average admission ACT score: 30.5 (1st);
  - Average admission HS GPA: (2nd)
  - Sophomore year retention: 86% (1st)
  - 4-year graduation rate: 51.9% (1st)
  - 5-year graduation rate: 79% (1st)
  - 6-year graduation rate: 84.2% (1st) {2nd place at 75%}
  - For the 2007, 2008, 2009 FEP cohort of students BENG has graduated 30 female students (more than any other department)
- Graduates employed by Arkansas entities:
  - Sustainability: Walmart, L'Oreal, Sam's Club.
  - Water: Beaver Water District, ADEQ, NRCS, ANRC, Rice-Tec, BlueInGreen, International Water Management Center, U.S. Corps of Engineers.
  - Food & Bio-Products: Riceland Foods, Tyson Foods, Walmart, Mars, Pacific Vet Group, Kraft Foods, Frito-Lay, Merck, Georgia-Pacific, Georges, Simmons, Nestle Purina.
  - Energy: LM Windpower, AP Innovations, Chevron, Haliburton, Entergy, Chesapeake Energy, BNSF Railway.
  - Consulting: Garver, GBMc & Associates, FTN Associates, CH2M Hill, Legget and Platt, McClelland, Mid-South Engineering, Crafton & Tull.
- Faculty have strong interdisciplinary participation in multiple units, programs, departments, and colleges with ties to both UA College of Engineering and UA Division of Agriculture:
  - Ecological/Environmental/Water Engineering
  - Arkansas Biosciences Institute (ABI)

- Food Safety, Risk Assessment and Biosensors
  - Bio-Nanotechnology, bio-nano interface and DNA computing
  - Bioprocessing, Bioenergy and Bio-based products
  - Sustainability and Climate Change
  - Cell and Molecular Biology
  - Environmental Dynamics (ENDY)
  - Microelectronics & Photonics
  - Public Policy
  - Sustainability Minor and Graduate Certificate
  - Community Design Center (CDC)
  - Center for Advanced Spatial Technologies (CAST)
- Statewide connections (three faculty located off-campus in Little Rock and Stuttgart) that extend to Walmart, Beaver Water District, Tyson Foods, Georges, Waste Water Treatment Plants, Illinois River Partnership, OK-AR Resolution, Simmons, Sam's Club, and through Division of Agriculture Cooperative Extension Service in all the 75 counties of Arkansas.
- Arkansas Academy of Biological and Agricultural Engineering.
- Leadership Positions in:
    - Arkansas State Water Plan
    - Arkansas Water Resources Center
    - Institute for Nanoscience and Engineering
    - Center of Excellence for Poultry Science
    - Society of Women Engineers (SWE)
    - Advancement of Women in Academic Science and Engineering Careers (ADVANCE)
    - Community Design Center (CDC)
    - UA Division of Agriculture Center for Agricultural and Rural Sustainability (CARS)
    - UA Sustainability Center
    - UA Division of Agriculture Water Quality Lab
    - UA Division of Agriculture Watershed Research and Education Center (WREC)
    - American Society of Agricultural and Biological Engineers (ASABE) – Past-Presidents, Fellows
    - Institute of Biological Engineering (IBE) – Past-President, Fellow
    - American Institute for Medical and Biological Engineering (AIMBE) - Fellow
- Faculty Awards in the past year:
    - John L. Imhoff ENGR Research Award – Dr. Carrier
    - UA Division of Agriculture John W. White Outstanding Extension Faculty Award – Dr. VanDevender
    - Gamma Sigma Delta Award for Extension – Dr. Sadaka
    - UA Alumni Association Outstanding Faculty Research Award – Dr. Kim
    - Staff Employee of the Quarter – Julian Abrams, Linda Pate
    - ASABE Student Team Design Award
    - BlueInGreen Global Cleantech Award – Drs. Osborn, Matlock
    - National Academy of Inventors – Drs. Li, Osborn, Matlock

### Challenges and Issues:

- Doctoral student numbers and stipends
- Growing undergrad numbers pose a challenge
- Teaching space on campus for our program limits our hands-on, project-based program
- Classroom and meeting space in White ENGR Hall is very limited
- Replacement faculty

### Priorities and Direction:

- Strategic plan for 2016-2021 has the vision to *“Become a leading Biological and Agricultural Engineering Department in the nation, providing engineering expertise to the public to build sustainable water, food and energy systems. Our programs will significantly contribute to the quality of life, economic development, and environmental stewardship for Arkansas and the world.”*

<http://bio-ag-engineering.uark.edu/resources/documents/strategic-plan.pdf>

- Increase the number and quality of graduate students.
- Further develop Environmental/Water Engineering collaborations, grant submissions, graduate students, teaching, and scholarly accomplishments.
- Develop new collaborative research/extension projects for Arkansas stakeholders.
- Enhance the connection between engineering and agriculture through statewide presence by promoting the opportunities in sustainability, water, food, and alternative energy in Arkansas through alumni and BAE Academy network.
- Increase public relations to make more people aware of our programs to grow enrollments, funding and overall support.
- As ASABE and IBE Past-President, continue to promote the unique BAEG programs in **sustainable food, water and energy systems**, at national and global level through NAE, ASABE, ASEE, IBE, and AIMBE.
- Lead efforts for the ASABE Global Conference *“Engineering and Technology Innovation for Global Food Security”* in October in Stellenbosch, South Africa.
- Proactively contribute to the UA College of Engineering and Division of Agriculture strategic plans.
- Work with ASU Dean of Agriculture and Engineering, and USDA-ARS scientists to grow mutually-beneficial collaborations to promote engineering for agriculture in Arkansas and the region.
- Increase departmental visibility through proactive communications of research, teaching and extension engineering programs in **sustainable water, food and energy systems** through the Arkansas Academy of BAE, BE Academic Advisory Committee, Arkansas Farm Bureau, and stakeholders.

## INTRODUCTION

### Background/Purpose

At the request of Chancellor Steinmetz, the Department of Biomedical Engineering (BMEG) has compiled data to provide the following overview report, which will discuss the strengths, weaknesses, and priorities/direction for all traditional mission areas of the department including research and service, teaching and learning, and outreach and engagement.

The purpose of this report is twofold. First and foremost, this report will serve to educate University Administration and the incoming Biomedical Engineering Department Head on the productivity of the department. Secondly, this report will serve as the foundation to drafting a departmental Strategic Plan that incorporates newly realized priorities and is in alignment with the College of Engineering's strategic plan. It is expected that this prioritization will lead to improved performance and success in becoming a regional leader in biomedical engineering research and education.

### Executive Department Summary

The Department of Biomedical Engineering was established in 2012 with only four assistant professors, one clinical/instructional faculty, and one staff member. Since that time, it has grown to include eight tenure/tenure-track faculty (one professor, three associate professors, and five assistant professors), two clinical/instructional faculty, one research faculty and four staff members. These department employees serve a growing student body of more than 200 bachelor's, master's and Ph.D. degree-seeking students. The department operates on an annual state budget of \$1.47M. Current external research expenditures (CY15) total \$1.22M, averaging an adjusted \$175K per T/TT faculty. When comparing these department statistics to the top 40-50 nationally ranked biomedical departments, the department has room for improvement in all categories. By focusing on our priorities, namely continuing to increase research productivity output and adding more faculty members (which will in turn grow graduate enrollment), it is the department's goal to progress significantly in these areas to become a nationally ranked department.

Recent department highlights:

- Dr. Raj Rao has accepted the Department Head position, and will begin with the department on July 1, 2016.
- 2015 marked the first class of 43 graduates from the full B.S. BMEG department curriculum.
- Bachelor of Science degree was awarded ABET accreditation through 2021.
- Faculty achieved second highest course evaluation rating in the College of Engineering, earning 4.41/5.0.
- The department Advisory Board was revamped to include 17 members from top-notch industry and academic fields.
- Dr. Kartik Balachandran was awarded the NSF CAREER award.
- Dr. Morten Jensen was recruited as the first department ARA Scholar.
- Dr. Kyle Quinn joined the department and was awarded the campus's first NIH K99/R00 award.
- Dr. Jeff Wolchok becomes an exceptionally rare investigator with major funding from both the NIH and NSF.

## RESEARCH & SERVICE

### Strengths Assessment

**Highly Productive, High-Pedigree Faculty** — Eight of nine T/TT faculty are Principal Investigators on external awards. As of March 1, BMEG faculty will account for five of 13 active NIH project grant recipients. No other department has more than two.

**Well-Equipped Research Laboratories** — The Department of Biomedical Engineering operates in more than 10,000 square feet of research laboratory space at the Engineering Research Complex (ENRC). This number is growing as a result of the productivity of BMEG faculty.

## Weaknesses Assessment

**Graduate Recruitment** — The department's ability to recruit graduate students is severely lacking, only partly as a result of being a new department. To more successfully and competitively recruit graduate students, funding for research training grants and additional department fellowships/endowments is needed.

**Campus Research Competitiveness** — UAF was awarded only \$1.4M in NIH funding in FY 2015. The department has suffered from a lack of potential mentors and collaborators for new faculty members within the UA community. The department is also hindered by a lack of clinical/medical school involvement.

## Priorities/Direction Assessment

**Form Connections** — The Department of Biomedical Engineering has been working on establishing itself since 2012 by building up faculty laboratories and individual identities, both of our professors and the department itself. It is now time to utilize these identities to form both internal and external connections.

**Center-based Funding Approach** — The department will find research success in moving to a center-based funding approach. There are opportunities to pursue an Arkansas Center for Innovative Cardiovascular Research, a Biomedical Optics Research Center, and a Center for Cancer Research.

**Research World Leader** — Once the department has established diverse research centers with clearly defined focus areas, it will be time to assess which of these areas UA can become a world leader. Future investments will be prioritized based on our unique strengths.

## TEACHING & LEARNING

### Strengths Assessment

**High-Quality, Diverse Undergraduates** — Incoming undergraduate students have ranked consistently high compared to COE and overall UA averages in both ACT score (30.5 in 2014) and high school GPA (4.05 in 2014). The department currently has a 63% 4-year graduation rate as compared to (COE: 30%, UA: 42.1%). The department also leads the college in gender diversity, with a 44% female population.

**Undergraduate Research Experience** — Faculty provide numerous undergraduate research experience opportunities, as 36% of undergraduates are currently in the Honors College.

**Teaching Laboratories** — The Department of Biomedical Engineering has state-of-the-science teaching laboratories that serve the needs of the current curriculum well.

**High-Quality Graduate Students** — The graduate students that the department is able to recruit and retain are of high-quality. The department currently holds 14 Graduate Fellowships (2 NSF, 1 AHA, 2 VEF, 7 DAF, 1 Fulbright, and 1 SREB).

**Challenging Yet Pursued Program** — In a survey of all College of Engineering Freshman, BMEG was ranked both the hardest and least easy program in college. Despite its reputation as a challenging program, BMEG is the second most sought-after program by freshman engineering students.

### Weaknesses Assessment

**Faculty Size** — Current faculty size limits upper-level, specialized course offerings, which affects the placement of students and forces large class sizes, and in turn affects graduation rates. It is imperative that the department grow its faculty numbers to achieve success in many areas.

**Limited Industrial Connections** — The department has revamped its advisory board to include several key industry contacts. This inclusion needs to continue in order to facilitate industrial connections that will lead to greater internship/co-op opportunities and more relevant/prestigious employment options for graduates.

**Graduate Recruitment** — See Research Weaknesses Assessment.



## **Priorities/Direction Assessment**

**Industry Student Placement** — While the Department of Biomedical Engineering has had great success in placing students in graduate and professional programs, it has struggled to place students in industry. Now is the time to capitalize on the industry-centered advisory board (represented by companies such as Wright Industries, NuVasive, Smith & Nephew, National Instruments, NOWDiagnostics, Edwards Life Sciences, and Thoratec Corporation) to turn connections and knowledge gained into higher student placements in industry.

**Pursue Training Grants** — Biomedical engineering faculty are now qualified to lead training grants, which will facilitate graduate student opportunities and recruitment as well as foster research collaboration.

**REU/Graduate Recruitment** — Although the department was not funded for the current year's REU submission, there is hope for future submissions given current feedback standards. A department-led REU program will serve as a strategic recruiting tool for identifying high-quality potential students for the graduate program, and will also serve to increase the visibility of the department, both regionally and nationally.

**Professional Graduate Degrees** — Greater collaboration between U of A BMEG and UAMS has the potential to serve as the foundation of both a MD/PhD degree and a M.S. Orthopedic Bioengineering degree. Bioengineering in particular could benefit the region by helping students prepare for work in the orthopedics industry. A M.S. Biomanufacturing degree could be created through the collaboration of U of A BMEG, CHEG and CHEM departments. Such a program has the potential to lead student placement in the biopharmaceutical industry, which is expected to net \$280B in global revenue by 2020.

## **OUTREACH & ENGAGEMENT**

### **Strengths Assessment**

**Active Student Groups** — The department currently hosts two very active engineering student groups, Engineering World Health (EWH) and the Biomedical Engineering Society (BMES). EWH actively works with local k-12 schools and the Boys & Girls Club to highlight world engineering topics/projects. BMES routinely recruits relevant guest speakers as a part of an open departmental seminar series.

**COE Summer Camps** — The College of Engineering provides centralized resources for outreach, particularly via summer campus for budding engineering students. Faculty routinely take part in the camps, and focus specifically on biomedical engineering topics.

### **Weaknesses Assessment**

**Lack of Clinical Engagement** — The region surrounding the Northwest Arkansas area does not provide an abundance of clinic collaboration opportunities. However, the department has not capitalized on the clinic opportunities that do exist in the area, including the VA Hospital, UAMS, and NWA Hospitals.

## **Priorities/Direction Assessment**

**Pursue REU** — See Teaching Priorities/Direction Assessment. REU will also engage students from other schools in research, opening up collaborative pathways.

**Boost Clinical Connections** — With the help of our advisory board contacts and through various research opportunities, the department plans to actively pursue clinical collaborations with NWA offerings.

## **CONCLUSION**

Biomedical Engineering is a research intensive, student-focused department with immensely talented faculty and staff. With the guidance of a new department head beginning in July 2016, the department will continue to make progress with regard to the identified priorities over the next five years and is poised to become a leader in research and scholarship both on this campus and regionally.

**Summary Report for Academic Planning**  
**Ralph E. Martin Department of Chemical Engineering**  
May 10, 2016

**Introduction**

The Ralph E. Martin Department of Chemical Engineering has 16 faculty, including three clinical teaching faculty/instructors (one full-time, two part-time) that are supported by faculty release. The Department has 277 undergraduates (sophomores-seniors), and graduated 51 BSChE students in 2015-2016. The Department has 15 MS students, 25 PhD students and 7 post-docs/research technicians that are being advised by the faculty, with 12 graduates (6 MS, 6 PhD) in 2015-2016. The Department ranks 88<sup>th</sup> out of 131 programs (rising eight places this past year), and ranks 55<sup>th</sup> among public institutions. The Department has an endowment of \$18 million to support faculty chairs/professorships and other programs, and has an annual State appropriation of \$2.47 million for FY17; TELE fees received in FY16 were \$287,000.

**Departmental Strengths**

The three most apparent strengths of the Department are:

- Its undergraduate students and the undergraduate program leading to a BSChE
- Chemical Engineering alumni and the support from our alumni
- The faculty

Chemical Engineering has some of the best students at the University of Arkansas, and the career preparation of undergraduate students is excellent. The students entering Chemical Engineering have an average ACT of 31 (the College of Engineering average is 28). Student retention is quite good—83% of the students entering Chemical Engineering graduate from the U of A. The vast majority of our students have co-op, internship or research experience. For each of the past 20 years, 2-3 teams of Chemical Engineering seniors have annually participated in the WERC International Design Competition and, over this time period, have accumulated 31 awards for superior performance. Over the past ten years, Chemical Engineering has had four Goldwater scholars (with four honorable mentions) and one Udall scholar. Approximately 25% of Chemical Engineering students graduate from the Honors College—double the College of Engineering average. Job placement of Chemical Engineering graduates is nearly 100%, with an average starting salary of \$71,000 in 2015. Chemical Engineering graduates attend top some of the nation's top graduate schools including the University of Michigan, the University of Texas, Johns Hopkins, the University of Colorado, the University of Wisconsin and UCLA. Since 2000, 16 Chemical Engineering students have received prestigious NSF GRFPs.

The Department's \$18 million endowment supports four chairs, seven professorships, graduate fellowships, scholarships and other programs in the department. The Arkansas Academy of Chemical Engineers was started in 2005 to honor alumni that are leaders in industry and society, and now has nearly 100 members. Chemical Engineering alumni are always eager to support the department through speaking engagements, mentoring, the hiring of graduates or through generous financial contributions.

Chemical Engineering has seven full professors (one with a 40% appointment as AVPRED), five associate professors (one on-leave as Program Manager at NSF) and one assistant professor, in addition to the three clinical faculty/instructors that are financed through faculty release. David Ford (currently at the

University of Massachusetts) will join the faculty as its new Department Head in January 2017. Chemical Engineering had \$2.16 million in research expenditures in CY2015 (3<sup>rd</sup> in the College of Engineering), or \$154,000 per faculty member. However, an upward trend in research expenditures has been noted. The Department has two research centers: the Chemical Hazards Research Center (CHRC) and the Membrane Science, Engineering & Technology Center (MAST). The objective of the CHRC is to study the potential consequences of toxic or flammable material released to the atmosphere. The purpose of MAST is to develop materials for energy production, water treatment, pharmaceutical purification and chemical processing. Chemical Engineering has strong research efforts in membrane separations (35% of the total 2015 research expenditures) and sustainability (25% of 2015 research expenditures). In addition, there are developing research programs in biomedical engineering, materials, biochemical engineering and chemical hazards.

The Chemical Engineering faculty are strongly committed to quality teaching and service. The average teaching evaluation for the Chemical Engineering faculty in all courses taught in 2015 was 4.38/5.00. The faculty are recognized regionally and nationally for their service to the profession—examples include work with SChE (a national program for Safety in Chemical Engineering), the preparation of nationally-used design problems, or service as invited speakers or meeting chairs at national and international meetings. Three of our faculty are fellows in the American Institute of Chemical Engineers, and one of our faculty members is a fellow in the American Institute of Medical and Biological Engineers.

#### **Opportunities and Challenges for the Future**

The faculty have identified three major opportunities or challenges in improving the quality of the Chemical Engineering Department:

- Improving the graduate/research program while maintaining a solid undergraduate program
- Improving Department visibility as a means of attracting future students/faculty
- Leveraging endowed funds in hiring quality faculty, attracting quality students and improving departmental programs

The greatest challenge faced by the Department is improving the graduate/research program while maintaining a solid undergraduate program. An excellent 2016 review of the Chemical Engineering graduate program provided a roadmap for improvement in this very important area. As was noted above, the undergraduate program is the number one strength of the Department, and improvements in the graduate/research program should not (and must not) result in lowering the quality of this excellent undergraduate program. Improvements in the graduate/research program center around the faculty securing additional external research funds to provide funding for students, post-docs, equipment, supplies, etc., and include tangible improvements in research productivity such as increases in scholarly activities (publications, presentations, patents, national leadership positions, national awards) and graduating more and better PhD students. Additional research-active faculty will ultimately be required to fully accomplish this mission, which will result in additional faculty release from teaching, the latter to be used in funding clinical teaching faculty to support the teaching of students. These additional faculty will, in turn, require space for laboratories and graduate student offices.

It is essential that the Department faculty attract more and better graduate students, which will come about through the development of student pipelines and other recruitment strategies. Finally, improved university/departmental/alumni support will be required for the professional and academic development of these students.

Improving the visibility of the Department, coupled with improving the graduate/research program, is essential in improving the quality of the students and future faculty hires. Improved visibility also results in greater recognition of accomplishments, and improves perceptions and rankings. Leveraging the Department's endowed funds will be required to attract and hire quality faculty, and in attracting highly qualified students and improving graduate programs.

The chancellor asked me to reach out to you regarding the written summary report (no more than 3 pages) requested at the onset of the academic planning process highlighting your departmental strengths, weaknesses, and the priorities and direction of your department. Although technically the deadline for submission is May 31, it would be greatly appreciated if our office received the documents as soon as possible to ensure that there is plenty of time to assemble the packets for your deans and the review groups that will meet over the summer to examine. This report is in addition to any handout or PPT printout you may have previously provided.

## Summary Report of Computer Science and Computer Engineering Department

Dear Chancellor Steinmetz,

I am writing this summary report to highlight strengths, weaknesses, the priorities and direction for Computer Science and Computer Engineering Department over the next five years.

### Departmental Strengths

#### Teaching and learning

The Computer Science and Computer Engineering Department has two programs *Computer Science and Computer Engineering*. The first departmental strength in teaching and learning is that our programs have been growing at a very high rate due to an increased demand for professionals in computing and information technology, students' interests in computer software and hardware, and high quality programs in the department. In the fall of 2015, it had a total of 438 undergraduate students excluding freshman students, and 71 graduate students. Undergraduate enrollment was increased by 96% and graduate enrollment was increased by 18% for the past six years, as shown Table 1 and 2. This significant growth has been accomplished with an increase of 6% of faculty in the same period. The second

**Table 1: Computer Science and Computer Engineering Undergraduate Enrollment (2010-2015)**

	Fall 2010	Fall 2011	Fall 2012	Fall 2013	Fall 2014	Fall 2015
CE-BS	87	90	109	140	137	139
CS-BS	112	131	161	227	242	258
CSCE-BA	24	32	65	56	46	41
Total	223	253	335	423	425	438

**Table 2: Computer Science and Computer Engineering Graduate Enrollment (2010-2015)**

	Fall 2010	Fall 2011	Fall 2012	Fall 2013	Fall 2014	Fall 2015
MS-CE	10	8	11	10	11	10
MS-CS	12	20	19	16	17	17
PhD-CE	31	9	15	19	20	22
PhD-CS	7	16	8	9	16	22
Total	60	53	53	54	64	71

departmental strength in teaching and learning is its strong laboratory components in many classes. Our department has excellent teaching laboratories in both computer science and computer engineering. Students can not only learn advanced knowledge but also acquire software development and computer hardware design skills from their laboratory experiences. The third departmental strength in teaching and learning is an integrated offering of both computer science program focusing on software and computer engineering program focusing on hardware computing technology. Computing hardware and software are increasingly integrated in computer applications. Students in our department have a plenty of opportunities

to learn knowledge and skills in both computer hardware and software technology since there are not any silos between these two programs. The fourth departmental strength in teaching and learning is that it has many opportunities of interdisciplinary education programs since computing technology finds its applications in many other disciplines. Currently, the Computer Science and Computer Engineering Department is an integral part of campus-wide interdisciplinary master's degree program in statistics and analytics, which is designed to provide students with the knowledge and skills they need to enter highly demanded career field of data science.

#### Research and Service

Computing technology has been advancing rapidly and it has fundamental impacts on our society due to its pervasive applications. The Computer Science and Computer Engineering faculty members are productive in publishing technical papers and providing professional services despite high enrollment of undergraduate students and heavy undergraduate teaching load. The total number of referred publications in the Department was increased to 78 in 2015 from 62 in 2014. They are very active in professional services and play leadership roles in professional communities such as serving as journal editors, international conference organizers, and proposal reviewers.

The Computer Science and Computer Engineering Department has made a significant effort in turning around sponsored research from Fall 2015, resulting in a total amount of \$2.8 million of new competitive research grants from reputable funding agencies with faculty members in our Department serving as Principle Investigators, which represents an 184% increase compared with the entire year of 2014. In addition, faculty members in the Department served as Co-PI or core executive team member to secure a grant of \$15M from the Department of Energy (DoE) to create the DoE Center on Secure, Evolvable Energy Delivery Systems (SEEDS).

#### Outreach and engagement

The Computer Science and Computer Engineering faculty and students were very active in outreach and engagement at both state level and locally in the state of Arkansas. A good example is that a faculty member in the Department was awarded a nearly a nearly \$1 million grant by the National Science Foundation (NSF) in 2015 for Training Arkansas Computing Teachers. Other examples of the outreach and engagement include, but not limited to, participating in the Hour of Code at local elementary schools, offering summer camp opportunities for students in grades 6-12, and hosting the High School Programming Contest in the state of Arkansas.

#### **Department Weaknesses**

The student/faculty ratio in the Computer Science and Computer Engineering Department is 31.7, excluding freshman students. When the freshman students who declared Computer Science and Computer Engineering as their majors are added for consistent comparison with other departments on campus and our competitors in the US, the student/faculty ratio is 36.4, which is very high. The high student faculty ratio leads to significantly large class sizes. The biggest class in the Department in Spring 2016 has 210 students. In addition, sizes of faculty in both Computer Science and Computer Engineering programs are very small compared with our competitors in the US. The Computer Science tenure track faculty size of 10 is roughly at 36% of the national average of 28.3 tenure track faculty. The Computer Engineering faculty size of 6 is also at 40% of the national average of 15.1 tenure track faculty. The high student faculty ratio, big class size, large undergraduate programs, and small sizes of faculty in our programs put significant constraints on scholarly activities of faculty, especially sponsored research, in the past. The Department had two rough years in terms of research expenditure before Fall 2015. The research expenditures in the Department were \$824,387 and \$1,295,307 in the calendar years of 2014 and 2015 respectively. Although there is a clear sign that the Department is

turning around in terms of sponsored research from Fall 2015, additional faculty resources are needed in order to sustain its growth in research.

**Priorities and Direction over the next five years**

The Computer Science and Computer Engineering Department started a strategic planning process in Fall 2015 and set up its strategic goals for the next five years ending in 2021, as shown Table 3. These inspirational and aggressive goals will be used to guide the Computer Science and Computer Engineering Department. The top priority is to strengthen scholarships in the Department over the next five years. It will be accomplished by increasing research funds and publications, increasing faculty size, reducing student/faculty ratio, and expanding graduate programs, especially PhD programs in both Computer Science and Computer Engineering. We plan to increase research expenditure per tenure/tenure track faculty from \$62,682/year in 2015 to \$300,000/year in 2021, an extremely aggressive goal. If the faculty resources become available, we also plan to double our graduate programs. Specifically, we plan to increase our PhD enrollment from 44 in 2015 to 70 in 2021 and our MS enrollment from 22 in 2015 to 75 in 2021. In this period of time, we will also increase undergraduate enrollment to 550. It would be infeasible to achieve these ambitious and aggressive goals without additional faculty resources. We hope to add nine (9) new tenured/tenure-track faculty and two (2) clinical/research faculty members to reduce class sizes and decrease student/faculty ratio so that faculty has time and resources to expanding their research programs. The target of our graduate/undergraduate enrollment ratio will be 26:1 in 2021 compared with 16:1 in 2015 in consistent with other public flagship research universities in the US.

In summary, the Computer Science and Computer Engineering Department in the next five years will work to develop highly ranked programs and it will expand and strengthen graduate programs, strengthen high quality undergraduate programs, increase individual research productivity, recruit high quality faculty members, expand interdisciplinary research and education programs, and develop and strengthen clusters of excellence with national and international reputation in big data and analytics, cybersecuti, and reconfigurable computing.

**Table 3: Computer Science and Computer Engineering Strategic Goals**

	Rankings		Undergraduate Enrollment	MS Graduate Enrollment	PhD Graduate Enrollment	Size of T/TT Faculty	Size of Clinical/Research Faculty	Size of Staff	Research Expenditures
	CS	CE							
Current (2015)	NA	59	438	22	44	16	1	5	\$62,682
Goal (2021)	50	50	550	75	70	25	3	8	\$300,000

Sincerely,



Xiaoqing "Frank" Liu  
 Professor and Head  
 Rodger S. Kline Endowed Leadership Chair  
 Department of Computer Science and Computer Engineering

## Department of Civil Engineering: At-a-Glance

U.S. News &amp; World Report Ranking (2015): 102/158 (Graduate) 98/184 (Undergraduate)

**Faculty Profile**

Tenured / Tenure-Track:	16*
University Professor:	2
Professor:	4
Associate Professor:	4
Assistant Professor:	6
*2 assigned to Admin Units	
Non-Tenured / Clinical:	3
Research Assoc. Prof.	1
"Clinical" Assoc. Prof.	1
Instructor	1

**Faculty Trends:**

- Essentially 'level' past 10 years

**Student Enrollment**

Undergraduate		Graduate			
Male	Female	Master's		Ph.D.	
		Male	Female	Male	Female
192	60	19	3	24	6
		42.3%		57.7%	
82.9%		17.1%			

**Enrollment Trends:**

- Undergraduate: 'leveling off' after significant growth
- Graduate: total relatively level for past 4 years
  - % Ph.D. steadily increasing for past 7 years
  - 2014: Ph.D. topped MS enrollment for 1<sup>st</sup> time

<b>Departmental Budget:</b>	State Allocation – Salaries ( <i>w/o Fringe</i> )	\$1,910,748 (FY'17)
	Expenses - Salaries ( <i>w/o Fringe</i> )	\$2,126,735 (FY'16)
	State Allocation – Maintenance	\$ 113,261 (FY'17)

**Research Expenditures (2015):** \$2,623,950 (29.3% increase over 2014) -- \$174,930 per T/T-T Faculty

## Department of Civil Engineering: SWOT

Strengths	Weaknesses
<ul style="list-style-type: none"> <li>Collegiality</li> <li>Student Achievement</li> <li>Alumni Support</li> <li>Undergraduate Program</li> <li>Teaching Accomplishment</li> <li>Research Capabilities of Faculty</li> </ul>	<ul style="list-style-type: none"> <li>Public (especially Higher-Ed) Perception</li> <li>Total Research Productivity</li> <li>Graduate Program Size</li> <li>Total Support Staff (number)</li> </ul>
Opportunities	Threats
<ul style="list-style-type: none"> <li>Study Abroad</li> <li>Service Learning</li> <li>Distance Learning</li> <li>Industry Partnerships</li> <li>Research Facilities - CEREC</li> <li>Graduate Program Growth</li> <li>Increasing Diversity – Students and Faculty</li> </ul>	<ul style="list-style-type: none"> <li>Balancing Growth (i.e. UG vs GRAD)</li> <li>Balancing Teaching/Research Mission(s)</li> <li>Recruiting/Retaining High-Quality Faculty</li> <li>Classroom Size and/or Functionality</li> </ul>



### Departmental Strengths

The ongoing success of Department of Civil Engineering (CVEG) is inextricably tied to its **people** – from students, to faculty and staff, to its alumni. The paragraphs which follow highlight the accomplishments and contributions of CVEG’s people.

**Collegiality/Culture.** CVEG is widely regarded as one of the most collegial departments at the UA. Rapport between students, students and faculty/staff, faculty and staff, and among the faculty is outstanding. These groups have combined to create a culture in the department which is dynamic, open, and supportive – which encourages each person to succeed. This is also displayed by the fierce loyalty shown to the department by its alumni.

**Student Achievement.** Both graduate and undergraduate students in CVEG enjoy a high degree of success in the classroom, in competitive awards/honors, and in graduation. In 2016 CVEG was awarded the Departmental Gold Medal by the UA Office of Nationally-Competitive Awards, bolstered by two NSF Graduate Research Fellows (with one Honorable Mention), a Gates-Cambridge Fellow, a Truman Fellow, and two Eisenhower Fellows. For the 2005-2009 student cohorts, CVEG’s 6-year graduation rate has grown from 66.7% to 78.9%, peaking with the 2008 cohort (87.2%) – by comparison, the overall UA rate has increased only modestly (59 to 62 percent) during this period.

**Faculty Achievement – Research and Teaching.** As with most academic departments, the faculty are the life-blood of CVEG. The period 2008-2015 represents a mini ‘turnover’ in the faculty – of the current 14 teaching/research active, tenured/tenure-track faculty, eight (8) have been hired since 2008. In addition, one full-time Instructor was added to the faculty during this period. This infusion of high-achieving individuals has resulted in significant growth in the research enterprise; for example research expenditures for (calendar years) 2013-2015 jumped 42.5% (to just over \$2.6M in 2015). The increase in research is also reflected in a transformation of the CVEG graduate program. In 2008, CVEG enrolled six Ph.D. students, representing 23% of the total graduate students; in 2015, CVEG enrolled 30 Ph.D. students, representing 58% of the total graduate students – demonstrating an intentional shift in the graduate program from an overwhelmingly-MS program to a predominately Ph.D.-program. The department also has featured two NSF-CAREER award winners since 2007; while, unfortunately, one has departed, Julian Fairey (CAREER in 2013) continues to lead in the environmental area. In terms of classroom instruction, CVEG boasts a number of award-winning teachers. Three faculty have been awarded the Charles and Nadine Baum and/or the Arkansas Alumni Association Outstanding Faculty Achievement awards. Four individuals have been awarded the department’s Outstanding Teaching Award since 2010. In addition, half of the teaching faculty have completed ExCEED (Excellence in Civil Engineering Education) – a national classroom training program sponsored by ASCE.

**Alumni Support.** CVEG maintains strong ties to its alumni, who provide tremendous support to the department’s programs, students, and faculty. CVEG alumni serve on the Dean’s Early Career Advisory Council, the College of Engineering Advisory Council, and through the Civil Engineering Society of the Arkansas Alumni Association. The Arkansas Academy of Civil Engineering (AACE) was created in 1981 for the purpose of supporting the department. Alumni provide classroom instructional assistance, career workshops, research support, and direct financial support. AACE and other alumni are widely recognized for their support of scholarships for CVEG students – *annually* providing over \$140,000 through both endowed and non-endowed scholarship programs. Notably, scholarship giving reaches across generations, from long-retired to recently-graduated professionals, all of whom seek to ‘give back’ to the department which provided them a memorable and rewarding educational experience.

### Departmental Challenges and Opportunities

The previous section “Departmental Strengths” provided a snapshot of the very good things happening in the Department of Civil Engineering (CVEG). Moving CVEG forward involves **balance** – maintaining strengths while pursuing additional initiatives and program growth. Key issues – which are necessarily interconnected – involving this balance include:

- *growing the graduate program without detrimental effect on the undergraduate program;*
- *increasing research productivity while offering a full complement of graduate courses, required undergraduate courses, and elective courses; and*
- *growing the faculty and achieving an appropriate mix of tenured/tenure-track and non-tenured/clinical persons.*

**Growing the Graduate Program and the Research Enterprise.** Increasing the research productivity of CVEG – which is the primary driver of growth in the graduate program – requires expansion of funding opportunities, space, and personnel. The bullets which follow highlight issues and opportunities.

- **Industry Partnerships.** A few CVEG faculty have had research success in partnership with private industry; however, this represents a possible ‘lightly-tapped’ resource. All CVEG areas (environmental, geotechnical, structural, transportation) have potential industrial partners which may be enlisted for direct support of research.
- **Support Staff.** An ongoing issue regarding research productivity relates to laboratory and I.T. assistance. CVEG, like many departments, is currently understaffed to significantly grow the research enterprise; resources must be identified to provide additional technical support.
- **Space.** There are two elements regarding research facilities: space and functionality. Currently, CVEG is ‘maxed out’ regarding space; most CVEG research areas ‘double’ as teaching labs, while some ‘triple’ as training labs for the CTP program. In addition, the structural area is severely limited in the types of testing that can be accomplished due to functionality constraints. Plans are currently underway to construct a new, \$14M structures laboratory (the 1<sup>st</sup> phase of a Civil Engineering Research and Education Center, or CEREC) pending successful fund-raising. However, this will not alleviate space constraints for the other three CVEG technical areas.

**Expanding Educational Opportunities.** Both the undergraduate and graduate curricula are currently appropriate for on-campus students – if limited in the ability to offer a wide array of graduate and elective courses on a regular basis. There are, however, opportunities to expand CVEG education:

- **On-Campus.** Three areas of possible improvement/expansion for the curricula include *study abroad*; *service learning*; and *industry-sponsored design*. Currently, CVEG has very limited participation in any of these areas. All three areas are suitable for both graduate and undergraduate students.
- **Off-Campus.** Perhaps the ‘only lightly tapped’, highest potential curricular area for CVEG relates to distance learning. There is a need for both undergraduate and graduate CVEG offerings by distance; however, the graduate program (MSCE, MSE, potentially a new MS-Construction Management) stands to reap the largest gains. In addition, CVEG should move aggressively to partner with other institutions, through which a much wider variety of graduate courses could be offered across the consortia.

**Growing the Faculty.** The common denominator for all these opportunities is a dire need to increase the number of faculty. Expansion of both the research and education enterprises for CVEG will be greatly stunted without additional faculty. A major strategic consideration for CVEG is establishing and maintaining an optimal mix of tenured/tenure-track and clinical/teaching (non-tenured) faculty.



Department of Electrical Engineering  
1 University Avenue, 3217 Bell Engineering Center, Fayetteville, AR 72701, (479) 575-3005, (479) 575-7967 (fax)

## **Department of Electrical Engineering – Report to Chancellor J. Steinmetz Spring 2016 Summary**

### **I. General Description**

The Department of Electrical Engineering, one of eight departments in the College of Engineering, has offered a BSEE degree for over 100 years, and has been continuously accredited by ABET since 1936. The current ranking of the department graduate program in the US News & World Report department rankings is 68 among all public universities, and our MSEE online program was recently ranked 33 nationally among 82 programs ranked and 25 among public institutions.

Our Spring 2016 enrollment includes 234 undergraduate students, 46 MSEE students (both on campus and online), and 51 PhD students. Of the undergraduate students:

- 60 (25.6%) of the undergraduate students are enrolled in the Honors College.
- 79% of students who graduated in the Fall 2015 either have jobs or were planning to attend graduate school by the end of that semester.
- The average starting salary was \$71,460. According to the PayScale website, the median entry level salary for electrical engineers is \$64,562.
- Approximately \$46,500 was awarded in undergraduate scholarships during 2015-2016.
- Undergraduate students are often given the opportunity to work in research labs, encouraged to work in summer internships and coops, and participate in study abroad programs.
- The student societies, involving both graduate and undergraduate students, are taking an active in the department. Eta Kappa Nu (HKN) – EE Honor society - has recently developed a mentoring program called "Arkansas Mentoring Program for Electrical Engineering & Related Studies" (AMPEERS), which pairs upperclassmen with sophomore students in an effort to make their transition in to the department both smooth and enjoyable by providing a resource to learn about topics such as coursework, career planning, tutoring, research, etc. The societies also bring in seminar speakers, do community outreach, and set up social events to encourage camaraderie among the students. These organizations are a great asset to the department.

The graduate program offers a Master of Science degree in Electrical Engineering (MSEE) under the on- and off-campus options, and a Doctor of Philosophy degree in Engineering (Ph.D.). A graduate certificate in Sustainable Electric Energy Systems is also offered.

The department has 16 tenure/tenure track faculty members, which includes two individuals in the Vice-Provost's Office, one individual serving as Director of the Engineering, Communication and Cyber Security at NSF, four non-tenure track faculty members, one teaching assistant professor and one instructor. The faculty of the department have gained national and international recognition, as evidenced by the fact that six of them have been gained the rank of Fellow in a number of professional

societies, two have received the NSF's prestigious CAREER award and over 140 journal articles or conference proceedings were published in 2015. As a result of research being conducted in the department, faculty members have received the R&D 100 award in 2009 and 2014.

The Department currently has five research centers, including the Center for Power Optimization of Electro-Thermal Systems (POETS), the first NSF ERC in the UA history. The other centers are:

- Center for Secure Electric Energy Delivery Systems (SEEDS)
- Center for Grid-Connected Advanced Power Electronics Systems (GRAPES)
- High Density Electronics Center (HiDEC)
- National Center for Reliable Electric Power Transmission (NCREPT).

In addition to those Centers, the department has several active research laboratories under the supervision of our faculty. In FY2015, the 16 tenure and tenure track faculty had a total of over \$3.9M in research expenditures. The major research areas of the department, which align with the current research strengths and/or the emerging research areas of the College of Engineering, include:

- Communications, Digital Signal Processing and Sensor Networks
- Electronics and Electronic Packaging, Analog and Mixed Signal, and Integrated Circuits
- Power Systems, Power Electronics, Renewable Energy, and Control
- RF and Microwave, Electronics, Antennas, and Terahertz
- Semiconductors, Nanotechnology, Optoelectronics, Photovoltaic, and Photonics

The Departmental budget from the State of Arkansas is just over \$2.6M, the HiDEC budget is \$602,225, and the budget for the ELEG program at the University of Arkansas Fort Smith is \$246,870.

## **II. Untapped Resources**

The department research capabilities fall within three of the COE five research strengths; namely, Electronics, Energy, and Nanomaterials Science and Engineering. The Department has many underutilized resources within its research centers and laboratories. Some of our research laboratories are second to none; for example, the packaging facilities at HiDEC, or the high-power and medium-voltage equipment testing at NCREPT. The department laboratories are used for undergraduate and graduate teaching but there are idle capacities to accommodate more research work or industrial collaborations.

## **III. Opportunities**

The department opportunities could be classified into two broad categories: distance education and research enterprise:

**III.1 Distance Education:** The opportunities lie at the undergraduate and graduate levels. For the undergraduate level, there is an opportunity to increase enrolment by attracting a larger number of transfer students, particularly, within the state. Presently, Arkansans are able to take the Physics and Math courses as well as Humanities and Social Science electives at some Arkansas community colleges (e.g., NWAC, Pulaski). However, it takes 3 years to complete their BSEE degree due to the offering sequence of ELEG required courses. Offering sophomore courses via distance education will enable these transfer students to take the required sophomore ELEG courses while taking non-engineering courses at community colleges.

The UA BSEE degree is the best one in the state of Arkansas and one of the best ones within the surrounding states. So, another advantage of distance education is that the department could collaborate with other campuses around the state to offer ELEG courses not available to them.

The opportunity at the graduate level resides in the Online-option of the MSEE program which has recently been increasing in numbers. The addition of the graduate certificate in Sustainable Electric Energy Systems should attract more students or increase the value of the MSEE degree.

**III.2 Research Enterprise:** Visitors touring our research facilities often state “Wow! I did not know that UA has these research capabilities.” So, there is an opportunity to increase the research activities, and one path may be through a “classified research facility”.

#### **IV. Challenges**

The department faces the following challenges:

- **Increasing undergraduate enrollment:** It is well known that high-school students are not electing to major in STEM fields; in particular, electrical engineering is perceived as heavy on math. This is compounded by the fact that the state of Arkansas has other programs, which in name sound similar but their quality is not the same, attracting students away from UA ELEG.
- **Faculty and staff positions:** Increased enrolments at the undergraduate and graduate levels require more personnel to meet student’s teaching needs while maintaining research activity levels. Attracting qualified faculty and staff is a significant problem, specially, when seeking to attract diverse applicants. Startup packages must be more competitive.
- **Space:** Increased research activity and student numbers lead to larger teaching labs, additional research lab space, and office space.
- **Staff non-classified positions:** Excellent performance in the job must be compensated with better salaries that UA classified employees currently receive.
- **Better graduate student quality:** This is important to meet expectations on externally funded research. Competing with higher-ranked schools will require higher graduate stipends.
- **Classified research facility:** This is kind of a “chicken and egg” issue. Classified research is not possible without a classified research facility; the latter will not be built without the former.
- **Marketing of the department:** This is a serious problem that only departmental annual or semester publications will solve it. There is a need for additional communication and marketing activities. The state of Arkansas may not fully recognize the value of the department when it comes to not only educating Arkansans but also as an engine for economic development. For example, the idle capacity of the laboratories could be used by high-tech companies that bring high-paying jobs to the state. An example is Arkansas Power Electronics Inc. that was recently purchased by CREE (Raleigh, NC) and now operates under Wolfspeed. Several UA graduates work locally instead having jobs in other states, and this company is planning on bringing manufacturing to NWA. There are current efforts to improve the situation but it seems that a synchronized and unified institutional effort is lacking. The same can be said of the department image within the Department of Defense and other Federal agencies. It is hard to have DoD program managers visiting UA campus; once that they do, the “Wow! Effect” works charms. Unfortunately, the current approach using the current lobbying firm based in Washington DC has not worked very well and search for another firm should be considered.

**Summary Report for Academic Planning**  
**Department of Industrial Engineering**  
May 27, 2016

**Introduction**

The Department of Industrial Engineering is the only industrial engineering department in the State of Arkansas. The department currently has 13 tenured/tenure track faculty, one research professor, and seven staff members. In addition, the department supports two clinical teaching faculty members using faculty release and resources from the graduate program, Master of Science in Operations Management (MSOM). The department has 295 undergraduates (soph-sr), and graduated 81 BSIE students in 2015-2016. The department currently has 16 MS students, and 31 PhD students that are being advised by the faculty, with 17 graduates (13MS, 4PhD) in 2015. The department is home to the MSOM program, a professional master's program. The MSOM program includes 4 live sites and is also offered online. There are over 800 students enrolled with 232 students graduating last year. Department research expenditures for CY 15 exceeded \$1.5 M. The department ranks 39<sup>th</sup> out of 99 programs, and ranks 27<sup>th</sup> among public institutions. The department has 3 endowed chairs, 2 endowed professorships and received an annual State appropriation of \$2.34 million for the current fiscal year.

**Departmental Strengths**

The four most apparent strengths of the Industrial Engineering Department are:

- Nationally recognized award-winning faculty
- Strong and diverse undergraduate student body
- Extremely supportive alumni organization, Arkansas Academy of Industrial Engineering (AAIE)
- Nationally sponsored research centers

The Industrial Engineering (INEG) faculty members are nationally recognized leaders in their field. INEG has six full professors (one with a 50% appointment as Associate Dean of Research, one with a 50% appointment as Director of the Freshman Engineering Program), two associate professors, five assistant professors, two clinical faculty members and one research professor. Three faculty members will be joining the department in the fall, two full professors and one assistant professor: Dr. Joe Geunes will hold the John and Mary Lib White Systems Integration Chair, Dr. Art Chaovalitwongse will hold the 21st Century Research Leadership Chair, and Dr. Kaveh Bastani will join the department upon completion of his Ph.D. from Virginia Tech. The INEG faculty members are strongly committed to quality teaching and service. The average teaching evaluation for the IE faculty in all courses taught in 2015/2016 was 4.47/5.00. Two of our faculty members have won the Baum Teaching Award. The department has nine faculty who are fellows in the Institute of Industrial and Systems Engineering (IISE), two fellows in the Society of Reliability Engineering (SRE), two fellows in the Institute for Operations Research and Management Science (INFORMS), two fellows in the American Society of Engineering Education (ASEE), two fellows in the American Society of Engineering Management (ASEM), a fellow in the International Council on Systems Engineering (INCOSE), a fellow in the Military Operations Research Society, and a fellow in the Society of Decision Professionals. The department also has one National Academy of Engineering Member (Dr. John White). Our faculty has held and continues to hold leadership positions in many of our national societies. The IE faculty has won national, university, and college level awards. Faculty Awards over the last two years include:

- IISE Fellow (Dr. Heather Nachtmann, Dr. Ed Pohl)
- IISE Teaching Excellence Award in Transportation and Logistics (Dr. Ashlea Milburn)

- IISE Albert G. Holzman Distinguished Educator Award (Dr. Richard Cassady)
- Society of Reliability Engineers Fellow (Dr. Ed Pohl)
- NSF Career Award (Dr. Ashlea Milburn)
- Glover-Klingman Prize (Dr. Kelly Sullivan)
- ASEE Fellow (Dr. Kim Needy)
- ASEM Frank B.W. Woodbury Award for Service (Dr. Kim Needy)
- ASEE John L. Imhoff Global Excellence Award for Industrial Engineering Education (Dr. Ed Pohl)
- ASEE National Engineering Economy Teaching Excellence Award (Dr. John White)
- UA Alumni Association Outstanding Faculty Service Award (Dr. Ed Pohl)
- INFORMS Frank P. Ramsey Medal for Decision Analysis (Dr. Greg Parnell)
- University of Arkansas Teaching Academy Fellow (Dr. Manuel Rossetti)
- University of Arkansas Outstanding Faculty Advising Award (Dr. Tish Pohl)

The Industrial Engineering undergraduate student body at the University of Arkansas is excellent. The undergraduate student body makeup is 33% female and 15% minority. Career preparation and placement of our undergraduate students is outstanding. The students entering INEG have an average ACT of 27.5 and a high school GPA of 3.87. The six year graduation rate for INEG students is very good—86.5% average 6 year graduation rate for the last four cohorts. The majority of our students have co-op, internship, and/or research experience. Approximately 16% of INEG students graduated from the Honors College in 2015-16. This past year, two of our senior design teams competed at the United States Military Academy Senior Design competition with one team finishing first in their track and the other finishing second. This year one of our Honors College students finished second in the IISE Regional Student Paper Competition. Job placement of our graduates last year was 83% at the time of graduation, with an average starting salary of \$62,000 in 2015. INEG graduates have attended some of the nation's top graduate schools including the University of Michigan, Georgia Tech, Northwestern, Cornell, and Virginia Tech.

The Arkansas Academy of Industrial Engineers was started in 1986 to honor alumni that are leaders in industry and society, and has inducted more than 280 members. Industrial Engineering alumni are actively involved in the department through classroom speaking engagements, mock interviews, mentoring circles, senior design projects, senior design reviewers, the hiring of graduates and through their significant financial contributions to our student scholarship funds. Last academic year, more than \$100K in scholarships was awarded to our students. Approximately 24% of our alumni donate to the department.

The department has depth in 3 core areas; Transportation and Logistics, Reliability and Quality, and Healthcare Systems Engineering. The department is home to two research centers: the Center for Excellence in Logistics and Distribution (CELDi) and the Center for Innovation in Healthcare Logistics (CIHL). CELDi is an NSF sponsored Industry/University Cooperative Research Center (I/UCRC) providing innovative solutions for logistics and distribution. The core competency of CELDi lies in the abilities of its researchers to use mathematical and computer based models to abstract a logistics and distribution problem so as to provide insight into analysis and/or design questions. CIHL is an industry-university partnership that leads a nationwide effort to identify and foster system-wide adoption of ground-breaking healthcare supply chain and logistics innovations. In addition to the two centers in IE, department faculty members are active participants in and leaders of several other interdisciplinary

centers. Dr. Heather Nachtmann leads the Maritime Transportation Research & Education Center (MarTREC), a Department of Transportation Tier 1 research center that builds economic competitiveness through efficient, resilient, and sustainable maritime and multi-modal transportation systems. Dr. Chase Rainwater is co-director of the newly formed Arkansas Security Research and Education Institute (ASCENT) and Dr. Art Chaovalitwongse will serve as a co-director of the emerging Institute for Advanced Data Analytics.

### **Challenges and Opportunities for the Future**

The faculty has identified several challenges and opportunities associated with improving the quality of the Industrial Engineering Department:

- Improving Department visibility as a means of attracting higher quality graduate students
- Improving the graduate/research program while maintaining a solid undergraduate program
- Working with Development to increase graduate fellowships and stipends in department
- Leverage department capabilities in the analytics area by targeting industrial needs

Improving the department's visibility is essential to improving the quality of the graduate students in the department. Improved visibility results in greater recognition of department accomplishments, improves external perceptions, which improves ratings and department rankings, all of which lead to higher quality applicants to the departments graduate program.

A significant challenge faced by the Industrial Department is improving the graduate/research program while maintaining the quality of its undergraduate program. The department needs to balance the commitment to the increasing undergraduate teaching loads with faculty research efforts. Improvements in the graduate/research program require that faculty secure external research funds to provide funding for graduate students, post-docs, equipment and travel. These resources enable improvements in scholarly activities (publications, presentations, national leadership positions, national awards) which increase department visibility and result in attracting and graduating high-quality PhD students that are highly sought after by both academe and industry. This effort to secure external research funds requires significant time and effort from the faculty. Care must be taken to make sure that the growing class sizes do not significantly decrease a faculty member's ability to conduct quality research and write proposals. To help alleviate the effort associated with increasing class sizes we need to increase the number of TA's assigned to each class. This will allow us to maintain the quality of the educational experience and reduce the impact of the increased class size on our faculty members.

In order to attract better and more graduate students we need to explore ways to increase our graduate student stipends in order to compete with other universities. By working with Development in the capital campaign, we can work to increase the number of graduate fellowships available in the department that can be used to enhance basic graduate student stipends.

The department needs to leverage its leadership roles in the interdisciplinary centers on campus to pursue large, interdisciplinary federally-funded grant opportunities. This can be accomplished using these centers and existing collaborative relationships within the supply chain and analytics areas to enhance the diversity of the departments research portfolio, as well as the number and type of industrial companies in which we can partner with. Specific areas of opportunity include infrastructure and resilience, cyber security, food security, food supply chain, healthcare systems engineering, and energy applications.





31 May 2016

Dr. Joseph E. Steinmetz  
Chancellor, University of Arkansas

Dear Chancellor Steinmetz:

I would like to start saying “thank you” for your visit, which gave us the opportunity to directly share with you and your staff our strengths, weaknesses, priorities, and overall departmental direction. After a brief summary of the departmental facts I documented during your visit, I will provide an expanded summary of specific list-items you requested.

The Department of Mechanical Engineering (MEEG) is the largest, and still the fastest growing, department in the College of Engineering (COE) at the University of Arkansas (UofA). MEEG is home for 524 undergraduate and 30 (M.S. & Ph.D.) graduate students. We have a total of 18 outstanding faculty members – 10 tenured, 4 tenure-track, and 4 instructors. Faculty and students in MEEG receive world-class support from 9 staff members – 4 administrative, 3 technical, and 2 research. Consistent with our land-grant mission, we have embarked on major initiatives on excellence in teaching, research, and economic development fronts in the past five years (full duration of my tenure as the department head).

## Strengths

This is a happy department! I am especially proud of the fact that we have established a mutual trust and respect based working relationship among & between faculty and staff in MEEG. The work environment is best described as one “we look forward to going every morning, and cannot believe it’s time to go home in the evening!” All faculty and staff meetings enjoy full attendance – I do not recall a single unpleasant exchange in the past five years.

**Teaching** – MEEG is committed to continuous improvement (CI) in everything we do. The key concept that forms the basis for CI is repeated on a regular basis in our meeting – “if you always do, what you always did, you will always get, what you always got.” Recognizing this fact, we embarked on a truly game-changing initiative on the teaching excellence front, namely, Conceive, Design, Implement, Operate (CDIO).and MEEG is officially a member of this worldwide initiative, which includes the foremost universities from every country. In North America, some of the member institutions include MIT, Harvard, Purdue, Michigan, Notre Dame, Stanford, Montreal, Calgary, and many others. MEEG is very proud to join this elite group, and extremely happy to participate in CDIO for our students! CDIO enables students to “engineer immediately upon graduation.” As opposed to relying exclusively on a senior capstone design, CDIO provides unusually large number of team design, analysis, and manufacturing

experiences for our undergraduate students. Just as importantly, CDIO helps us realize the most desirable outcome in an educational activity, namely, deeply-rooted understanding and long-term retention. Finally, I am happy to report the fact that we have received phenomenal feedback from our students (through senior surveys and exit interviews) and industry partners!

**Research** – We regularly repeat another one of our popular slogans, which is “think big, and do big things.” Working as individual contributors and team members in all our research activities, MEEG faculty made a commitment to expand our research activities in the past five years. Consequently, our research enterprise has risen exponentially! It was a deliberate attempt to form, through judicious hiring process, a “critical mass” in the materials area. This is now a powerful group capable of covering atomistic, nano, meso, micro and macro scales using both experimental & computational techniques. For the first time in the history of MEEG, our team effort in materials culminated in a \$24M NSF EPSCoR grant. This five-year grant established the new Center for Advanced Surface Engineering (CASE). Two MEEG faculty members, Dr. Min Zou and Dr. Paul Millett, were listed in the recent Top 15 most active researcher at UofA. Also, we are quite proud of the fact that MEEG is enjoying the highest concentration of DDF/DAF caliber doctoral students in its history! “Scholarly output” was identified as a critically important focus area and the COE level, and MEEG is proud of doing its part in this category.

**Economic Development** – I have embarked on a massively large-scale effort in economic development starting at the onset of my tenure as the department head. Working closely with Arkansas Economic Development Commission (AEDC), MEEG established strong working relationship with a large number of companies in many industries, which include aviation, aerospace/defense, chemical, oil & gas, heavy equipment, steel, automotive, jet propulsion, and others. Some of our key industry partners include Dassault Falcon Jet, Lockheed Martin, General Dynamics, Esterline, Raytheon, Aerojet/Rocketdyne, Clean Harbors, El Dorado Chemical, Martin/Cross, Caterpillar, Nucor-Yamato Steel, Superior Automotive, Pratt & Whitney, etc... During the current academic year, we had 12 industry-funded senior capstone design projects, and the stage is all set for 15 projects involving 60 seniors for the next academic year! In the past, TELE fees were used to cover all design projects in MEEG. In addition, we have many companies streaming projects to cover CDIO design activities in courses at all levels. Our undergraduate students now enjoy much expanded opportunities in internship, co-op, and full-time employment with our expanded network of industry partners. As expected, we now see industry initiatives to fund graduate level projects for more demanding technical issues. It is my belief that, as federal funding dwindles, our economic development initiative will lead to outstanding, long-term research support from industry!

## **Weaknesses**

Our building is seriously getting in the way of progress on all three fronts – teaching, research, and economic development. The MEEG Building has a total of 35,000 ft<sup>2</sup> of useable space. Although we utilize every square inch, there is simply not enough space to accommodate all of our initiatives and activities. First, the ideal scenario to have all of MEEG under one roof is not possible. We are dispersed all over the place with faculty & graduate student offices and research labs in three buildings (MEEG, NANO, and ENRC). We are unable to dedicate sufficient space to adequately cover MEEG’s undergraduate teaching labs, CDIO projects, senior capstone design activities, and study areas for our students. Institutional funding for expanded “graduate teaching assistants” for a solid, steady, and reliable source for graduate research assistants is another weakness. As our research enterprise rises exponentially, this issue is becoming even more critical!

## **Priorities**

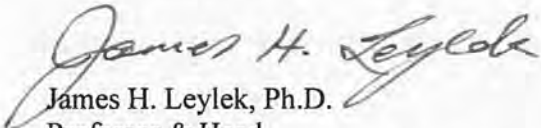
As a department, we have established the following priorities: (1) Stay the course on the teaching excellence front, as we push toward full implementation of our CDIO initiative throughout the MEEG curriculum; (2) Create two additional “critical Mass” groups involving design/manufacturing and energy areas within MEEG; and (3) Continue expanding our massive effort in economic development activities, and push for research funding by our corporate partners.

## **Directions**

MEEG faculty and staff are determined not to fall into the trap of expecting better outcomes while doing what we have always done in the past (If you always do, what you always did.....). We are dead-serious about making major progress in our national rankings, in both undergraduate and graduate programs, through “game changing” initiative involving all three mission areas in the land-grant charter – teaching, research, and economic development. MEEG’s CDIO initiative is recognized to be at the cutting-edge of educating the next generation of engineering students. We have joined an elite group of institutions worldwide (there is no other SEC school, and no other university can compete with us within a 700 mile radius!). We will continue to form powerful research teams through our “thing big, and do big things” initiative. Formation of two additional critical mass groups will help immensely in this regard. Finally, combination of MEEG’s CDIO and research success is helping expand what is already an impressive network of companies in our economic development initiative.

Please call on me to expand on what is admittedly a super-concise summary of what the Department of Mechanical Engineering faculty, staff, and students are engaged in. I would be more than happy to provide additional information if you feel the need.

Respectfully yours,



James H. Leylek, Ph.D.  
Professor & Head  
21<sup>st</sup> Century Leadership Chair in Engineering  
Department of Mechanical Engineering  
College of Engineering  
University of Arkansas  
O: (479) 575-4153  
[jleylek@uark.edu](mailto:jleylek@uark.edu)

**Fulbright College**

The anthropology faculty in AY 2015 includes four archaeologists, six biological anthropologists, and six cultural anthropologists. As a department, and within each subunit, we are strong in research and teaching. We publish our research regularly and are frequently awarded competitive research grants. Through research, teaching, and university service, faculty are strongly involved in area studies and interdisciplinary programs. Our faculty are internationally recognized as leaders in their fields.

**I. Summary Metrics**

**Budget:**

Account	FY'15 Carry over	FY'16 Budget
Anthropology-Instructional Support (Maint)	\$0	\$20,000
ANTH-Teach/Lab Equipment Enhancement (TELE)	\$6,861	\$20,000
R I F-Anthropology	\$20,174	\$1,926

**Faculty and staff (current):**

Staff: 2

Tenure track Faculty: 14 (5 Assistant, 3 Associate, 4 Full, 2 University/Distinguished)

Non-tenure track Faculty: 2.2 (1 Visiting Assistant Professor, 1 Clinical Assistant Professor, 3/16ths Research Assistant Professor)

Adjunct Faculty: 12 Unpaid research Faculty: (Arkansas Archaeological Survey)

**Credit hours taught (AY 15-16):**

Undergraduate (Fall 2015, Spring 2016) = 10,199

Graduate (Fall 2015, Spring, 2016) = 539

**Majors and Graduate Students (current):**

ANTH Majors: 182 (104 BA, 78 BS)

ANTH Grad students: 53 (18 MA, 35 PhD)

**Research output (Annual average – past three years):**

Books: 2.3

Peer-reviewed papers/chapters: 35.7

Non-peer-reviewed works: 3

Presentations: 49 (10.3 invited, 38.7 contributed)

**Annual Awards:**

Fiscal Year 2014 \$ 287,986.00

Fiscal Year 2013 \$ 141,626.00

Fiscal Year 2012 \$ 142,369.00

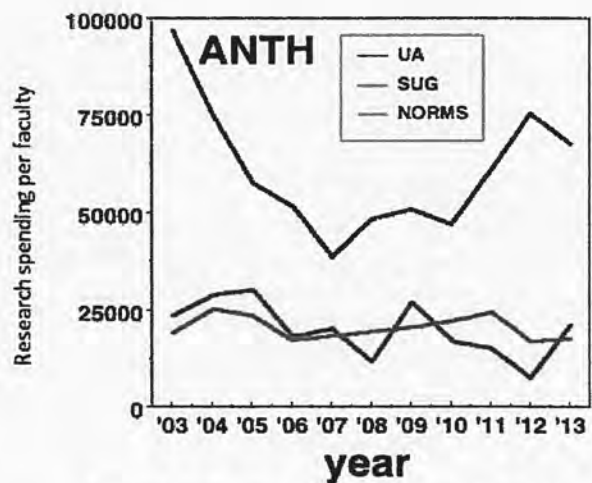


Figure 1. From Delaware Report (1/15).

## II. Strengths

### a. The department as a whole

- *Interdisciplinarity:* The Anthropology Department is one of the most interdisciplinary departments on campus. As scholars of humans and culture we interface with many different departments as well as off-campus communities across the natural sciences, social sciences, arts and humanities.
- *Diversity:* Through teaching, research, and public outreach we promote respect and equality for all ethnicities and genders.
- *Hands-on Training and Career Preparation:* Anthropology faculty have a strong record of including both undergraduate and graduate students in their research, with close one-on-one support and mentorship. Our graduate program has a strong track record of job placement.
- *Excellence in Research and Teaching:* We lead the nation in a number of research foci and are awarded prestigious grants. Our research is regularly published in leading journals and university presses. We serve or have served as presidents, officers, or editors on boards of prominent journals and academic associations. We bring our research into the classroom and serve thousands of students annually.

### b. Archaeology

- *Interdisciplinarity:* Students work across the boundaries among the following units to develop truly innovative research with strengths in human-environment interaction, the application of geospatial techniques, and materials science approaches to the past. We actively contribute to the Arkansas Archaeological Survey (AAS), the Center for Advanced Spatial Technology (CAST), Geosciences, and Environmental Dynamics (ENDY).
- *Hands-on Training:* We prepare students to immediately gain employment upon graduation by providing hands-on experience through lab facilities and participation with faculty research emphasizing traditional field and lab methods as well as specialization in geospatial analysis or materials science.
- *Leader in Geospatial Method and Theory:* The archaeology program, in conjunction with CAST, leads the fields of geographic information systems (GIS), statistical methods, remote sensing, and geophysical prospection as applied to understanding humans of the past.

### b. The biological anthropology program

- *Research:* All of the biological anthropologists have active research programs emphasizing human-environmental interactions. We have field projects that range from analyzing skeletal samples from pharaonic Egypt to foodways of Native Americans. Further, we have a strong focus on human evolutionary studies with four faculty actively researching the topic and with research sites that stretch from southern to eastern Africa and beyond. We also maintain active research laboratories where undergraduate honors and graduate students actively contribute to our research output.
- *Teaching:* We serve a large number of non-major and major students in Introduction to Biological Anthropology (ANTH 1011L/1013), and have a rich selection of upper level undergraduate and graduate courses available. We house the pre-dental program (via Dr. Jerry Rose) and are able to interface with many pre-med and biology majors. Additionally, Dr. Ungar co-directs an annual study abroad program in Tanzania. Finally, Dr. Ungar is the Director of the ENDY program at the UofA; he and the other biological anthropologists regularly chair graduate committees for students enrolled in the ENDY program of study.

### c. The cultural anthropology program

- *Interdisciplinarity:* The teaching and research focus of the cultural anthropology faculty is strongly interdisciplinary, and we are actively involved in the Gender Studies, Religious Studies, Indigenous Studies, Visual Studies, Legal Studies, LAST, AAST, and MEST programs, both on campus and through leadership positions in international academic organizations and journal and book series editorships.
- *Researching The Global World:* Our research as cultural anthropologists stands out for its focus on social life in an era of globalization, through original, ethnographic work on timely issues such as migration, faith, transnational identity, violence, popular culture, and media. Cultural anthropology faculty members have a

strong record of securing major external competitive research funding and lecture and publish nationally and internationally.

- *Diversity:* Cultural anthropologists have a strong commitment to diversifying our faculty, and to offering courses on themes of diversity, gender, and race. Our courses are of particular relevance to students of diverse backgrounds, and appeal especially to members of Arkansas' rapidly growing African-American, Asian, Latino/Hispanic, and Middle Eastern communities.

### III. Priorities and directions for the next five years

- *Teaching Development:* Expand existing introductory courses in biological and cultural anthropology, which fulfill core requirements in the natural and social sciences. A major goal over the next year is to position *Introduction to Archaeology* as a core humanities requirement.
  - Expanded offerings create teaching assistant opportunities and, thus, funding for graduate students.
  - Increased enrollments to justify hiring clinical positions in Biological Anthropology and Archaeology.
- *Public outreach and community development:*
  - Develop speaker series in biological anthropology, cultural anthropology, and anthropology as a whole, including annual distinguished lectures.
  - Develop an annual laboratory "open house" to attract undergraduate majors.
- *Cement the role of Anthropology in interdisciplinary research and teaching:*
  - The importance of anthropology to the humanities is an untapped strength. Our research would be enhanced and highlighted if the University of Arkansas had a Humanities Center
  - Develop overlapping, integrated courses and research programs that take advantage of crossovers – within Anthropology and across departments.
- *Diversification of faculty, student population, and curriculum:*
  - Create a departmental committee on diversity.
  - Hire a cultural anthropologist who specializes in South or Southeast Asia to fill a gap in our regional specialization and thus address the many South/Southeast Asian communities statewide.

### IV. Resources and university commitments needed to become stronger

- *Space:* There is no dedicated space for graduate students within the department. Such space is necessary to foster an environment in which faculty and students can interact and exchange ideas.
- *Graduate student funding:* The department is being outcompeted by other programs that offer higher graduate stipends and other forms of support. We cannot attract the best students with poor support structure for dissertation research and writing. There is little to no support for graduate research or conference travel. Researchers would benefit from a limited number of Research Assistant lines for the best graduate students that would integrate faculty and student interests in collaborative projects.
- *Equipment:* To continue hands-on training of students in areas where this Department has been a national leader, Teaching Enhancement Laboratory Enhancement (TELE) funds provided by the university are fundamental for purchasing and maintaining the tools required for training students. Without the appropriate equipment, teaching quality and student experience decreases considerably.
- *Support for faculty research:* Research support can come in many forms: travel funds to conduct research and present results; departmental library funds for purchasing books; pilot funds for new scholarly projects; teaching releases to conduct research and publish.

## **The Department of Art (soon to be School of Art)**

### **Traditional Mission**

The Department of Art is one of 19 departments in Fulbright College, the largest and most robust college on campus, of which we are grateful to be a part. The Arts and Sciences college is an appropriate fit for us as our research and teaching defy boundaries and transcend disciplines, which enables our faculty and students to forge strong allegiances in a wide variety of departments.

### **Weaknesses**

We have been experiencing an amazing transformation these past five years, outgrowing the historic Edward Durell Stone Fine Arts Center Building constructed in 1950 to teach and conduct research in a total of 6 facilities on and off campus. These additional temporary facilities have greatly benefited our students, allowing them the space and resources necessary to develop portfolios and research that have dramatically increased their success after graduation, including jobs in the design fields, positions as K-12 public school art teachers, positions in top graduate programs, internships and residencies at prestigious institutions, and significant exhibitions. Although the increasing scale of the department marks positive growth, a significant weakness lies in the aging and temporary facilities.

We are becoming increasingly competitive in the all 11 Art fields that we offer, and have had significant success preparing our students for the next step in the fields of Art Education, Art History, Graphic Design, and Studio Art. We are bursting at the seams with over 400 undergraduate art majors, 19 terminal degree seeking graduate students, and over 2000 non-major students we teach annually in our Art History Lecture course. Currently we have 35 faculty members, 16 of whom are tenured or tenure track. Our growing department and increase in offerings has also become a weakness due to the amount of work our tenured, tenure track, and non tenure track faculty are doing in service to maintain the sheer scale of programming without the proper ratio of tenure and tenure track faculty.

### **Strengths**

We are the only university in the state of Arkansas that offers an MFA, the terminal degree in Studio Art. The size and scope of our department is comparable to our top national peer institutions and competitors, many of which are Schools of Art rather than departments, and we are well-poised to become a School of Art.

### **Art History and Strong Ties with Crystal Bridges Museum of American Art**

- Faculty members frequently participate in public talks at CBMAA, when our specializations can be utilized in their programming
- We have had faculty exhibit work at CBMAA
- MFA students have participated on panels and exhibited work in conjunction with CBMAA
- The museum is often used as a teaching resource, with classes active meeting at the museum when it is appropriate for courses
- Crystal Bridges has been consulted on our Art History searches, ensuring they have a voice in continuing a close relationship
- We have seven Alexander Calder mobiles on loan to the museum
- Students frequently take advantage of CBMAA as interns, volunteers, and through the College Ambassador Program

### **Foundations and Growing Enrollment and Rising Standards**

We have recently debuted a re-structured foundational curriculum for incoming undergraduates, replacing a system that had been in place for over 30 years. Course offerings now include exposure to real-time developments in the art world, training in design technology and fabrication techniques, as well as fresh, rigorous approaches to instruction in the tried-and-true elements and principles of art and design.

- We have developed a rigorous program that strives to be competitive with top art schools nationally. Students attend two full days per week in the classroom, with an additional weekly drill/lecture component.
- The program's emphasis on the simultaneous development of conceptual limberness and formal acuity already has yielded tangible results.
- Enrollment in Foundations during the new program's first year spiked to just under 100 students from an average of about 60.
- Fayetteville High School has, for the first time in recent memory, started recommending our program—an indicator of a renewed reputation for our department.

### **Ceramics and Student Successes on the National Stage**

Ceramics provides an example of the high level of success we are seeing from our graduate students, and the high standards that are expected of them. Graduate applications have been on a continual upward trajectory as word has spread about our community—and we have gained national recognition as a program on the rise.

- We are a small area, but have tremendously productive students. Our 5 graduate students averaged 5 national or international exhibitions per student in 2015. This doesn't include all they have done locally.



- Our MFAs have secured competitive awards, residencies, and have been featured in nationally prominent publications.
- MFAs have pursued many international opportunities, whether participating in student exchanges, or traveling abroad for competitive residencies.
- Our undergraduates have gained admission to many of the nation's top graduate programs, and have also been incredibly active in securing residencies and exhibition opportunities.

#### **Painting/Drawing and Renowned Faculty Research**

The reputation of the innovative research of our faculty work extends nationally and our faculty is upheld for its high level of commitment and achievement in their fields. In painting, we have seen an exceptionally productive faculty that continues to prioritize strong research practices.

- Kristin Musnug is currently on leave, preparing for an upcoming solo exhibition at Inman Gallery in Houston after completing a residency at the North Cascades Institute. The Walton Foundation recently acquired a selection of her paintings.
- Stephanie Pierce recently won the very prestigious Joan Mitchell Grant—an unrestricted \$25K award for career support. Also currently on leave, Stephanie has attended multiple residencies in the past year and is currently preparing for an exhibition at Steven Harvey Fine Art Projects in NYC.
- Students in painting have directly benefitted from the reputations of our faculty from the relationships built with other institutions, such as Yale Norfolk School of Art and the Chautauqua Institute, among others.

#### **Photography and A Shared Vision through Collegiality in the Department**

There is an energy and enthusiasm in the Department of Art that makes striving for shared goals a pleasure. This optimism extends into the graduate and undergraduate programs as well. The faculty as whole take pride in making our department as collegial as possible.

- There is a unique sense of collegiality and high regard amongst faculty that is evidenced by friendliness, mutual respect, support, and unity in purpose as we all work together to shape the direction of the department.
- Instructors at all levels of the department, not just tenure or tenure track professors, have a stake in the development of the department.
- There is a momentum toward excellence in art making and teaching, as well as an ambitious vision for the future of the department that is unusual in typical university departments.
- The positivity and shared vision of the department have proven to be an important recruiting tool in drawing top candidates to our department, when positions are available.

#### **Printmaking and Benefitting from External Funding—Windgate Equipment Grant**

In 2014, we were awarded \$2.1 million dollars from the Windgate Charitable Foundation, with a large portion dedicated to improving studio equipment within the department. The award has been transformational, and all areas have made improvements with this outside funding by acquiring necessary tools and updating facilities with innovative visual art equipment.

- These new tools allow each area to better educate their students in ways both historical and contemporary.
- Many of the media areas updated safety equipment through this grant, which creates an improved teaching and research environment.
- Many areas have or will be including advanced technology in their areas such as CNC routers and laser cutters/engravers, equipment for rapid prototyping, state-of-the-art kilns, photographic printers, and many others, which will surely enhance our interdisciplinary program.
- We are showing the community and national educational institutions that we are current, knowledgeable, and able to be leading researchers in the visual arts.

#### **Directions**

##### **Graphic Design - New Degree Development and Collaborative Emphasis**

Design has long held a very important role within the department, comprising the single largest area serving the most students. Importantly, we have just launched an entirely new BFA degree in Graphic Design, aimed at competing with the very best programs nationally.

- Up to 42 credit hours solely in graphic design, and will focus on such factors as design thinking, research, design and coding.
- The students will traverse through the program in cohorts, within a studio laptop model, with access to 3D printers, mobile devices and other technology.
- New courses have interesting and timely topics such as Design For Good, Human-Centered Design and User Experience.

Collaboration is emphasized at every level of the design degree and we have developed many relationships regionally and nationally. The types of organizations our students work for and support are anything from internal design teams of large companies such as Wal-Mart, Tyson and JB Hunt, to agencies that directly support the Wal-Mart ecosystem, such

as Saatchi + Saatchi X, CJRW, Rockfish and Collective Bias.

### **Sculpture and New Facility Development and Its Positive Effects**

\$500K of the \$2.1M grant received from the Windgate Charitable Foundation in 2014 was allocated towards construction costs associated with our new sculpture facility in the new Art + Design District. Another \$500K is currently being spent on new equipment for the Sculpture area, which will provide a much-needed overhaul of the area.

- The new facility includes equipment to embrace not only traditional processes such as the lost wax process in bronze casting, but also advanced technologies such as CNC routing, rapid prototyping, digital scanning, and laser cutting.
- The additional space added for sculpture will drastically change the projects students are capable of achieving—our already ambitious students will be able to achieve even more.
- With our unprecedented growth, it is clear that space is a much needed-resource for all areas.
- We have developed a plan that would relocate Studio Art media areas and Graphic Design to the Art + Design District adjacent to the new Sculpture facility, which would give Art History and Art Education the space they need to develop their programs within the Fine Arts Building.

### **New Media and A Commitment to Meeting Changing Student Needs**

Keeping pace with universities nationally, we have begun the research and development of a new 4D, or time-based media area. This includes new technologies, performance, lens-based video, digitally generated animation, projection, and more. Our first efforts towards this development came in our Foundations curriculum. Since then, we have developed and added a new course to the area each semester.

- We are fulfilling a student need, and increasing our competitive edge by keeping apprised to contemporary trends and responding thoughtfully—staying not only relevant, but at the forefront of a fluid and contemporary art world.
- Time-based art serves as a bridge between many media areas and can also help to act as a technical supplement to existing media areas.
- Students have a presence nationally in competitive shows and professional opportunities from as far as Los Angeles, and beyond in international film festivals- in London for example.

### **Outreach and Engagement**

#### **Art Education and An Exceptional Education for Art Educators**

With a highly laudable 100% job placement rate, our single-faculty art education area is creating the next generation of top art educators in Arkansas and beyond. Our area provides training for many types of teaching opportunities available in the arts, and our students teach art in a variety of community venues: public and private schools, the children's shelter, the Upward Bound program on campus, and art classes for adults.

- Our program has a history of obtaining the highest art Praxis test scores in Arkansas and are nationally competitive. Many of my students have become leaders in Arkansas art education.
- Within the past few years, we have developed a service learning course that offers students more extensive experience with mentally and physically disabled students in an inclusion class.
- Recently, I've supported and placed student teachers in Peru, Sweden, and Italy. One graduate received a Fulbright Teaching Assistantship to teach English through a community arts program in Argentina.
- Additional resources are much needed to provide more professional development opportunities and graduate education for the growing number of art teachers across the state, and to engage in more community service and international teaching opportunities and research.

#### **Gallery and Community Leadership through Public Programming**

As the university continues its path toward a top-50 research institution, it will be essential for exhibitions and public art projects to also increase in size and scope. We have an outstanding foundation, and look forward to time when we can serve the community on and off campus more fully.

- In 2010, the University of Arkansas began an ambitious public art program that has been instrumental in placing works of art in Hillside Auditorium and Champions Hall. The university's collection now includes works of art by internationally renowned artists.
- The Fine Art Center Gallery is an incubator for stimulating critical thought and the appreciation for works of art, chiefly in the 20th and 21st century. Over the past 5 years, the gallery has provided our students with diverse exhibitions that featured internationally renowned artists.
- Along with exhibitions, the Department of Art also hosts lectures by visiting artists, historians, and scholars. On average, the department hosts between 22-24 presentations annually. These lectures not only provide a forum for our students to learn more about the studio practice and research of artist/scholars working throughout the US and abroad, but also allow for one-on-one interactions through workshops and individual studio visits.

## Introduction to the Department of Biological Sciences

The Mission of the Department of Biological Sciences at the University of Arkansas is:

- to support and conduct competitive research
- to provide an educational and research training experience to prepare non-majors, majors, graduate students and post-doctoral fellows for their future careers
- to serve the University and State
- to be a global resource in our specialty areas of the life sciences.

### People:

	Fall 2009	Fall 2105
Tenure-Track Faculty	22 (+2)	28 (+2)*
Instructors / Non -TT	3	9 (+2)
Graduate Students	67	98
Funded TAs	36	74
Office Staff	5.5	4.5
Laboratories (Taught)	88	Ca. 155
Total BISC Majors	852	1195
Honors Students (declared)	217	309 (63 in labs, 2015)
Total UA enrollment	19,849	26,754

\*8 Assistant, 9 Associate, 11 Full, 2 Co-op

- BISC has taken on a disproportionately large share of student growth
- BISC is the 3<sup>rd</sup> largest major on campus, and largest in Fulbright College
- BISC has taken on a disproportionately large share of enrollment in service and core courses
- Our SSCH has more than doubled since 2006
- Still, our first year retention and 6-year graduation rates are at or above the UA average
- BISC produces 200 BA and BS degrees per year
- BISC produces between 7 and 20 graduate degrees (MS and PhD combined) per year
- In 2014, the cost of BISC salaries and operations was ca. 60% of tuition, fees and RIF generated

### Space, Teaching

- Current wet and dry laboratory teaching space is adequate for Departmental mission
- Primary teaching space limitations:
  - Transportation to off-campus sites for field courses
  - Insufficient computer-based teaching laboratories

### Space, Research

- NIH Standard currently recommends **200-400** net-square feet laboratory space per person.
- BISC currently operates at **138** square feet per person (202 researchers in 27,830 sqft)
- BISC averages \$2.4M in research expenditures, and 100 peer-reviewed publications, per year.

### Departmental Strengths

- Quality Research and Teaching Space (FERR, CHPN, DISC, BGRN)
- Quality Research Facilities (UASIL, AHPCC, Microscopy, AR Cooperative Fish and Wildlife Research Unit): Research & Recruitment
- People
  - Faculty: Broad, Productive, healthy demographic
  - Graduate Students: DAF/DDF: exceptional quality
  - Undergraduates: Honors and Premed
  - Staff: Devoted but over-worked and underpaid
- Broad Research Foci: Collaborative, Interdisciplinary, Cross-Campus
- Adaptability: Department is adept at problem solving. Operations are Efficient, Effective
- Strong supportive NWA professional community:
  - Industry-supported Center for Sustainability

### Untapped Opportunities

- Major US funding initiatives
  - BRAIN initiative, National Cancer Moonshot, Carbon Footprint / Sustainability
- Returns on investment
  - Alumni (need tracking and follow-up)
  - Companies in NWA (untapped resource for career development/internships)
- UAMS/Children's Hospital NWA branches
  - Dual appointments? Collaborations?
- ARA scholar program
- Access to Federal and State Wildlife Funding
- Departmental web site evolving:
  - Expansion of internet and social media presence.
- Organized graduate student recruitment

### Challenges / Obstacles

- **Too few faculty, too many students**
- **Staff issues**
  - Too few staff (4.5 Staff for 42 FTE, 98 Grads, 1200 Majors)
  - Heavy Workloads, Horribly underpaid.
- **GA Support:** Non-competitive stipends, fixed at 9-months
- **Technical Shortages** (Technical Staff, Computing, Data storage, Service Agreements, Electric, Machine, and Glass shops, Greenhouse staffing...).
- **Space Shortages** (Research labs, Offices, GA space, Seminar/meeting rooms, Computer labs, Greenhouse Bays).
- **Non-TT faculty** (Career Path, advocacy concerns)
- **Faculty salary compression** (Associate and Full Professors)

**Future Aspirations:**

In a perfect world, the Department of Biological Sciences would be more fully supported in its mission. Specifically, if the UA could provide resources and remove impediments, we would be empowered to continue our development toward a national leadership role in research and teaching. As a start, we would be pleased to move several metrics closer to those representative of our peer institutions. In 2012, BISC identified 7 peer institutions (Clemson, IA State, OU Norman, USC Columbia, LSU, OSU-main campus, and IL State), from which multiple descriptive metrics were obtained. Two of these metrics were staff numbers and number of majors to TT-FTE. Regardless of department size, staff positions averaged 10.1 individuals among our peers, in comparison to our 4.5. Likewise, Majors/TT-FTE ratio was much more favorable at 27.6 among our peers, in comparison to 40 at the UA. Understaffing and huge student workloads result in significant drain on faculty intellectual and creative effort.

**Priorities for the next 5 years:**

1. Continue to hire well, with specific reference to consideration of faculty and staff diversity.
2. Through Hiring and coordinated efforts, continue to pursue improved national rankings in our core sub-disciplines: "Cell and Molecular Biology", and "Ecology and Evolution".
3. Grow the TT faculty to obtain a Majors/TT-FTE ratio < 30 (With our current number of majors, that would set the TT faculty growth target at a department total of 40 FTE, from current ca. 30).
4. Grow the administrative staff to between 6 and 8 full time members.\*
5. Develop personnel documents that cover appointments and promotion of non-TT faculty.
6. Cultivate increased interdisciplinary profile of BISC through CEMB, ENDY, SPAC and other interdisciplinary graduate programs, and collaborations.
7. Continue to support the research activities of faculty through efficient use of available funds and space.

**Critical needs from UA central administration:**

To support BISC's 5-year priority list, and the well-being of BISC faculty, the following considerations are requested from Central Administration:

1. Expansion of research laboratory and office space on central campus, and greenhouse space at BGRN. BISC cannot grow without additional research space, offices, and research support space.
2. Re-establishment of fundamental research services (e.g. Technical Staff, Computing, Data storage, Service Agreements, Electric, Machine, and Glass shops, Greenhouse staffing), most of which were present 10 years ago, but have been lost due to reallocation of resources.
3. Increase the GA stipends, and extend them over 12 months – this would have a positive impact on our ability to attract and recruit the best new graduate students.
4. Consider ways of alleviating salary compression where appropriate.

\*Note: we have recently been informed that we have been approved for two new staff positions (ADMN III, and Fiscal Analyst) to be hired by July. We are grateful for this development.



## REPORT TO CHANCELLOR STEINMETZ

## OVERVIEW

## FACULTY AND STAFF

26 tenure-track faculty  
6 permanent non-tenure track faculty  
6 classified staff  
3 non-classified staff  
11 post-docs or research staff

## STUDENTS

81 graduate students  
– 62 in CHBC doctoral program  
– 19 in interdisciplinary programs  
395 undergraduate majors

## SSCH

25,754 in FY2015

Fourth largest total of any department in entire University, 3.8% of all SSCH for University

**HONORS:** In 2015, 30 of 127 Fulbright students graduating with honors were CHBC majors. In 2016, 30 of 172 ARSC honors graduates were CHBC majors. About 6-8% of ARSC students outside CHBC graduate with honors, about half of our majors do.

**STUDENT SUCCESS:** Our students seem to have no trouble getting jobs or admitted to graduate or professional school. Of the 60-70 chemistry majors who graduate each year, about half go on to medical school, so our best statistics are for this group. About 75-80% of CHBC majors who apply to medical school are accepted, higher than the UA average and much higher than the 39% national average.

## BUDGET

**Expenditures:** The department spends about \$3.4 million in salaries, fringe and tuition to support our teaching mission. We spend about \$2.8 million in salaries, fringe and tuition to support our research mission. Our maintenance and TELE funds cover most other expenses and have not grown in proportion to the growth of the student population.

**Revenue:** Assuming every student paid in-state rates, the department generates \$7.3 million in tuition revenue each year. The real total is likely higher. Fees generate additional revenue as well.

From FY11 to April, 2016, CHBC brought in \$18.7 million in external grant support, 5.55% of the University total over this time. We averaged \$3.3 million per year. This total does not include CHBC faculty who participated in grants that had a PI in another department, a common occurrence.

**SERVICE:** CHBC faculty serve the nation, the state, the chemical profession, and larger campus in a variety of roles. A representative listing includes many faculty serving on editorial boards, NIH or NSF study sections, a wide variety of campus and college committees. Dr. McIntosh is currently the Organic Division program chair for the American Chemical Society and Dr. Koeppe, the campus director for the Arkansas Bioscience Institute, is also the director of the NIH funded INBRE state network. Dr. Stites currently serves on the Arkansas Pollution Control and Ecology Commission overseeing the Department of Environmental Quality and recently served a term on the US Army Science Board. Dr. Allison is past and present Chair of the Faculty Senate and serves as the pre-medical advising Liebolt chair, Lorraine Brewer is a director of the Cordes Teaching Center (named after past chemistry professor Wally Cordes) and pre-pharmacy advisor.

**AWARDS:** An exhaustive list is beyond the scope of this report, but a few recent highlights would include Dr. Xiao's joining the department as the third Arkansas Research Alliance Fellow on campus and the first in Fulbright College, Dr. Fritsch's recent election as AAAS Fellow, Dr. Koeppe's selection to the campus "Top 15 in 2015" list, Dr. Adam's receipt of the National Organization of Black Chemists and Chemical Engineers President's Award for Excellence in STEM Research Mentoring, and Dr. Wilkin's honoring with the 2015 Southwest Regional American Chemical Society Award.



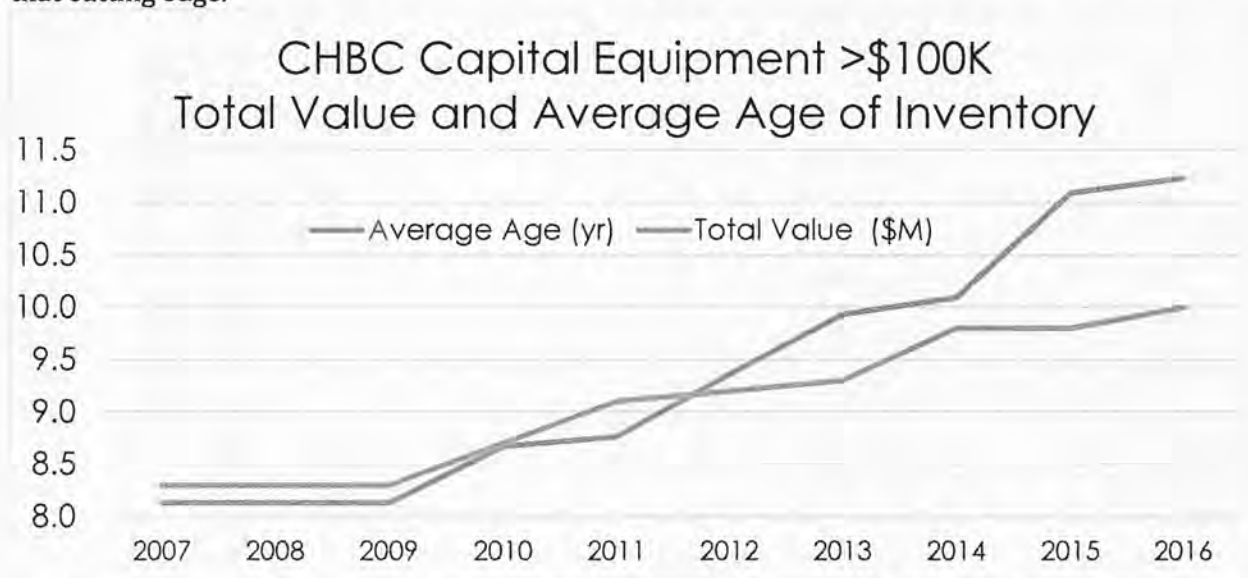
## REPORT TO CHANCELLOR STEINMETZ

## CHALLENGES

**GROWTH:** In 2015 SSCH for University grew to 151.5% of those taught in 2007; over the same period for CHBC, SSCH grew to 162.8%. To put it mildly, the numbers of tenure track and non-tenure track faculty, staff, and teaching assistants have not kept pace. In addition, we have been more productive than the University average, teaching 3.9% of all SSCH for the entire University with just 2.9% of the full time instructional faculty. If we added 4 tenure track and 5 non-tenure track faculty, we would still be above average in SSCH production per faculty member.

**CRITICAL MASS:** CHBC has fewer tenure track faculty than comparable institutions. To cite one example the Chancellor is familiar with, the University of Kansas, with nearly identical numbers of students, has roughly double the number of tenure track faculty of our 26 tenure track faculty in comparable functions. A further 25 tenure track chemists and biochemists at KU are housed in the Department of Medicinal Chemistry and the Department of Pharmaceutical Chemistry. This gives them much greater opportunity for collaborative work and a broader base to support expensive instrumentation.

**AGING TECHNICAL INFRASTRUCTURE:** We have an impressive array of equipment needed to support cutting age scientific research. We are not replacing this pool of equipment at the rate needed to stay on that cutting edge.



**GRADUATE STUDENTS:** Numbers of graduate students per faculty member are low compared to peer institutions. This poses challenges for both research and teaching. Our stipends lag behind peer institutions as well.

**RESEARCH SPACE:** CHBC space is in generally good condition, but further growth will require additional labs and offices.

**TEACHING:** Space for large enrollment classes is also very tight. We have been able to free up faculty time from teaching to develop an on-line version of only one course, a matter of serious concern to us.

## DIRECTIONS FORWARD

**HOW CAN CHBC IMPROVE ITSELF AND STRATEGICALLY BENEFIT THE ENTIRE UNIVERSITY?**

We propose several broad initiatives that will not only assist CHBC in solving challenges, but that we feel will aid other parts of the University as well.

**INTERDISCIPLINARY GRADUATE PROGRAM IN SCIENTIFIC AND ENGINEERING COMPUTATION:** Computational approaches to scientific and engineering research problems are growing in importance. We have a good



## REPORT TO CHANCELLOR STEINMETZ

high performance computing physical infrastructure and many researchers across campus who use these tools, but relatively few graduate students in this area. In part this is because no department truly focuses on computational approaches alone and relatively limited opportunities within a single department make it more difficult to recruit students. Many of our peer institutions have interdisciplinary programs in scientific and engineering computation. If we established a similar program it would allow a broad based marketing of the opportunities for students across campus. Such a program, analogous to our very successful CMB PhD program, would benefit departments across several colleges, including CHBC.

**DENTAL SCHOOL:** The number of top 50 public universities that do not have a medical, dental, or veterinary schools is very small. Arkansas is the most populous state that does not have a dental school and has among the lowest number of dentists per capita. There is strong support within the state dental association and UAMS for establishment of a dental school. We recognize that establishing a dental school will require significant philanthropy, but think this is exactly the kind of project that would attract gifts that would not otherwise be made to the University. The basic scientists that would form part of a dental school would immediately increase the opportunities for collaboration and sharing of expensive instrumentation and would benefit not just chemists and biologists, but anthropologists, materials scientists, and a variety of engineering faculty as well.

**SCIENTIFIC INITIATIVES:** We would like to expand our faculty in this department and others by hiring to support some new interdisciplinary scientific initiatives and to reinforce existing strengths. *Materials Science-* The department was pioneering in hiring on campus in nanomaterials and recently hired in battery materials science. Also recently, at the initiative of CHBC faculty a chemical and electrochemical energy storage and conversion group has been meeting with an eye toward an NSF MRSEC proposal. We still lack critical mass in this area. *Brain Initiative-* CHBC has one strong faculty member, Dr. Stenken, in this area and would like new faculty lines hired in research areas that would make the University more competitive in neuroscience. *NIH COBRE-* We hope that NIH will soon announce a new round of COBRE funding and we can submit a proposal for a Center for Molecular Interactions at the Abiotic/Biotic Interface with Dr. Stenken as PI and 5-6 current junior faculty. While the grant would supply most of the start-up, we would need commitment from the University for four new faculty lines in ARSC and ENGR as well as other support.

**SPACE:** New researchers will require new space. We feel one of the best ways to alleviate the space crunch across campus would be to add a wing onto NANO. This would create new research space and allow the consolidation of mass spec facilities scattered in CHBC, FERR, and POSC. This would improve the facilities for mass spec instruments tremendously, and also thus free up space in those three buildings as well. The plans for this wing were developed for an NIH stimulus package construction grant that was well reviewed, but not funded. This wing will add 32K gross SF and cost approximately \$23.3 million.

**TEACHING:** One of the quickest ways for the University to increase its rankings would be to improve its graduation rates. While CHBC majors graduate at rate well ahead of the University overall, our service courses are a major hurdle for many students outside the department. Chem I has a DFW rate of 32.1%. Those with a DFW in Chem I have only a 40.2% six year graduation rate. Chemistry I is such a large course, if we were able to raise the graduation rate of those getting DFWs in it, to that of the students with A, B, or C grades, the University's overall graduation rate would jump by 4.2%, to 66.7%. Doing this is very possible, following a successful model developed at UT-Austin. At-risk students are identified and then placed in smaller sections where they cover the same material, but receive extra help with it and get extensive coaching on study skills and similar encouragement and mentoring. After this one time intervention, their graduation rate raises to higher than average. This model would apply to other large enrollment classes with high DFW rates. Dr. Laude, who developed this at UT and is now their graduation czar, is a former PhD student of our Dr. Wilkins. We would need more TAs and faculty to teach the smaller sections and provide the help this proven model needs to succeed.



**Department of Communication**  
**J. William Fulbright College of Arts and Sciences**

**Mission**—The Department of Communication is committed to excellence in scholarship, instruction, and expression of human communication. We nurture a thriving intellectual community by bridging the humanities and social sciences. Discovery, learning, diversity, and engagement are the hallmarks of this community.



UNIVERSITY OF  
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**Vision**—The Department of Communication will enhance its national reputation for competitive peer-review research, comprehensive graduate education emphasizing civic engagement, diverse undergraduate curriculum, and innovative online learning.

**Chancellor and Academic Department Meeting**  
**Summary**

**May 25, 2016**

*In an effort to describe the Department of Communication, this report is divided into four sections—Summary Metrics, Departmental Strengths, Priorities and Directions for Next Five Years, and Resources and University Commitments Needed to Grow Stronger.*

## I. Summary Metrics

A. <u>Budgets:</u>	2005-05	2011-12	2015-2016
Maintenance	\$24,000	\$25,000	\$25,000
TELE	\$65,000	\$65,000	\$65,000
Global Campus		\$19,000	\$27,000 (Carryover)
B. <u>Faculty and staff (current):</u>			
Tenured		10	10 (\$810,900)
Tenure-track		2	2 (\$131,000)
Non-Tenure Track Assistant Professors		0	4 (\$212,400)
Non-Tenure Track Instructors		5	5 (\$183,800)
Non-Tenure Track Lecturers		2	15 (\$210,000)
Teaching Assistants		23	24 (\$264,000)
Staff		2	2 (\$54,000)
C. <u>SSCH</u>			
Undergraduate		8,517	11,293
Graduate		240	290
D. <u>Majors and Graduate Students</u>			
COMMBA		306	509
COMMMA		29	31
E. <u>Research Productivity (3 year Total)</u>			
Peer-reviewed Publications			150+
External Grants			\$193,549
Internal Awards/Support			\$60,000

## II. Departmental Strengths

- A. Long-term Interdisciplinary Commitments
1. Successful collaborators on research grant initiatives with colleagues across campus; and
  2. Leaders in nine on-campus programs including the Director of Gender Studies, the Director of the Interdisciplinary Studies Program, and participants in African and African American Studies, Latin American Studies, Sustainability, Environmental Dynamics, Public Policy, Comparative Literature, and Indigenous Studies.
- B. Research (2012-2015)
1. Faculty have produced over 150 peer-reviewed publications appearing in top tier journals;

2. *Faculty managed over \$193,549 in external grants and \$60,000 in internal awards; and*
  3. *The Center for Communication and Media Research has facilitated collaborative research across universities and departments within the University.*
- C. Outreach (Current)
1. Coordinated Nobel Peace Laureate, Dr. Rigoberta Menchu's participation in the annual Trail of Tears memorial walk on Indigenous People's day;
  2. Initiated the first joint partnership of Crystal Bridges Museum of American Arts, the Arkansas Philharmonic Orchestra, and the University of Arkansas; and
  3. Launched the podcast, "Lean Back: Critical Feminist Conversations."
- D. Graduate Program
1. Robust 33 hour degree with new focus on civic engagement;
  2. Students well placed after graduation (competitive position in the public and private sectors and regular admittance into top Ph.D., programs); and
  3. Second largest producer of M.A. graduates in Fulbright College.
- E. Undergraduate Program
1. Fifty-four percent (54%) enrollment growth in majors and 85% growth in minors from fall 2011 to fall 2015;
  2. Our faculty offer undergraduate students opportunities for research collaboration, successful applications for SURF fellowships, and independent study projects;
  3. We are one of the few departments in the University with courses in the University Core spanning three general education requirements including the Fine Arts (COMM 1003), Humanities (COMM 1233), and Social Sciences (COMM 1023); and
  4. Our COMM 1313 course (Public Speaking) reaches well over 3,300 students each academic year.

### III. **Priorities and directions for the next five years**

- A. University Core Course Refinements
1. Significantly increase number of seats in COMM 1023 (Social Science Core) and COMM 1233 (Humanities Core); and
  2. Expanded offerings will create teaching assistant opportunities and funding for graduate students; and
- B. Increase Diversity in Students, Faculty and Staff
1. Significantly increase the Department's "diversity" efforts in the areas of students, faculty, and staff;
  2. Using funds from Global Campus, begin an image-campaign to raise the Department's desired profile to be a more diverse unit; and
  3. Create a departmental committee on diversity to increase curriculum offerings and initiate outreach activities by bringing in speakers in targeted areas.

C: Outreach and Community Engagement

1. Using Global Campus monies coupled with the Center for Communication and Media Research, continue to expand our speaker series in community engagement and outreach by bring in scholars who can explain their research in scholarly and applied settings; and
2. Using our research lab in Kimpel 405A, present a number of workshops targeting physiological and audience-centered research investigations.

D. Undergraduate and Graduate Student Research Encouragement

1. Using the opportunities and leverage in III. C. (previous item), offer workshops in our research Lab designed to engage undergraduate and graduate student research efforts;
2. Increase the opportunities for research mentoring between faculty and students by offering small sections of some of our specialized courses where students can experience theoretical and applied research first-hand.

E. Support efforts in our online course offerings to reach "Quality Matters" Standards

1. Engaging departmental faculty who teach online courses to seek the Quality Matters designation; and
2. To work with Global Campus instructional designers to improve the delivery and content of our online (and face-to-face) courses.

#### **IV. Resources and University Commitments Needed to Become Stronger**

- A. Increased Graduate Assistant Stipends—the current M.A. stipends are well below our peer institutions both nation-wide and in the region. With more and more directional institutions choosing to offer graduate degrees in communication, we are faced with a highly competitive marketplace at the level of peer-institutions who offer between 150-200% higher graduate assistant stipends (e.g., Kansas, Kentucky, Missouri, Tennessee, Texas, and A&M).
- B. Increased Departmental Maintenance Budget—the Department's current operating budget has increased by \$1,000 since 2005 and is exhausted by the beginning of February in most years.
- C. Lack of Space for faculty and students—beginning fall 2016, the department will no longer be able to offer space in Kimpel Hall to our teaching assistants and part-time lecturers. This space is crucial to our sense of community as well as the efficient day-to-day operations of the department.
- D. Global Campus Funding Stability—The Department relies heavily on funds shared by Global Campus based on course enrollments and engagement of online students. Changes in Global Campus funding policies affect our short and long-term efforts and financial stability.

## English Department Report to Chancellor Steinmetz

**Students** 120 graduate students: 45 PhD, 45 MFA, 30 MA, 9 Certificate  
356 BA majors  
33% male 67% female  
83% Caucasian (We're working on it)  
8,300 in non-major core courses

**Faculty** 27 T&TT faculty (including 4 joint appointments)  
10 of these are Diversity Faculty  
18 NTT faculty (including 1 joint appointment)  
3 of the NTT faculty are from underrepresented ethnicities  
60 national awards won by present T&TT faculty  
Average publication per year for 10 years: 5.4 books + 25 peer-reviewed shorter pieces

### Doctoral Program Ranking, 2006-7 (the NRC's latest rankings)

41<sup>st</sup> -79<sup>th</sup> of 119 English PhD programs for faculty research activity. Below us are, e.g., Maryland, Kansas, Rice, Brown, Illinois, Colorado, UC Davis, and Ohio State.  
55<sup>th</sup> for national awards per faculty member.  
68<sup>th</sup>-100<sup>th</sup> overall (based partly on reputation). Since the NRC report, we have diversified faculty, improved graduation rates, and revised our mentoring. We need to work on PR.  
Our doctoral program has a tenure-track placement rate of 47%. The remaining 49-53% obtain Alt-Ac positions, Post-docs, or other teaching jobs.  
Our PhD students win large numbers of Hudson Doctoral Fellowships, Fulbright Dissertation Fellowships, and African American Studies Fellowships.

### MFA Program Ranking, 2012 (*Poets and Writers'* latest rankings)

35<sup>th</sup> out of 201 programs. 6<sup>th</sup> for job placement. One of the "Top 5 Most Innovative" MFA programs (*Atlantic Monthly*).  
Since hiring 3 MFA faculty of color in 2014, we have seen a marked uptick in applications from minority students. However, recruiting and retaining MFA students from underrepresented backgrounds remains one of our greatest challenges.  
Our Literary Translation degree track, a rarity nationwide, focuses on world literature.  
In 2015 we established the Canto Mundo Poetry Series book prize for Latina/Latino writers. Winning books will be published by the U of A Press.  
*The Arkansas International* is our new professional literary journal. The international focus of the magazine will raise our international profile and cast a wider net for recruitment.  
Our Distinguished Readers Series is in its 10<sup>th</sup> year. Recently we have featured writers from the Middle East and nationally prominent writers of color.

### Budget

Maintenance	\$66,500
Diversity Incentive	\$28,500
TELE	\$55,000
Global Campus	\$ 9,000

We have donated a major database to the library, installed security cameras in Kimpel's public hallways, and helped sponsor University visitors. We plan to remodel our TA lab to make the crowded space more efficient.

### **Interdisciplinary Research**

Our research engages with Astronomy, Petroleum Geology, Medicine, Digital Humanities, Archival Studies, Social Work, Political Science and Public Policy, feminist Muslim issues, Indigenous Studies, Southern Studies, African American Studies, Latino/Latina Studies, European Studies, Medieval and Renaissance Studies, Religious Studies, Psychology, Philosophy, History, Sustainability, Linguistics, Rhetoric, Theatre, the Visual Arts, Social Media, Music, World Languages, American Studies, Economics, and Gender Studies.

### **Interdisciplinary Academic Programs We Direct**

- Fulbright Honors Program
- Indigenous Studies (INDS)
- Online Graduate Certificate in Technical Writing and Public Rhetorics
- American Studies (AMST)
- Comparative Literature (CLCS)
- Medieval and Renaissance Studies (MRST)
- Two Study Abroad Programs

### **Community Outreach and Service-Learning Programs We Direct**

**Writers in the Schools (WITS):** our MFA students visit schools and juvenile detention centers throughout Arkansas to conduct two-day creative writing workshops for underfunded school districts. Creative writing can improve dropout rates.

**Brown Chair in English Literacy:** recognized by the National Humanities Alliance as one of the most important programs for integrating humanities into communities. Students Involved in Sustaining Their Arkansas (SISTA) pairs high school juniors throughout Arkansas with U of A undergraduates to write proposals for projects that will revitalize the quality of life and economic viability of their home towns. The Arkansas Studio Project (ASP) trains schoolteachers to use the arts to deepen curricular learning. 80% of the students qualify for lunch subsidies.

**Medical Humanities Colloquium:** a service-learning course for UARK premedical students, who shadow physicians and carry out medical service work. Reading literature in combination with real-world experiences cultivates more compassionate, culturally competent, and community-responsive physicians.

**Health Coaches Program:** a collaborative effort between Fulbright College, the College of Education and Health Professions, and Washington Regional Medical Center. Pre-med students are trained to work with a healthcare team to improve outcomes for at-risk patients. The program won the Award for Outstanding Contributions to Service Learning.

**Northwest Arkansas Latino Literacy Research Project:** distinguishes among various Latino/Latina groups in Northwest Arkansas to document community-specific learning practices that can influence how educators serve these growing populations.

**Global Community Development in Vietnam:** our students collaborate with Can Tho University and a community in the MeKong Delta on projects and research exchanges.

**Tibetan Cultural Institute:** offers two weekly classes for the public. The Tibetans in Exile Today Program (TEXT) has been featured on ESPNU as one of the premier programs for student-faculty collaboration in the SEC. It trains students to interview Tibetans for a cultural record, and it supplies tutors for nine refugee camps in India.

**Center for Arkansas and Regional Studies:** curates many Arkansas museum exhibits.

**Online professional and technical writing reference site:** under construction.

**Continuing education coursework with Global Campus,** e.g. Writing and Ethics for Realtors.

**Humanities Community Outreach version of our core Intro to Literature course:** students will work with local non-profits and then read and write analytically about that experience.

**Pilot of Civic Engagement version of Composition I:** focuses on community ethnographies.

## Challenges

- Undergraduate Retention:** our first-year undergraduate retention rate is only 79.3%, and our 6-year graduation rate is a low 57.9%. Three of our NTT faculty currently handle undergraduate advising. One TT faculty member works with the Office of Graduation and Retention to develop strategies for improving retention. Another TT faculty member offers Alt-Ac and professionalization training, serves as Faculty-in-Residence in the dorms, and is developing a Living-and-Learning Community for English Majors and Minors.
- TA Salaries and Teaching Load:** not competitive.
- TA Consultation Space:** 19 Duncan is mostly inaccessible to the disabled and has mold.
- Classified Staff Salaries:** inhumane.

## Plans and Opportunities

- Our newly renovated MA:** highlights diversity, interdisciplinarity, and Alt-Ac training. Will be in this Fall's catalogue.
- NEH Next Generation Humanities PhD Planning Grant:** we have applied, along with the History Department. We want to revamp our PhD programs and to cultivate strategic partnerships with nearby nonprofits, corporations, and foundations that will lead to training and employment opportunities for our PhD graduates.
- Interdisciplinary Group in Middle Modernity:** we would like to build on our college's strengths in this historical period (1660–1900), a time when print culture, class structures, economics, the sciences, and empire underwent massive changes. Such a group would be productive of faculty research and attractive to graduate students, especially those who want to study the rise of the transatlantic slave trade and the abolition of slavery. Our next two items dovetail with this one.
- Digital Humanities:** in order to train our students effectively, we would like to add to our current strengths in this area. This field pairs well with Middle Modernity, a prime time for digital archives that are already in our library. Growing numbers of students are interested.
- Coordinated interdepartmental use of TELE to grow the Library's Special Collections**—for example, in the History of Science. An interdisciplinary teaching collection of rare items would beautifully support courses and research in Digital Humanities. More than 100 students from the English Department alone already use the existing—and growing—Special Collections annually.
- Proposed Minor in Rhetoric and Writing Studies:** at other institutions, such an undergraduate minor has attracted large numbers of students and has boosted both graduation rates and job placement. We already have a perfect job-placement record for our doctoral students in this area. We would like to meet the growing graduate and undergraduate demand by combining two of our existing instructor positions to fund an additional TT hire in Rhetoric and Composition.
- Proposed set of core classes under the rubric "Literary Intersections,"** with titles such as "Leadership and Society," "War and Peace," and "Sacred Journeys." Such a set of classes would expose students across the University to better models of writing and critical thinking.
- Opportunity for our PhD students to teach one course in their own field:** we would like to free up a few of our Composition I and II sections so as to give some of our best doctoral student teachers the opportunity to teach one semester of literature each. This would improve our already strong placement rate.

**Department of Geosciences**

**Division of Geography**

**Division of Geology**

**Primary Participants in:**

**Environmental Dynamics (ENDY) (Interdisciplinary)**

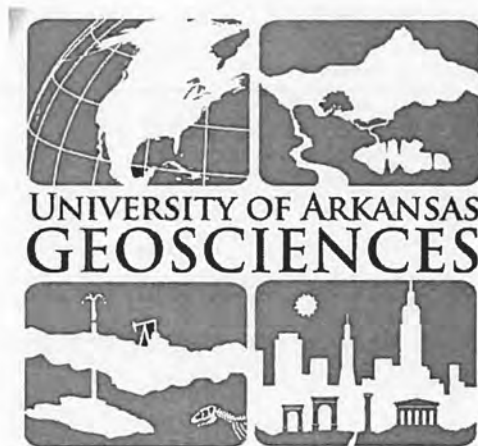
**Space and Planetary Sciences (SPAC) (Interdisciplinary)**

**Middle East Studies (MEST) (Interdisciplinary)**

**Summary Report for Chancellor Steinmetz**



UNIVERSITY OF  
ARKANSAS



**May 25, 2016**



## I. Geosciences Faculty:

- 23 total TT-T faculty (11 Geography & 12 Geology)
  - 21 active TT-T faculty Spring 2016
    - ✓ 2 TT faculty will join in fall 2016 (Lamb and Holland)
  - 1 Distinguished Prof; 2 University Prof; 8 Prof; 3 Associate Prof; 9 Assistant Prof
    - ✓ 2 included above are also Endowed Chair's
      - ❖ Leica Geosystems Endowed Chair – Fred Limp
      - ❖ Maurice F. Storm Endowed Chair in Petroleum Geology – Chris Liner
- 1 faculty shared appointment with U.S. Geological Survey (Hays)
  - paid directly by USGS; UA support via continuing contract with USGS
- 3.5 instructors (2.5 geology and 1 geography)

Excellent junior faculty hires engaged and ready to move the department, college and university forward, evidenced in-part by receipt of NSF Career Awards and other recognition:

- Assistant Professor Gregory Dumond (NSF Early Career Investigator Award – Structural Geology and Metamorphic Petrology)
- Assistant Professor Matthew Covington (Cave Formation - Limestone and Ice)
- Assistant Professor John Shaw (DOE Early Faculty Career Award - sedimentology/stratigraphy – river delta dynamics)
- Assistant Professor Celina Suarez (American Geological Institute Diversity Award - isotope geochemistry/paleoclimate/paleontology)
- Assistant Professor Song Feng (drought modeling – severe weather)

Nationally/internationally recognized research faculty

- David Stahle, Distinguished Professor (Dendrochronology related to Climate/Global Change)
- Thomas Paradise, University Professor (Stone weathering Petra , Jordan) – Director MEST
- Christopher Liner, Maurice F. Storm Endowed Chair in Petroleum Geology (Geophysics/Petroleum Geology)
- Fred Limp, University Professor and Leica Geosystems Endowed Chair (Geoinformatics)
- Jackson Cothren, Associate Professor (Geoinformatics) - Director CAST and Co-Director HPCC

## Geosciences Staff:

- 1 Admin II (Milligan)
- 1 Admin Support Supervisor (Center)
- 0.25 Program Coordinator (Kvamme)
  - Shared with ENDY; housed in Geosciences
    - ✓ *Primary duty is with ENDY*
- Seasonal work study

## II. Summary Metrics

### Budget:

- Salary and Fringe Non-Classified: \$2,399,604
- Salary and Fringe Classified: \$88,466
- Salary GA: \$310,000
- Maintenance: \$52,000 (stuck in the 1980's)
- TELE Funds: \$54,000 (substitute for maintenance resulting from lack of maintenance increase)
- RIF: \$20,000/year
- Global Campus Return: \$12,000/year
- Scholarship awards on an annual basis \$50,000-\$75,000/year

### Research Funds:

- New Awards 2014-2015:
  - \$1,069,000 Geosciences

- \$2,628,156 CAST Directly Tied To Geosciences Faculty
- Total = \$3,697,156
- Total value of active and ongoing grants in 2014-2015:
  - \$4,655,963; This number includes CAST grants attributed to faculty in Geosciences

#### **Research Foci and Faculty in Various Clusters:**

- Geoinformatics, Remote Sensing, Cartography
  - Aly, Cothren, Limp, Paradise, Shi, Tullis
- Geochemistry/Hydrochemistry/Contaminant Hydrology
  - Covington, Davis, Hays, Potra, Suarez
- Water Resources/Hydrogeology – ranked in top 100 hydrogeology programs in U.S.
  - Covington/Davis/Hays
- Dendrochronology/Climate Change/Climate Dynamics/ Drought Modeling/Paleoclimate
  - Feng, Hehr, Stahle, Suarez
- Petroleum Geology/Basin Analysis/Geophysics/Structural Geology /Neotectonics
  - Boss, Dumond, Guccione, Lamb, Liner, Shaw, Zachry
- World Regional Geography
  - Davidson, Dixon, Paradise, Holland
- Geomorphology
  - Covington, Dixon, Guccione, Paradise
- Sustainability
  - Boss, Davis

#### **Student Numbers:**

- Geology BS – 99; 10 honors
- Geography BA – 47; 8 honors
- Earth Science BS - 19
- Geology MS – 50; 1 Fulbright; 1 NSF MS
- Geography MS – 25
- Geosciences PHD – 15 (first student accepted in 2013): DDF – 3; DAF – 3; NSF Doctoral - 1
- Environmental Dynamics PhD (ENDY) - 17 supervised by Geosciences Faculty; DAF – 4; NSF Doctoral 1
- Space and Planetary Sciences (SPAC) MS and PhD - 2 supervised by Geosciences Faculty
- Middle East Studies (MEST) supported MS and PhD – 12 supervised by Geosciences Faculty
- Geospatial Certificate – on-line; undergraduate (2014) first certificate for campus; graduate (2016)

#### **Credit hours taught (AY 12-13): Data From Departmental 7-Year Review:**

- Undergraduate (Fall 2012, Spring 2013) = 22,348
- Graduate (Fall 2012, Spring, 2013) = 933

#### **III. Strengths**

- Field based/experiential learning at all student levels
  - Spring break field trip various U.S. locations
  - 6-week geology field course in Montana
- Collegial faculty and students
- Faculty invested in research and teaching across departmental and college boundaries
  - Sociology, European Studies, International Studies, Chemistry, Biological and Agricultural Engineering, Sustainability, Chemical Engineering, Biology, Anthropology, and Crops, Soils and Environmental Sciences, among others
- Outstanding alumni support
  - Geosciences External Advisory Board – formed in 2006

- ✓ champions for industry partnerships, engagement with national laboratories, and overall financial support
  - ✓ Increased endowed accounts by over \$3.5 m since 2008 plus over \$15 m in software and data donations
- Strong industry and agency ties
  - Devon Energy, Southwestern Energy, EOG, FTN Geotechnical, Oak Ridge National Lab, U. S. Geological Survey, Arkansas Geologic Commission
- Outstanding classroom instruction as recognized by faculty awards for teaching and mentoring
  - Davidson, Feng, Paradise, Zachry
- Quality students
  - Sought by industry via on-campus interviews SWN, EOG, Devon
  - Extensive placement in TT academic positions
    - ✓ Examples Stephanie Shepherd TT at Auburn
- ✓ University Core Facility Partners
  - University of Arkansas NanoTechnology Laboratories (NANO)
    - ✓ Faculty routinely utilize the XRD; SEM; SEM-EDX
  - University Arkansas Stable Isotope Laboratory (UASIL)
  - Arkansas Water Resources Center Water Quality Laboratory
    - ✓ Faculty routinely utilize this facility for water analyses
  - University of Arkansas Tree Ring Laboratory
    - ✓ Supports long-term Federally funded climate/global change research based on analysis of tree rings
  - University of Arkansas Mass Spectrometry
  - Center For Advanced Spatial Technologies (CAST)
    - ✓ Six Geosciences faculty directly linked with CAST

### III. Untapped Resources and Opportunities (Next Five Years)

- Near term (next 5 years) faculty retirements:
  - Geology: Zachry and Guccione
    - ✓ strengthen petroleum, basin analysis, geophysics and geomorphology groups
    - ✓ continue strong ties with industry partners
  - Geography: Hehr and Dixon
    - ✓ strengthen climate dynamics and water resources groups internally
    - ✓ broaden ties with climate change efforts in Biology, Crop, Soils and Environmental Sciences and Biological and Agricultural Engineering
  - Geography: Limp
    - ✓ strengthen geoinformatics group internally
    - ✓ broaden ties with university-wide data analytics efforts

### IV. Challenges and Issues:

- Space
  - limited grad student housing; no undergrad study space
  - maxed out on faculty; inadequate post-doc/visiting scientist space
  - split between two buildings (JBHT and GEAR)
  - laboratory facilities split between several buildings across entire campus (JBHT, GEAR, MLKB, FERR)
- Research infrastructure limited and not well supported
  - no plans for replacement instrumentation
  - research tech support very limited to non-existent
- Low grad stipends – non-competitive without DDF and DAF at PhD level; just non-competitive at the MS level
- 2-2 teaching load – 7-year review recommends 2-1 load

## A. Brogi

### Department of History

The Department of History currently houses 3 Distinguished Professors, Fulbright College's only female University Professor, a Former Dean of Fulbright College, Vice Chancellor for Diversity and Community, Associate Dean of Fulbright College, Dean of the Honors College. All faculty are involved in Interdisciplinary Studies.

#### I. Summary Metrics

##### ***Budget:***

<b><i>Accounts</i></b>	<b><i>FY '15 Rollover</i></b>	<b><i>FY '16 Budget</i></b>
HIST—Instructional Support (Maint)	\$ 2,606	\$ 40,000
HIST—TELE	1,892	35,000
Global Campus—HIST	23,598*	43,500
RIF—HIST	17,073**	7,775

\*Also used for travel needs for graduate students and faculty, and faculty research.

\*\*Also used to supplement development for faculty and staff.

##### ***Faculty and Staff (current):***

	<b><i>FY '16</i></b>
Staff (includes 3 HIST and 1 AHQ)	4
Faculty (tenure-track and tenured)	29
Faculty (non tenure-track – visiting assistant professor)	1
Instructors (100%, 4/4)	6
Lecturers (50%, 2/2)	11
GAs (includes 18 HIST, 2 AAST, 1 AHQ and 3 UP)	24

##### ***Credit Hours Taught:***

	<b><i>AY '15</i></b>
Undergraduate	21,664
Graduate	833

##### ***Majors and Graduate Students (current):***

	<b><i>AY '15</i></b>
HIST Majors	318
HIST Minors	82
HIST Graduate Students	
Ph.D.	52
M.A.	30

##### ***Scholarships and Awards:***

	<b><i>FY '16</i></b>
Scholarships and Awards for Students	\$60,037
Awards for Faculty	\$150,000

##### ***Research Output***

	<b><i>AY '15</i></b>
Books:	6
Peer-Reviewed Papers/Chapters:	40
Non-Peer-Reviewed Works:	23
Presentations (invited and contributed):	60

##### ***Faculty Awards***

	<b><i>AY '15</i></b>
	16

## II. Strengths

### a. Overall departmental strengths

*Excellence in Research Teaching and Service:* The department has truly excelled in the evaluation metric of 40/40/20.

- **Research:** Departmental historians maintain a national/international reputation by presenting their research across the nation and globe. Their efforts have resulted in departmental faculty receiving some of the most prestigious fellowships in the country. Among them are:
  - Pulitzer Prize finalists (2 recipients)
  - The National Endowments for the Humanities Awards (13 recipients)
  - The National Humanities Center Award
  - The Alexander von Humboldt Foundation Fellowship
  - Carter G. Woodson Institute for African American and African Studies
  - The Schomburg Center for Research and Study of Black Culture (2 recipients)
  - Mellon Foundation (2 recipients)
  - Fulbright College's Mater Research Award (5 recipients in last 10 years)
- **Teaching:** almost fifty percent of the current faculty has won the Fulbright Master Teacher Award, 10 have been inducted into the teaching academy, and 7 have won university-wide teaching awards--two of which are the Dr. John and Lois Imhoff Award for Outstanding Teaching and the Nadine Baum Teaching Award.
- **Service:** History faculty is represented on almost every major service committee on campus. Our faculty serves in the Faculty Senate, the Graduate Council, the Teaching Faculty Center, and Fulbright College Cabinet. In sum, the department prides itself on holding very high research standards but also maintaining a high standard in teaching and service.

### b. Graduate Program

The Department of History is currently tied as the second largest Ph.D. program on campus, with 52 students within its ranks. Our departmental reputation attracts students from across the country and the globe.

- We have the third best placement rate nationally for all history programs.
- 93 percent of all graduates within the last decade have found full-time employment, with 82 percent of them in tenure-track positions at institutions such as Iowa State, Kansas State, Oklahoma State, Minnesota State, Coastal Carolina, Georgia Southern, and the University of Central Arkansas.

### c. Undergraduate Program

The Department of History currently has 318 majors and 82 minors, 15 percent are enrolled in the Honors program, over 10 percent have studied abroad.

- Our undergraduate program provides an essential service to the Fulbright core curriculum. 6,461 students were enrolled in History courses in the AY '15.
- Our LinkedIn alumni page and our collaboration with Fulbright's Humanities@Work initiative has produce a list of over 400 History graduates from the past five years who have successfully gone into profession careers,

or entered Graduate Schools, Law Schools, Medical Schools, Dental Schools, proving the versatility of the history degree.

#### **d. Interdisciplinarity**

- History faculty pride themselves on their interdisciplinary research, teaching, and service.
- Faculty currently serve in the African and African American Studies (AAST), Latin and Latin American Studies (LAST), The King Fahad Center of Middle Eastern Studies (MEST), Religious Studies, International Relations, and European Studies.
- History faculty have served or are currently serving as directors of African and African American Studies, Middle Eastern Studies and Religious Studies.
- Faculty also offer teaching support to the above programs by regularly teaching cross listed and introductory courses.

### **III. Priorities and Directions for the Next Five Years**

- **Continued Diversification of faculty, graduate program and curriculum:** Although the department outpaces national averages concerning department diversity, we will continue to seek to diversify our faculty.
  - More important, we will strive to diversify our graduate program, which in turn will aid in the effort to diversify the profession.
  - At present the department teaches courses that make up major components of the core; however, HIST understands the importance of continuing to diversifying our course offering. In the future, we seek to expand our offering in the areas of East Asia, the Middle East, and Europe
- **Director of Undergraduate Studies:** The department, in conjunction with the dean's office, seeks to hard fund the position of director of undergraduate studies. The aforementioned position is critical to addressing issues of departmental retention.
- **Better Support Faculty Research:** In order to continue to maintain the department's national and international reputation, the department must have access to better research funding with special attention given to those at the junior level.

### **IV. Resources and university commitments needed to become stronger**

- **Library Upgrade:** Attention must be given to the library that will allow for upgrades in the current collections and electronic periodicals. Faculty members often struggle to gain access to collections and periodicals that colleagues at peer institutions have readily available in their libraries.
- **Space:** We are well aware that space can often be the most highly sought after thing on campus as well as being highly political, but HIST's needs have become critical. Currently, we have no additional space to house incoming tenure track faculty.
- **Graduate Student Funding:** For repeated years, HIST has lost good graduate students to other peer institutions due to non-competitive funding. In order to compete on a national level, attention must be given to graduate funding.

**Report to Chancellor Steinmetz  
Lemke Department of Journalism  
March 4, 2016**

**Mission Statement:** "The Walter J. Lemke Department of Journalism at the University of Arkansas prepares students to be innovative and ethical media professionals and scholars in the digital world. The faculty is engaged in scholarly and professional pursuits, bringing fresh approaches to challenges faced by media. Our students gain conceptual knowledge and practical skills from a curriculum that emphasizes critical thinking and mastery of state-of-the-art technology." Adopted May 1, 2015

**Majors:** 730; Graduate Students: 19

**Faculty:** Professors: 4; Associate Professors: 5; Assistant Professors: 2; Clinical Assistant; Professors: 3; Instructors: 8; Adjunct: 6; Graduate Assistants: 6

**Budget:** Maintenance: \$25,000; Telefunds: \$85,000; Ethics Center: \$15,000

**Creative and Traditional Scholarship :** Creative Scholarship: Our documentary professors produce major documentaries, winning juried national competitions such as the Broadcast Education Association and Emmy awards from the Mid America Chapter of the National Academy of Television Arts and Sciences. These documentaries air on national venues like the MLB Network and PBS and are presented at national conferences like the upcoming Cooperstown Symposium on Baseball and American Culture at the National Baseball Hall of Fame. These faculty members have consistently obtained grants from a variety of sources to produce their documentaries. Our print professors publish news and feature stories in major national publications including The New York Times, National Geographic and U.S. News & World Report. One is working on a book about Boys Town. Another has a book contract on Arkansas photographs from the depression era for the University of Arkansas Press. Another is a TV columnist and provides commentary and book reviews for several websites.

Traditional Scholarship: The faculty publishes in national journals, and publishes books and textbooks. One professor won a regional top paper award and is publishing a book and article on anonymous sources as well as on foreign policy issues. The Ethics Center director won an honorable mention for a national top paper award and a regional top paper award, examining the hero mythology of journalistic practice and ethical issues in his research.

Ad/PR faculty conducts policy research including advertising to children, political consumerism and crisis communication. Ad/PR faculty has won outstanding research paper and journal awards at several national and international conferences. In conclusion, we need to build the breadth and depth of our traditional research to add experts in a variety of methodological and theoretical areas in all branches of journalism and in ethics.

**Sequences:** The Ad/PR sequence stresses strategic advertising and public relations planning in all courses. Students are trained in how to develop strategic AD/PR campaigns, with strong emphasis on research-based strategies and tactics. Graduates work in advertising and PR agencies, corporations and non-profit agencies.

The Broadcast Journalism program is designed to prepare students for careers in radio and television news and production. In all of our courses, students get real world experience producing stories for KXUA radio and UATV campus television. Our graduates work at stations in NWA, Little Rock, Tulsa, OKC, Memphis, Nashville, KC, Orlando, ESPN, NPR and other outlets across the country. Our graduates serve as reporters, anchors, videographer, editors and news producers.

The News/Editorial sequence is undertaking a dual mission:

- 1) The faculty reviewed results of an assessment and concluded that our introductory courses need strengthening in the areas of grammar and sentence structure. Those changes have been discussed, designed and are being implemented.
- 2) The News/Ed faculty also agrees that mining data, particularly by using Microsoft Excel to organize information, is a skill that our students must have. We're working of identifying and recruiting faculty to teach that skill across sequences.

**MA Graduate Program:** The Journalism Master's program offers advanced study in three areas: News, Documentary Film and Strategic Communication. Our program includes a 5-year MA plan designed for high-achieving undergraduates who can take a limited amount of graduate coursework in their senior year and complete the master's in a fifth year after receiving their BA degree. Currently, we have 19 active graduate students, and we typically admit three to four students each year.

**KUAF, National Public Radio** is the university's NPR station--100,000 watts providing outreach and service to around 50,000 people a week from Ft. Smith to Bella Vista. The 10-person full time staff are all U of A graduates and the 5 person news department all have journalism degrees from the U of A and produce a daily hour-long news magazine "Ozarks at Large."

The Lemke Journalism Project is our department's main minority outreach activity. Tyson sponsors this 15-year-old high school multicultural reporting program and UA colleagues volunteer six Saturdays to work with students who are bused to campus from across the region. This year, we've expanded our digital and broadcast component, and had CNN Worldwide executive Ramon Escobar on campus to train students. He also provided a live workshop on network news production after the death of Justice Scalia. Many of the university students who took part had met Justice Scalia in Washington during our Covering the Courts class last May. The Lemke high school students are showing strong interest in difficult topics like the suicides of young Hispanic girls. We have 30 students this year, and five have told us they want to enroll in our department in the fall.

**Scholarships for Students:** The journalism department is fortunate to have enough endowed scholarships to guarantee financial aid to our most deserving students. This



year, seventy-six journalism students applied for departmental scholarships. Sixty-six of those applicants will receive journalism scholarships next year, for a total of over \$150,000. The scholarships will be presented at the department's annual scholarship reception, Wednesday, April 6, at 3 p.m.

**Nationally Competitive Students:** The Lemke Journalism Department received the University of Arkansas Office of Nationally Competitive Gold Medal Award for its work with students who achieve success at national and international competitions. Broadcast students received a regional Mid-America Emmy for their newscast about the Vilonia Tornado, The Arkansas Traveler was named best non-daily newspaper by the Society of Professional Journalists and a team of students from the Advertising Campaigns class received a second place Silver Medal at the Collegiate Echo Challenge. These are three of 55 awards presented to our students last year.

**Center for Ethics in Journalism:** Founded in 2013 and located in Kimpel 202, the Center for Ethics in Journalism works to improve the study and practice of journalistic principles under the belief that the best journalism starts with an emphasis on the ethical gathering and distributing of information. Each fall, the center features a visiting professor to assist with study in the classroom, improve professional standards and public awareness through outreach events like the media workshop or public lecture.

**Online Education:** The online minor, begun in Fall 2015, has attracted 19 students. Development of courses will be completed this summer. The department has a total of seven online courses and will add three more by Spring 2017.

**Student Media:** Arkansas Traveler newspaper, UATV campus television, KXUA radio, Razorback Yearbook, The Hill magazine. Student media is funded by Student Affairs, but most students are journalism majors. A new student media center will soon break ground on second floor of Kimpel Hall, with lead funding by a U of A Journalism alum.

**Student Organizations:** PRSSA, Ad Club, Society of Professional Journalists

**School of Journalism and Strategic Media:** The Walter J. Lemke Department of Journalism is proposing a name change, and is requesting endorsement for a plan to change its status from “department” to “school” within the Fulbright College of Arts and Sciences. On September 16, 2015, journalism faculty, by unanimous vote, approved a proposed name change to School of Journalism and Strategic Media, University of Arkansas. No requests for additional funding are included at this time.

We believe this new name accurately reflects our mission, current status and future direction. We have grown to become the largest accredited journalism “department” in the country. The other 49 largest accredited Journalism programs, by enrollment, are either “schools” or “colleges.”

**Department of Mathematical Sciences  
Summary Report for Chancellor Steinmetz**

**May 26, 2016**

**I. Strengths**

*Overview.*

The department has 27 tenure-track faculty, which includes 8 Assistant Professors, 8 Associate Professors, 10 full Professors and 1 Distinguished Professor. There are 35 non-tenure track faculty, including 30 instructors and 5 clinical faculty members. The department's strengths include both teaching and research.

The Department generates over 50,000 SSCH's per year. This amounts to approximately 15,000 students taking mathematics classes annually. However, the vast majority of the instruction occurs at the undergraduate level. We have about 150 majors, and graduate approximately 28 majors per year. Among our various graduate degree programs, we have 54 supported students, including students in the interdisciplinary STAN program.

*Research.* The department has strong research groups in Algebra, Geometry/Topology, Analysis, Statistics and Math Education. The faculty publish in a wide range of academic journals, including the most prestigious publications in the field. Many of the faculty have international reputations in their respective areas. In FY 2015, the department was awarded \$205K in grants; in FY 2014, the figure was \$346K.

*Teaching.* The faculty teach a very broad range of courses, include a large number of service courses. The department has 6 Fulbright College Master Teachers. According to the Delaware data, the department has the second highest ratio of students/TT-faculty in Fulbright College, and twice the regional and national VHR norms.

*Interdisciplinary.* Numerous faculty are engaged in interdisciplinary collaborations across the campus. Several of our faculty are heavily involved, and responsible for the development of the STAN program; Dr. Arnold is the STAN director.

*Outreach.* For forty years we have organized the Arkansas Spring Lecture Series in the Mathematical Sciences, which brings the top researchers in a field of the mathematical sciences to the University, and connects with the greater campus community. In recent years, we have run an annual event, called Celebration of Mind, which brings K-12 students from across the region to our campus to challenge them, and inspire an interest in mathematics in the next generation. Several faculty members are involved in extensive outreach, and professional development, with the regional secondary teachers of mathematics.

## II. Weaknesses

*Graduate Program.* Our doctoral program is ranked lower than our regional aspirational peers.

*Undergraduate Program.* While our program has multiple tracks, it would be helpful to increase their flexibility for a variety of career paths. This is especially the case for the tracks in applied mathematics and statistics.

*Non-Tenure-track faculty.* The percentage of MASC faculty that are non-tenure-track is at the highest in Fulbright College; compared to other Math departments, this percentage is far above our peers and national averages for research universities.

## III. Priorities

*Strategic Hiring.* Our goal in hiring in the next five years is to build a research strength in applied mathematics. This will help further to develop even more interdisciplinary research links across the campus. It also will enable us to increase possible course offerings in these areas, and to help diversify the major.

*Diversity.* Our tenure track faculty needs to become more diverse, especially in terms of female faculty. The Lawrence Jesser Toll, Jr. Endowed Chair in Mathematical Sciences position shall help in this regard.

*Undergraduate Program.* We seek to make the mathematics program a more attractive major, as well as improve the ability of students in different colleges to pursue mathematics as a minor.

*Graduate Program.* We seek to recruit stronger graduate students into our graduate program, as well as increase the number of supported students. This may depend in part on an increase in the graduate assistantship stipend, to competitive levels.

*Career Preparation.* We shall continue to develop career pipelines for our undergraduate and graduate students. This means establishing deeper relationships with employers, cultivating internships, and positioning our students for a wider variety of career paths. This shall also improve our relationship with our alumni.

## Department of Music

43 Faculty Members: **21 Tenured/Tenure-Track**

1 University Professor  
9 Full Professors  
6 Associate Professors  
5 Assistant Professors

**22 Non Tenure-Track**

13 Instructors  
4 Lecturers  
3 Adjuncts  
2 Visiting Assistant Professors

Specialties: Performance, Music Theory, Music History, Music Education, Conducting and Composition

309 Enrolled Students:

Bachelor of Music – 165 Students  
Bachelor of Arts – 44 Students  
Music Minors – 58 Students  
Master of Music – 39 Students  
Certificate in Advanced Performance – 3 Students

Ensemble Participation includes 300+ non-music majors from all Colleges

**The Department of Music is fully accredited by the National Association of Schools of Music**

Department Events During 2015–16 Academic Year:

23 Large Ensemble Concerts  
99 Student Recitals  
62 Faculty and Guest Artist Recitals  
61 Sporting Events (Razorback Marching Band and Hogwild Band)

The music department provides music for the University Commencement, Fulbright College Commencement, several other colleges' commencements as well as many special events for the university.

## Budgets

	Music		Band	
Operating	Maintenance	\$65,000	Bowl Travel	\$350,000
	TELE	\$80,000		(as needed)
Concert Support		\$68,000		
Personnel	Teaching	\$2,254,168	Instructors	\$126,375
	Support	\$254,219	5 GA's	\$74,250
Scholarship	Institutional	\$373,000	Institutional	\$618,000
	Private	\$40,000	Private	\$180,000

Endowment for the music unit (which includes band) is \$9,147,556.

## Strengths

### Overall Department

- Talented, dedicated and nurturing faculty, appreciated by the students for their availability.
- Diverse faculty with an increasing diversity in our student population and curricular offerings.
- Faulkner Performing Arts Center provides an extraordinary on-campus space for concerts and supports our connection to the university.
- Community outreach, especially with the recent inclusion of the Community Music School into the department.
- An All-Steinway School program that provides quality keyboard instruments to the students.
- Scholarship support is among the best in the nation. We award 630 individual awards between \$500 and \$7,000; the average award is \$1,800.

## Ensembles

- *Participation:* Over 2% of the 27,000 students on campus participate in an ensemble each year. Students from all majors and schools participate in our ensembles. Schola Cantorum's 44 singers represent more than 20 majors.
- *Diversity:* Our ensembles range from Latin-American Ensemble to Jazz Big Bands, from Marching Band to Schola Cantorum and Inspirational Chorale. Repertoire includes music from different cultures, different styles, in different languages, and from different time periods. New music is particularly emphasized. Our New Music Ensemble performs regularly, and our faculty has composed and arranged for our ensembles.
- *Performance Experiences:* Bands have performed at AT&T Stadium and Meyerson Symphony Center in Dallas. Top ensembles are invited to perform at national conferences. Schola Cantorum is on a tour of Belgium and Germany. In 2016 the opera theatre program staged its first full-length opera in many years, Strauss's *Die Fledermaus*.
- *Community:* Music students create strong bonds in their ensembles, with students from throughout campus. Ensembles perform at University events, including graduations and sporting events.
- *Recruitment:* Ensemble directors participate in over 60 events at high schools across the nation each year.
- *Scholarships:* The scholarship budget encourages ensemble participation.
- *Conducting:* The conducting program in the Master's degree is one of the strongest in the department. Faculty have garnered high-profile conducting opportunities. One example is Benjamin Lorenzo conducting the World Youth Wind Orchestra in Schladming, Austria this summer.

## Music Education

- *Research:* Two books were accepted for 2017 publication by Oxford University Press. Faculty made six international conference presentations over a one-year period. Two faculty members will present at the International Society for Music Education in Scotland in July.
- *Job Placement:* All of our graduates who have searched for jobs in music education have found a job in music education.
- *Popularity:* Music education is our most popular degree program, with 107 majors.

## Performance

- *Performance Recognition:* Ben Pierce has won every competition for tuba and euphonium on the international level. Several faculty members have CDs with glowing reviews.
- *Concerts:* Performances in 2015 included ten invited international performances. Seven faculty performed at refereed international conventions. The faculty presented 62 concerts on campus, including guest recitals. Faculty have performed solos with national orchestras including the Detroit Symphony and international orchestras such as the National Symphony of Thailand. They play a large role in orchestras in Northwest Arkansas and the Tulsa area.
- *Student Success:* Performance students have gone on to excellent graduate programs, including Julliard, The Eastman School of Music, The University of Michigan, Yale University, and The University of North Texas.
- *Faculty Ensembles:* Three resident chamber ensembles are *Lyrique Quintette* (woodwinds), *Boston Mountain Brassworks* (brass quintet) and the *Fulbright Trio* (strings).

## Music Theory, Music History and Composition

- *Research:* Three books were published in the last three years. *On Repeat: How Music Plays the Mind*, by Elizabeth Margulis won awards for best book in music theory, as well as outstanding book on music. Alan Gosman's two-volume book on Beethoven's "Eroica" Symphony was reviewed as a "crowning achievement." Three of the faculty in this area have given eight presentations in the first four months of 2016. Robert Mueller had compositions premiered last year at the Meyerson Center in Dallas and the opening of the Faulkner Center.
- *Teaching:* Music Theory revised its curriculum so that its introductory three courses are followed by courses of a student's choice, including 18<sup>th</sup> century counterpoint, jazz analysis, and music perception. The music history professors teach numerous large general education core courses, including Experiencing Music, World Music and Popular Music.
- *Graduate Program:* With the additional hires coming next year in music theory and music history, we anticipate developing strong graduate programs in these fields.

## Priorities and Directions

### Strategic Planning

- *Recruitment*
  1. This year the department focused on opportunities for performance studio growth and hired a new tenure-track professor in music education (which previously had a 79 to 1 ratio of majors to tenured/tenure-track professors). We are encouraged that these efforts are showing results already. The number of incoming freshmen has risen from 48 to an expected 80 students over the last year.
  2. *Arkansas Music Initiative*: The band is committing \$1.25 million in scholarship support over the next 5 years toward Arkansas students planning to study music at the university. Each year, 10 students will receive a \$5,000 scholarship, renewable up to five years.
  3. *Jazz Studies*: We are building a core of faculty for an emphasis in jazz studies, which is an area that prospective students have expressed interest.
- *Retention*: There are indications that retention is improving. We identified several factors in student retention and have adjusted accordingly. We have a good advising system in place, Theory II has become less of a stumbling block for students because theory professors are now able to teach the course, we have modified our aural perception classes and supervised the teaching much closer, and we have instituted a Living Learning Community (LLC) which will have a music major University Perspectives course and a tutoring program. Jann Knighten is our newly appointed Coordinator of Undergraduate Studies.
- *Bachelor of Music with Elective Studies in Business*: There are several opportunities to give our students more access to the business side of music. We have started by offering internships with the Community Music School and the Faulkner Performing Arts Center.
- *Music Perception* The Music Department houses one of the nation's leading Music Cognition Labs, devoted to using cognitive science to understand human music making. The creation of the new Center for Interdisciplinary Study of Science and the Arts provides a framework for new courses and research projects involving people from across campus.

### Outreach

- *Outreach*: The connection of the department to the community is a priority.
- *The Community Music School*: This is an asset for the department and the community. It is a critical part of our future.

### Challenges

- *Space*:
  1. *Offices*: There are no offices to assign to some newly hired faculty. Currently, some faculty share offices. Many faculty and graduate assistants have tiny offices designed to be practice rooms.
  2. *Practice Rooms*: There is a shortage of practice rooms (partly because they are being co-opted for offices). This forces students to practice late at night, which presents a safety issue.
  3. *Soundproofing*: Most rooms in the music building have poor soundproofing, to the point that it interferes with our class scheduling. Our current budget only allows for limited fixes to this problem.
- *Faulkner Performing Arts Center*: Further support would allow this new space to realize its full potential for our department and the entire university.
- *Dependence on Non-Tenure Track Faculty*:
  1. Just over half of our faculty is non-tenure track. Some areas have little or no grounding with tenure-track faculty. This creates issues for filling service roles and encouraging recruitment.
  2. The creation of a Clinical Professor rank would help recognize the contributions of our longest-serving, enormously committed non-tenure track faculty and improve our department stability.
- *Staff Salaries*: The salaries for classified staff, and particularly our Administrative Support Supervisors, do not reflect how valuable these people are to our complex department. Low staff salaries are one of the largest threats to the long-term health of our department.
- *Curriculum*: Several areas need to rethink their curriculums, as they have not changed for many years. We hope to build upon interdisciplinary successes, such as the addition of music perception to the core music theory courses.

## 1. Departmental Overview – Philosophy at the University of Arkansas

Contrary to widespread opinion, philosophy is not an isolated, “ivory tower” discipline:

- The field is highly interdisciplinary, with strong ties to many other fields of study (philosophy of law, of science, of mathematics, etc.).
- Philosophy draws on and makes contributions to other fields: Art and literary criticism, classics, gender studies, history, law, political theory; mathematics and theory of computation; biology, physics, psychology.
- Critical thinking and applied ethics courses (e.g. professional ethics, medical ethics, environmental ethics) present opportunities for growth and outreach.

Majoring, minoring, or just taking classes in philosophy is a wonderful idea:

- Philosophy teaches critical reasoning, careful reading, construction and assessment of arguments and evidence, clear and articulate oral and written expression of complex and abstract ideas, knowledge of how influential ideas originate and develop, and the ability to think for oneself.
- Philosophy majors do extremely well on graduate entrance exams (GRE, LSAT, MCAT, etc.): <http://dailynous.com/value-of-philosophy/charts-and-graphs/>
- Philosophy majors attain the highest mid-career salaries of any humanities major and have better earnings than many other majors (e.g., chemistry, accounting, geology): [http://online.wsj.com/public/resources/documents/info-Degrees that Pay you Back-sort.html](http://online.wsj.com/public/resources/documents/info-Degrees%20that%20Pay%20you%20Back-sort.html)
- Philosophy is a fascinating and difficult major that contributes to the development of a thoughtful and autonomous citizenry.

Our department, by the numbers:

- Faculty: 9 tenured and tenure-track faculty (four full professors, three associate professors, two assistant professors); currently 1 full-time instructor; 12 teaching assistants; roughly 32 courses/year taught by instructors and lecturers (hired on a semester by semester basis).
- 1 full-time staff person
- 53 Majors, 60 Minors, 23 Graduate Students (10 M.A., 13 Ph.D).
- SSCHs (AY 15-16): Undergraduate = 12,153 (lower level 10,246; upper level 1,907); Master's = 138; Ph.D = 146. Overall increases in 9 of last 11 years.
- Annual Budget: Maintenance, \$15,000; TELE funds \$20,000; Global Campus (varies; \$28,000 for 2015-2016; used to fund *Philosophical Topics* and some faculty and graduate student research and travel)
- Two major research grants awarded in 2015:
  - Professor Eric Funkhouser, Templeton Foundation, \$190,000
  - Assistant Professor Warren Herold, Templeton Foundation, \$143,000

## 2. Teaching, Research, and Departmental Strengths

Teaching:

- The Department teaches four core courses satisfying university core humanities requirements: Introduction to Philosophy (including ten sections/year of honors introduction to philosophy, taught by regular faculty); Introduction to Ethics;

Introduction to Logic; Ethics and the Professions (also required for several engineering majors). Enrollments in these courses has grown and would likely continue to grow should we be able to offer more sections.

- Virtually all courses, including introductory courses, feature significant writing requirements.
- Two faculty (Lyons, Ward) are completing a critical thinking/reasoning text (under contract with Routledge) and have been developing a highly original critical reasoning curriculum, currently taught as PHIL1003, Reasoning and Discovery. Adding this course to the university humanities core is a desirable outcome.
- Other faculty are developing new courses in applied ethics.
- The curriculum has always been flexible and has adapted to student needs.
- We contribute to various interdisciplinary programs: Religious Studies, Jewish Studies, European Studies, Humanities, Public Policy.

#### Research:

- Our faculty has an excellent research record, including two recent books with Oxford University Press (Funkhouser, Lyons); individuals enjoy national and international reputations in their fields.
- Four have recently been promoted to full professor (Funkhouser, Lyons, Minar, Senor).
- Areas of particular strength include epistemology (theory of knowledge and evidence), philosophy of mind, and philosophical psychology:
  - Empirical and theoretical work on moral psychology and self-control; conceptual work on perception, cognition, self-deception, perspective-taking; animal minds.
  - Other strengths have been history of philosophy and philosophy of religion.
- Two current research projects are funded with Templeton Foundation grants:
  - The Self, Motivation, and Virtue Project (\$190k, with University of Michigan Psychology; Assistant Professor Warren Herold);
  - The Philosophy and Science of Self-Control (\$143k, with UofA Psychology; Professor Eric Funkhouser).

#### Additional Departmental strengths:

- We publish *Philosophical Topics*, an internationally known journal with an excellent reputation. Each issue is devoted to cutting-edge research on a specific “hot” issue on the current philosophical scene. Outgoing editor: Edward Minar. New editor: Jack Lyons
- Everyone in the department has some expertise and research or teaching interests in interdisciplinary areas, making contact with biology, economics, history, law, literary theory, mathematics, physics, political theory, psychology, religion.

### **3. Priorities and Directions for the Next Five Years**

Under the direction of Assistant Professor Warren Herold, we are developing plans for a new interdisciplinary Center for Ethics in Public Life.

- The Center will support interdisciplinary research on the ethical dimensions of social problems; enhance teaching of theoretical and applied ethics throughout the University; facilitate informed discussion of ethical issues; and promote faculty and student engagement with the local community.
- Short-term goals (relatively low investment): Create a network among existing faculty, establish lecture and seminar series.



- Long-term aims: Work with Development Center to acquire funding for a named chair, conferences, postdoctoral fellowships, public outreach ventures, and other activities.

In general, there is ample potential for interdisciplinary programs/centers/minors/research groups utilizing already existing faculty and physical resources. For example:

- We are working with other departments to create a new *Medical Humanities* minor.
- The Department could contribute in other areas in which we have current research and teaching strengths (notably Cognitive Science; also Animal Studies).

We are planning to introduce new courses at all different levels in:

- Applied ethics (e.g., medical ethics, business ethics, ethics & public policy)
- Philosophy of race and gender

We have plans to further develop our critical thinking curriculum:

- PHIL 1003, Reasoning and Discovery, would be a valuable addition to the University's Humanities Core Curriculum. This innovative course combines empirical psychology of reasoning with normative fields of logic and applied epistemology, asking how do we reason, and how should we reason instead? It also explores basic methods of discovery for the sciences.

We hope to recruit more majors by providing course plans for double majors, highlighting the important role that philosophy can play in preparing students for law school and other types of graduate study, and increasing awareness of the connections between philosophy and science.

#### 4. Challenges and Issues

We have a very strong faculty for a department of our size, devoted to teaching at all levels and known for excellence in research. We have successful graduate programs with a solid placement record, and a small but flourishing community of undergraduate majors. In the next five years we would attempt to improve in all these areas:

- Increasing number of majors, including students taking philosophy as a second major;
- Seeking more applicants to our graduate programs, in the hopes of admitting better and potentially more students;
- Increasing diversity among students at all levels and faculty, in part through enhanced curriculum;
- Reaching out to the rest of the University through curricular development and interdisciplinary ventures;
- Supporting faculty research.

Here are the main challenges we face:

- Staffing: current commitments to core teaching, to our major, and to our graduate programs make it difficult to pursue innovative curriculum and program development as actively as we would like; adding tenure track faculty?
- Graduate recruitment: There is a strong need for increased stipends and graduate fellowships;
- Funding for *Philosophical Topics*: The journal's endowment is depleted and we have been paying expenses out of department funds;
- Faculty research and travel funds: Our research is very inexpensive, but we need money to attend and to host conferences.

Philosophy at the University of Arkansas is in good shape; it could be a growth enterprise. A number of universities (e.g., Rutgers and Florida State) have shown that humanities departments are a good investment, bringing prestige at low cost.

**Department of Physics**  
**Summary Report for Chancellor**  
**May 12, 2016**

The Physics Department has a diverse and internationally recognized faculty that engages in world-class research and scholarship. Its educational mission includes its own B.S. and B.A. degrees, M.S. and Ph.D. graduate degrees, and a number of very large “service” courses in support of other programs, as well as initiatives aimed at training science teachers, and other outreach programs.

**I. The department by the numbers**

According to the 2015 data from the Office of Institutional Research, the department has

- 19 tenure-track faculty (20 since January 1<sup>st</sup>). This includes 3 Distinguished Professors (Salamo, Xiao, Bellaiche), plus one University Professor (S. Singh) starting AY 2016.
- 6 non-tenure track teaching faculty (only 4 of these in hard-funded positions).
- 2 master technicians (electronics, machine shop).
- 4 administrative staff.
- 1 librarian, on loan from University Libraries.
- 141 undergraduates (134 B.S., 7 B.A.; 83 with physics as their primary major).
- 42 Ph.D. students, 5 M.S. students.

**II. Research and scholarship**

External recognition:

The physics faculty includes 6 Fellows of the American Physical Society and 2 Fellows of the Optical Society of America. Two members currently serve on the Editorial Boards of scientific journals (Min Xiao, Physical Review A, and J. Gea-Banacloche, American Journal of Physics). One member (Dan Kennefick) is an editor for the Princeton/CalTech Einstein Papers Project. Several members (Barraza-López, Thibado, Salamo) have been involved in organizing scientific conferences and workshops in recent years. (The 76<sup>th</sup> Physical Electronics Conference (PEC), a premiere, long-standing surface and interface conference, will be hosted this summer on our campus.) All department members serve as reviewers for scientific journals and most also have served in review panels for various funding agencies (DOE, NSF, etc.). Several members hold joint or honorary appointments with other institutions.

The total number of publications in refereed journals by the Physics department faculty has been close to 100 per year for the past few years, which means about 5 papers per year per faculty member. In reality, a few large-output groups (broadly associated with the Distinguished Professors) dominate the count, but just about everybody publishes at least 2 papers per year.

The faculty also has a good record of securing external research grants. Historically, we have substantially outperformed both the national average and the Southern Universities Group in the Delaware Cost Study data of research expenditures per FET tenure/tenure-track faculty (we fall in the \$200-300K range). More recently we have come down closer to the average, but there are strong signs that this will improve in the near future (see section V below).

Internal recognition:

Four faculty members have endowed Chairs. Several have been winners of University awards such as the Baum award, Alumni Association Award and College Master Researcher and Master Teacher Awards.

### **III. Undergraduate program**

The department has, for some time now, enjoyed a thriving undergraduate program that has been recognized in several ways. Most recently, we made the American Institute of Physics' list of the relatively few research universities that graduate 20 or more physics majors per year (<https://www.aip.org/statistics/table6>).

Many of our majors are Honors students, and many are double or even triple majors. Upon graduation, many choose to go to graduate school, and we always have several going to top-tier universities, such as Michigan, WUSTL, Georgia Tech, UIUC, the University of California at Santa Barbara... We also typically are awarded one or two NSF Graduate Research Fellowships every year.

We believe the key to our undergraduate program's success, in addition to excellent teaching, is exceptional advising and mentoring: we have a core group of five faculty members who each advise 20-30 undergraduates. Each advisor follows his or her students closely and typically gets to know very well their strengths and weakness; in this way, he or she may alert the student to opportunities for awards or fellowships, and provide personalized letters of reference for any programs the student may apply to.

In addition to this, our faculty members typically encourage undergraduates to do research in their labs, and many of our best students take advantage of this opportunity, so it is not unusual for them to appear as co-authors in faculty publications before they even graduate.

### **IV. Service teaching and outreach**

The department's "service" courses are Astronomy, Physics and Human Affairs (both general education classes), Physics for Architects (a course specially developed by Prof. Salamo for the School of Architecture), College Physics I and II (algebra-based, primarily for students in the life sciences), University Physics I and II (calculus-based, primarily for engineering students), and Physics for Elementary School Students, or PET (inquiry-based introduction to physics concepts, offered to students in the College of Education).

Although some of these courses are taught by instructors, most are regularly taught by tenure/tenure-track faculty members. For the sake of the students, we have tried to resist the trend to put instructors in charge of the large undergraduate courses; the exceptions are Physics and Human Affairs and PET, where we have some excellent instructors who have been with us for a long time, and College Physics, which we are working on.

We should note here that the large growth of the university has resulted in a huge increase in our SSCH (41% from 2010 to 2015) that has not been accompanied by a corresponding increase in faculty size (only 9% over the same period, including instructors).

For a while the department was very active in an American Physical Society-American Association of Physics Teachers initiative called PhysTEC, aimed at improving the education of future physics teachers (in fact, we were one of the pioneering PhysTEC campuses in the country). We continue to be involved in related programs, partly through the UATeach project (on which Prof. Oliver is one of the P.I.'s), partly through other initiatives such as summer camps for science teachers. Just this year we were recognized by PhysTEC with the "5+ award" given to departments that graduate 5 or more physics teachers in a given year (see <http://www.phystec.org/the5plus/>).

The department also has currently an REU program, run by Prof. Vyas, with the involvement of many faculty members. We also participate every year in the INBRE conference, which highlights undergraduate student research in Physics, Chemistry and Biology at participating institutions. Many other faculty members are involved in other outreach projects, including high school talks and science programs aimed at minority groups.

## **V. Challenges and opportunities**

Through a combination of retirements and resignations, the Physics Department has become a very young department over the past few years: six of our 20 regular faculty members have only been with us since 2011 or later. Four of these already have received substantial federal grants, including several early career awards, and are well on their way to establishing well-funded research programs in biophysics, condensed matter/materials science (theory and experiment), and astrophysics.

These three (or four, if you count experimental and theoretical condensed matter physics separately) are also traditional areas of strength of the department. In the past, we have had substantial grants awarded both in biophysics and astrophysics, and, as regards condensed matter/materials science, the department was a part of an NSF MRSEC for ten years, which led directly to the establishment of the Nano Science center on campus. Most of the “veteran” faculty responsible for these past successes are still with us and very active, and in several cases, still bringing large grants in.

Given both this traditional departmental strength and the new faculty’s present success, it seems logical that future investments should concentrate in these three areas, which also lend themselves naturally to interdisciplinary collaborations. In this context, in addition to the existing centers and programs (Nano, SPAC, micro-EP, CEMB) with which many of our faculty members are already very actively involved, there are a couple of new initiatives under discussion on campus to which we believe we could make important contributions:

- the Center for Neuroscience proposed by Dr. Shew (who has procured more than \$1 million for funding his neuro/physics research since joining us in 2012) and other researchers on campus. Such a center would also leverage the imaging expertise of our newest hire, Dr. Wang, and would be quite in line with President Obama’s recent BRAIN Initiative, which specifically calls upon the expertise of physicists and mathematicians to tackle this challenging research frontier.
- a Center for Scientific Computation, which could leverage the expertise and extraordinary current success of Distinguished Professor Bellaïche (who has at present 9 grants, for a total of close to \$4 million), as well as other faculty members, such as Barraza-López and Fu, plus the campus’ computing resources (CHPC), and expertise in other units such as Chemistry and Engineering. A proposal for such a center came from the Chemistry department not long ago, and we would be very much interested in seeing this happen and playing a large role in it.

## Department of Political Science Meeting with Chancellor Steinmetz

April 1, 2016

“Leveraging synergistic innovation through sustainable thought leadership and pedagogy”

- 2:30 Dr. Steinmetz and faculty introductions
- 2:40 Dr. Reid, brief overview
- 2:45 Discussion with faculty

### **Mission**

The Department of Political Science seeks to promote excellence in scholarship, teaching and service to the community and support the mission of the college around international education as well as the land-grant mission of the university. We aspire to develop better understanding of complex societal issues, introduce our students to new perspectives to the phenomena they study, and promote professional education and scholarship.

### **Vision**

The vision of the department is to support the university in achieving its improved rankings among very high research universities by developing ground-breaking research in interdisciplinary contexts and by building on existing strengths, and through innovative approaches to leveraging our connections on campus as well as with other partner universities. As political scientists we focus on identifying solutions for extant problems and issues and our policy focus allows us to disseminate this knowledge within the scholarly community as well as to policy practitioners in inter-sectoral settings.

### **Values**

We strongly endorse principles of scholarship, pedagogy and service that are grounded in the diversity and complementarity of our subfields and that are informed by a profound respect for diversity of thought and expression. We seek to identify innovative linkages in scholarship and teaching that transcend the boundaries of the discipline and encourage the search for new approaches.

## **I. Our Strengths**

### *Theme 1: Interdisciplinarity*

- Involvement with and support of area studies, International Studies, Gender Studies, and Journalism programs
- Blair Center of Southern Politics and Society (PLSC, History, English)
- Minors (Legal Studies; Urban Planning; Southern Studies)
- Collaborations with Law School; Walton College; Architecture College
- Involvement with the Public Policy Ph.D. program

Theme 2: *Retention and Graduation: Strong teaching commitment and student placement*

- Teaching awards and other recognitions; working with our advisors and retention and graduation specialists in Provost's office; new undergraduate advisor offering numerous career activities; *Executive in Residence* program
- Curricular changes with an emphasis on the balance between theory and practice (e.g. service learning classes); better thematic integration across different subfields within PLSC; graduate certificate "Cross Sector Alliances" with the MBA program
- Good placement record for our graduate students (PhDs and professional fields) due to faculty engaging students in scholarship (Integrated scholarship)
- Deliberate data analytics focus to tailor strategies around our ever-changing student needs.

Theme 3: *Diversity*

- Commitment to diversity and inclusion (statement on our website; hiring)
- Sustained strong focus on diversity research (race/ethnicity, gender etc.)
- Support of area studies programs
- RSOs (e.g., Pi Sigma Alpha; Law Society; "She is First")

Theme 4: *Scholarly activities and outreach*

- Faculty collaboration within and outside the department to capitalize on different scholarly expertise; has led to increase research productivity
- Increased submissions of grant proposals (foundation grants; NSF; others)
- Frequent expert comments to state, national, and international media
- International presence and scholarship
- Building "lab" space in the department to increase scholarly productivity and professional development of our students
- Representation of faculty on national boards and associations.

## **II. Accelerating our Impact**

Target 1: *Get more faculty involved in funded research projects*

Theme 1: External, national and international grant development has begun but has not yet yielded the results we are looking for; Fulbright Scholarships

Identify new resources to provide faculty with a competitive edge to win external funding grants

Target 2: *Continue to improve our graduate programs*

Theme 2: Continue coordination between MA and MPA programs to enhance student learning and skill development

- Our MPA and Nonprofit Studies program is going strong (one additional TT line in policy analysis or related field would increase that potential exponentially)
- To grow our graduate programs we need additional graduate assistants and “clinical” faculty to help with teaching needs at the undergraduate level
- Identify/obtain funding resource to provide more time for faculty to develop and teach new service learning classes involving local clients.

Target 3: *Strengthening our international footprint*

Theme 3: Significantly increase student enrollments in our international affairs programs at the graduate level (we are currently pursuing several avenues)

- Support the internationalization of our MA program and other allied areas studies programs (cluster hire: TT position - Africanist)
- Create better “pipelines” from honors/undergraduate and master’s programs to PHD program.
- Seek out study abroad partnerships with other departments in the College and the University and develop stronger cooperative study/research agreements with sister institutions around the world (e.g. China; Latin America).

**Appendix**

## Appendix: PLSC by the Numbers

<b>Budgets</b>	<b>2015/16</b>
Maintenance	20-23K (not grown for a decade)
TELE	50K (25K have or will be used for technology enhancements)
GC	20K (used to hire lecturers; support graduate student travel; ancillary)

**Faculty** number and expertise has increased significantly over the years.

**2015:** 19 faculty members (includes Dean Shields) (American:9;Comparative/IR: 5; Public Administration-Nonprofit Studies/Public Policy: 5); One “Clinical” Assistant Professor (American/Public Policy) and several lecturers (**2005:** 14 faculty members)

### **Centers:**

Diane D. Blair Center of Southern Politics and Society (since 2001); endowed.

### **Students** (these are approximate numbers)

10+ GAs/TAs

BA: approx. 360 majors and additional PLSC minors (mostly in history and business)  
Legal Studies minor: appr. 140; Urban and Regional Planning (with Landscape Architecture) minor: appr. 20 (since 2013); Southern Studies minor: appr. 20 (since 2014).

1<sup>st</sup> year retention rate: 81%

6th year graduation rate (2009-2015): 77%

Participation in and support of area studies programs (African & African American Studies; Asian Studies; European Studies; Latin American Studies; Middle Eastern Studies) and International Studies (a program with several hundred students).

Graduate student enrollments fluctuate between 35 and 50 students

A recently created graduate certificate (with the MBA program) “Cross Sector Alliances” graduates between 3 and 5 students a year, currently.

PLSC faculty members also play a critical role in the interdisciplinary Public Policy Ph.D. program with approx. 50 students (the chair is a PLSC faculty member).



The Department of Psychological Science is one of the most popular and productive departments in the Fulbright College of Arts and Sciences. We have a large undergraduate major and Ph.D. Programs in Clinical Psychology and Experimental Psychology. The Department excels in both research and teaching. Faculty members publish frequently and apply for and receive extramural funding with regularity. Our Department and faculty also provide service to the community with clinical services on and off campus, mentoring programs, and serving on numerous community boards.

## I. Summary Metrics

### Budget:

Account	FY'16 Budget
Maintenance	\$29,000
TELE Funds	\$20,000
RIF	\$25,549
Marie Wilson Howells Endowment	\$240,000 (Estimated)

### Faculty and staff (current):

Staff: 4.5

Tenure track Faculty: 15 (2 Assistant, 7 Associate, 6 Full)

Non-tenure track Faculty: 5.5 (2 Visiting Assistant Professor, 3.5 Instructors/Lecturers)

Two assistant professors hired beginning in Fall, 2016, though two faculty retiring in May, 2017.

### Credit hours taught (AY 15-16):

Undergraduate (Fall 2015, Spring 2016) = 16,036

Graduate (Fall 2015, Spring, 2016) = 701

### Majors, Minors, Graduate Students, and Degrees Awarded

Majors: 748

Minors: 115

Graduate (Ph.D): 41

B.A.s awarded: 637 (since 2010)

Ph.D.s awarded: 40 (since 2010)

### Research output (Annual average – past three years):

Refereed Publications/chapters: 45.3

Refereed Conference Presentations: 100.0

### Annual Extramural Funding Awards:

Fiscal Year 2014: \$312,000

Fiscal Year 2013: \$645,000

Fiscal Year 2012: \$132,000

Fiscal Year 2011: \$626,000

Fiscal Year 2010: \$623,000

## II. Strengths

- *Commitment to Excellence in Research, Teaching, and Service:* The Department of Psychological Science as a whole exhibits a strong commitment to excellence in all areas of our mission. Department Faculty have won awards in all of these domains, garnering University, professional society, and national recognition. Faculty involve their undergraduate and graduate students in their research programs, and many faculty members are involved in service to the university, community, state, and the profession of psychology. Department research is currently funded by the NIH, NSF, IES, and private foundations. We firmly believe that each aspect of our mission serves to inform and improve the others, and that the wide dissemination of research findings in psychological science is of critical importance in our society.
- *Well-established and strong doctoral programs:* Our two Ph.D. programs are among the most long-standing and successful at the University of Arkansas. Our Experimental Psychology programs trains students for careers both in and out of academia. Our Clinical Psychology program is fully accredited by the American Psychological Association. We have an excellent record in placing clinical students in outstanding internships, and students in our programs go on to careers in academia, research, service provision, and combinations thereof. Faculty are recognized leaders in their fields and have received numerous grants from Federal agencies and private foundations. Current students are recipients of NSF Predoctoral Fellowships, NIH National Research Service Awards, and APA Minority Fellowships.
- *Large and successful undergraduate major:* We are the second largest major in Fulbright College with almost 750 majors, over 100 minors, and approximately 70 honors students (we note that the largest major has nearly twice as many faculty as we do). PSYC graduates go directly into the workforce in human services, human resources, and a variety of other positions in public and private sectors. Many students go on to post-graduate work in Psychology and related fields, as well as in medicine, law, and business. Our undergraduates are diverse in terms of gender (66% female) and ethnicity (23% non-White).
- *Collaborative and Collegial Faculty:* We are fortunate to have department faculty who are collegial and respectful of one another, our students, and diverse individuals and points of view. Many faculty in the department collaborate in both research and teaching with colleagues both inside and outside of the Department. Departmental governance is open and transparent, which contributes to a strong sense of group cohesion and shared goals.
- *Marie Wilson Howells Endowment:* A strength of the Department is the existence of this endowment that allows us to support faculty and student research through research facilitation funds, travel funds, and competitive, peer-review internal grants. The fund is also used for start-up funds, research assistantships (our largest annual expenditure), and faculty development in the form of summer stipends and seed awards and submission awards for extramural funding.
- *Leadership in campus neuroscience initiative:* Several of our faculty members (along with faculty in other Departments) have been instrumental in developing a multidisciplinary proposal for developing strength in neuroscience on campus. With great investment in brain science from the federal government, this proposal aims to build on a developing area of strength at the university that will increase research funding, and impact both graduate and undergraduate students.

## III. Priorities and directions for the next five years

- *Enhancing Diversity:* Though we do well in some areas of diversity, given the importance of this issue for our field, we believe we can be doing better. Our Diversity Committee recently reported on its climate survey and made several recommendations for the department including:

- Develop an undergraduate course that emphasizes diversity (e.g., Cultural Psychology) and requesting that instructors explicitly include a diversity goal and diversity content in their syllabi.
- Focus our future hiring efforts on recruiting scholars who will increase the diversity of both the faculty (currently only 1 member from an underrepresented group, 40% female), and whose research foci involve issues of diversity.
- Host a teaching and research in diversity conference using funds from Howells Fund and TELE
- **Revising and Expanding our Curricula:** In addition to the diversity course mentioned above, aspects of the undergraduate curriculum and the graduate curriculum are being considered for revision including:
  - A course on professional development for our majors based on responses to our annual exit survey
  - With additional faculty, add new courses at the advanced undergraduate level, including courses in neuroscience, multicultural psychology, professional development
  - Expand online course offerings
  - Reduce course requirements for Ph.D. students to help enhance their research productivity
- **Building on existing strengths, creating new strengths:** The department has noted excellence in several areas of research. Future efforts should build on these existing strengths and create new ones in the following manner:
  - Recruit new faculty who complement existing areas of strength (e.g., social/personality; human cognition; mentoring; mental health disparities; experimental psychopathology) while adding new expertise to the department
  - Continue developing neuroscience in the department and across the university
- **Communicating better about our excellence:** The Department of Psychological Science excels in many areas but relatively few people know about us! We wish to communicate with the University community, state, our fields, and our nation about our accomplishments. Doing so will help to accomplish the following goals:
  - Improve recruitment of outstanding graduate students
  - Enhance development efforts
  - Bring additional resources to the Department of Psychological Science

#### IV. Challenges and resource needs

- **Faculty numbers:** We are operating at a severe disadvantage compared to our peer institutions in terms of our faculty allotment. For comparison, in the SEC, the University of Mississippi has 23,838 students and 26 faculty, while the University of Tennessee has 27,845 students enrolled this year, and 38 full-time, tenure track faculty.
- **Space:** Research space is at a premium in Memorial Hall. We have only 2 wet labs, and after the arrival of our new faculty this year we will have no available lab space for new hires as our future retirees have little space allocated to them. Additional space will be needed.
- **Graduate student funding:** Our base graduate stipend is unacceptable and uncompetitive. The only way we are able to attract graduate students is by offering them Fellowships that are awarded by the graduate school. Very few offers are accepted without a fellowship or grant that provides better funding. We need to improve support for the students who will represent the Department and University in the future.
- **Staff salaries:** Our support staff are hard-working and poorly paid. We have difficulty retaining qualified staff. Finding funds to make their salaries more competitive will lead to better morale and, likely, better performing staff members.

## School Overview

The mission of the School of Social Work is to improve the lives of vulnerable persons, families, groups, organizations and communities, especially those in economic risk. We achieve this mission by using evidence-based practices to educate social work leaders/practitioners; emphasizing critical thinking and self-awareness; facilitating collaborative relationships in the community; and conducting original research.

We currently employ 6 tenured/tenure-track (one out on extended medical leave), 7 clinical and approximately 12 part-time faculty. Of these, 2 of the tenured and 4 of the clinical faculty are administrators, and 1 is the Principal Investigator of the Arkansas Academic Partnership in Public Child Welfare grant. Furthermore, of the tenured/tenure-track faculty, 2 are Professors, 1 is an Associate Professor and 3 are tenure-track.

Founded in 1940 as one of the first BSW programs in the country, our BSW program has been experiencing steady growth over recent years with an average increase of 20 students per year (126 students in 2007 and 261 students in 2015). We offer two undergraduate minors: Social Work and Child Advocacy Studies (CHAS), and these minors represent 2 of the 7 minors that comprise the new online Interdisciplinary Studies major. Our BSW students are active in the community and work with faculty to provide service and conduct research. Our BSW program has a 94% graduation rate. Our graduates work as administrators, case workers and case managers.

Our MSW program was accredited in 2005, and the first student cohort graduated May 2005. Since then, we have moved up in the national rankings from 122 in 2012 to 78 in 2016. We offer Advanced-Standing, 2-year and extended 3-year programs. In August 2016, we will launch an online Advanced-Standing program. Our graduation rate is 96%. The 2015 state licensing exam pass rate is 100%, compared to the national 81% pass rate.

Field education is the signature pedagogy in social work education. As such, BSW students complete 2 semesters of internships, for a total of 440 hours. MSW students are enrolled in 3 semesters of internship, completing either 900 (Advanced Standing) or 990 (2- and 3-year) hours at their internships. During the Spring 2016 semester, students were placed in 56 community agencies, and have provided 13,420 (BSW) and 8,910 (MSW students) of service in the community.

Faculty, staff, students and community members take pride in the accomplishments and culture of our School. We promote collaboration, interdisciplinary practice, hard work, and collegiality. This culture of extended community and professionalism is commented on by visitors to the School. In fact, the cite visitors for our Council on Social Work reaccreditation process commented on how productive and healthy the School is and encouraged us to be protective of it.

Due to the efforts of faculty, staff, students and community members, we have a strong record in research, teaching and service/outreach.

## Budget

Good stewards of our finances, the financial data for the 2015-2016 Academic Year are as follows:

Roll-ups from 2014-2015:	\$ 69,725
Revenue:	\$137,000
Expenses:	<u>\$186,000</u>
<b>Balance:</b>	<b>\$ 20,725</b>
Restricted gifts:	\$ 23,116

## Research, Teaching, Service and Strengths

### Research:

- Strong ties to the community and participation in community-based research
- Students are engaged in scholarly publications and presentations (*approximately 80% of publications and presentations are co-authored with students*).
- Recipients of the Robert & Sandra Connor Endowed Faculty Fellowship (six faculty)
- Recipients of the International Award for SW Research (two faculty)
- Recipients of the Community Research Award (two faculty)
- Recipient of the Top 15 Faculty/Staff for External Funding (one faculty, 2 years)
- Common research agendas:
  - Social and economic justice (e.g., asset building, health disparities, food insecurity, justice system, veterans, child welfare, aging, education/educational access)
  - Survivors of abuse and/or trauma (e.g., IPV, sex trafficking, child abuse)
- Arkansas Academic Partnership in Public Child Welfare, started in 1991 has been awarded to the U of A since 1994.
  - Since 1994, have secured over \$117,000,000
  - Current FY16 Funding: \$3,030,390
  - Anticipated FY17 Funding: \$3,030,700
- Internal and external funding supports innovative research projects. Faculty have received in \$19,935,926 in grants since 2010
- With an average of 5.9 tenured/tenure-track faculty, since 2010, we have:
  - 35 scholarly publications
  - 61 presentations

### Teaching:

- Student-centered teaching model
- Consistently growing BSW & MSW programs
- Provide field internships for real-life practice experience
- Faculty Mentor Award from the U of A Center for Multicultural and Diversity Education
- Celebrating Diversity in Education Award from the NW AR Democratic Black Caucus
- Apple teaching awards
- Part-time & clinical faculty bring practice experience and connection to the community
- Offer electives & interdisciplinary courses to students across campus and online (e.g., Death & Dying, Juvenile Justice, Child Advocacy, Child Welfare, Social Welfare Policy, Human Diversity, Spirituality in SW Practice, Addictions in the Family, SW with Elders)

### Service:

- Community partners (e.g., Let's Talk NWA, Age Friendly Fayetteville, Peace at Home Family Shelter, Hispanic Women's Organization NWA, Just Communities of Arkansas, Magdalen House)
- Conduct research with African American, Latino and Marshallese communities in NWA and four elementary schools & their community in southwest Little Rock.
- University partners (e.g., School of Nursing, Education, Law School, Business, Agriculture, Sociology, African & African American Studies, Public Policy PhD, Anthropology, Office for Studies on Aging, Psychology, Exercise Physiology, Dietetics, Journalism, Political Science)
- National Association of Social Workers Arkansas Chapter 2016 Lifetime Achievement Award (faculty)
- School Awards including: UA Diversity Award and APPLE Award (A Patron Providing Leadership by Example) from the Fayetteville Public Education Foundation
- Arkansas Governor appointed faculty member to the Arkansas Social Work Licensing Board

- AR National Association of SW-AR chapter: Faculty have served as president and branch representative, and students have served as board members
- RSOs sponsored by the SCSW:
  - Social Work Action Group - 145.5 volunteers hours in the community from 9/2015 to 4/2016
  - National Alliance on Mental Illness (interdisciplinary) - hosted a mental health summit and held campus awareness walks
  - Phi Alpha Honor Society – 602 volunteer hours; NASW Policy Poster Award 2012

### **Untapped Resources and Opportunities**

- Create BSW and 2-year online MSW programs
- Increase student funding
- Create PhD program (no such program exists in AR)
- Increase student research opportunities
- Increase student participation in honors program
- Increase faculty & student diversity
- Increase collaboration with other departments & community members
- Create a Social Work Clinic and Research Center
- Maintain high levels of faculty productivity
- Maintain high levels of student achievement
- Maintain our culture of collaboration and collegiality

### **Challenges and Issues**

- Faculty size
  - Limits research productivity
  - Limits student enrollment and semester credit hours
- Limited GAs (only seven)
  - 63-73% of MSW students are self-paid
  - Over 75% of MSW students graduate with loan debt
  - Internship requirements (8 hours per day, 3 days per week) severely limit possibilities for student employment
  - Additional GA positions are required for competitive recruitment
- Online Teaching Policies
  - Limits flexibility in scheduling courses in the best format: online vs. in person, particularly in summer semesters, when students who have gone home for the summer are interested in online electives
  - Limits ability to optimize the number of students enrolled in online classes because the number must be fewer than on-campus courses
- Our building
  - NOT compliant with ADA regulations, Council on Social Work Accreditation standards nor professional social work values
  - Student recruitment would be easier with more professional building
  - Students feel disenfranchised by the university
  - Need more office and classroom space

The Department of Sociology and Criminal Justice has an interdisciplinary structure, built around a Sociology Major and Master's Program, Criminal Justice Major and on-line Minor, and a graduate concentration in Criminology. We excel in published and funded research, teaching, and community outreach/engagement. We participate in and contribute to over 20 area studies and interdisciplinary programs. Our students have access to two successful research centers, the Community and Family Institute (CFI) and the Terrorism Research Center (TRC). Currently, to further strengthen and expand our funding streams and interdisciplinary work, we are reinvigorating the Center for Social Research (CSR).

## I. Summary Metrics

### Budget:

Account	FY'15 Carry over	FY'16 Budget
Sociology-Instructional Support (Maintenance)	\$1,680	\$45,630
SOCI-Teach/Lab Equipment Enhancement (TELE)	\$39,631*	\$116,472**
RIF-Sociology (Indirect Costs)	\$2,708	\$22,070

\* The carry over amount included planned FY' 15 TELE purchases that we were not able to complete due to transition in departmental leadership

\*\*The amount includes support to two twelve month GA lines staffing a general access computer lab.

### Staff and Faculty (Spring 2016):

Staff: 2

Tenure track Faculty: 17 (6 Assistant, 6 Associate, 2 Full, 2 University, 1 Distinguished)

Non-tenure track Faculty: (1 Visiting Assistant Professor, 1 Instructor, 7 Part-time Lecturers)

### Total Credit Hours Taught (AY 15-16): 18,046\*

\*The Department was not able to maintain the 2013 level of SSCHs due to the following factors 1) loss of classroom space; 2) loss of some soft growth-related funding; 3) lack of funding to accommodate growth in upper-level required and elective courses

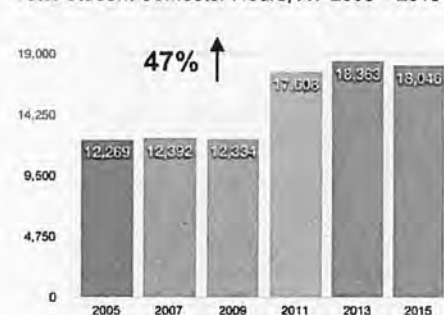
### Majors and Graduate Students (AY 15-16):

SOCI/CMJS Majors: 422 (295 CMJS, 127 SOCI; 155 Double Majors)

SOCI/CMJS Minors: 63 (32 CMJS, 31 SOCI)

SOCI Grad students: 23 (MA)

Total Student Semester Hours, AY 2005 – 2015



### Research Output Since 2010:

Books: 15

Book chapters: 30

Peer-reviewed articles: 99

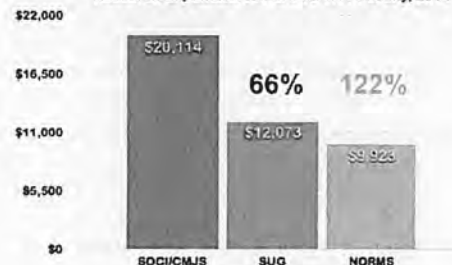
Publications with Graduate Students: 25

### External Grants 2010-2016:\*

Total \$ 3,260,000

Annual Average \$ 540,000

Research Expenditures Per FTE T/TT Faculty, 2014



\* In 2014, SOCI/CMJS research expenditures per FTE T/TT exceeded our peers in the Southern Universities Group (SUG) by 66 percent and of those at the universities in the Carnegie Classification of very high activity research (NORMS) by 122 percent.

## II. Strengths

**Diversity:** Diversity is an integral component of everything we do. The Department has always been committed to diversifying our faculty and students, and to offering graduate and undergraduate courses of particular relevance to students seeking in-depth knowledge of inequality and diverse populations.

- **Teaching:**

- *University Core:* We serve a large number of students in the university social science core course - General Sociology (SOCI 2013). Since 2010, we have increased the number of seats in SOCI 2013 by 52%, from 2,499 to 3,800. The Department's total SSCHs increased by 47% closely approximating the growth of the total SSCHs for the University (56% increase).
- *Undergraduate Education:* The Department provides undergraduate education in Sociology and Criminal Justice, including an online CMJS minor. Since 2010, we have awarded 566 B.A. degrees and have grown our majors by 29%, from 328 to 422 majors, including 155 double majors. The Department prides itself on carrying out the vision of J. William Fulbright to enrich not only the lives of our many students, but also the State, and the larger society, with "reason, justice, and humanity." We offer a variety of upper level courses addressing both timeless and urgent topics in the areas of community, inequality, diversity, culture, emerging adults, immigration, religion, social networks, incarceration, social control, criminal victimization, and terrorism, to name just a few. In 2015, our CMJS program was ranked #25 among top colleges and universities that best balance affordability with reputation and future career prospects.
- *Internship Program:* The 2013 ADHE review highlighted the SOCI/CMJS Internship Program as a departmental strength. Internships place students in local, state and federal agencies, providing them with valuable work experience, facilitating their professional networks and allowing them to apply their skills. Since 2010, we have placed 386 students with 54 local agencies, averaging 78 placements a year.
- *MA Program:* Since 2010, we have provided high quality training to 46 M.A. graduates to subsequently lose them to other Ph.D. programs; currently, almost 50% our MA students enter highly ranked Ph.D. programs like SUNY-Albany, University of Illinois at Chicago, University of Maryland, Indiana University, Florida State University, California –Irvine, and the University of Minnesota.

- **Research and Discovery**

- *Published Research:* The 2013 ADHE review also cited the overall departmental record of research and scholarly productivity as a strength of the Department. Our faculty produces peer-reviewed research that is published in prestigious outlets including top university presses (e.g., Oxford, SUNY, Temple) as well as several large commercial publishers (e.g. Routledge, Macmillan, Praeger). Our articles appear in refereed journals in both top overall sociology outlets (e.g., Sociological Quarterly, Social Science Research, Annals of the American Academy of Political and Social Science), as well as top sub-discipline journals (including Social Science and Medicine, Criminology, Justice Quarterly). Despite being an MA-only program, about 1 in every 5 of our high-quality publications is co-authored with our students.
- *Externally Supported Research:* Since 2010, the Department has received \$3.26 million in external grants, averaging \$540,000 per year in competitive funding. This past year the Department was awarded over \$750,000 in new federal funding. Last year, federal grants provided over \$125,000 in indirect costs, nearly \$75,000 in salary savings, and funded 4 graduate assistantships. In addition to federal funding, last year the Department was awarded over \$180,000 from other external sources.
- *Interdisciplinary Work:* The Department has a long history of interdisciplinary collaborations between faculty trained in sociology, criminology, and criminal justice. We have been awarded external funding with an interdisciplinary focus, have been engaged in interdisciplinary programs and collaborative research in more than 20 Departments and programs in Fulbright College and across the University, including the Gender Studies, Religious Studies, African and African American Studies (AAST), and Latin and Latin American Studies (LAST), to name just a few. Two of our tenure-track faculty have joint appointments, one with AAST and one with LAST. We work with researchers in other disciplines who are seeking social science expertise that is increasingly required in grant solicitations.
- *Foci Research Areas in Community and Civic Engagement, Crime and Social Control, and Stratification and Social Inequality:* We have a critical mass of highly published and nationally recognized faculty in two high profile areas 1) community and civic engagement research, which includes the activities of the Community and Family Institute, and 2) crime, law, and social control research, which includes the activities of the Terrorism Research Center. We are also growing our strength in the third foci area of 3) stratification and inequality, re-invigorating the Center for Social Research under new leadership and expanding our research to the critical areas of immigration; racial/ethnic and gender identities; gender,



race, and organizations; race and gender in the criminal justice system; and gender and violence.

- **Service and Outreach**

- *Community Engagement and Outreach* Community engagement and outreach are central to our Department's mission and our faculty has expertise in community-oriented research, especially in the areas of health, crime, immigration, inequality, homelessness, hunger, veterans, and the correctional system. Through research funding from organizations like Winthrop Rockefeller, Wal-Mart Foundation, United Way of Northwest Arkansas, and the Walton Family Foundation, we have been able to consult and strategize with local and regional organizations. We have also developed service-learning courses addressing issues such as diversity, immigration, and homelessness, and engaging undergraduate and graduate students in the community.

### III. Weaknesses

- We lose our best graduate applicants to other sociology programs because we do not offer a Ph.D., and our funding levels are not competitive. Similarly, our MA students going on to obtain their Ph.D.s must do so out of state, taking this resource away from Arkansas.
- Our funding streams are strong but too narrow as we are not eligible/competitive for some national and private grants because we do not have Ph.D.s receiving training in the areas of grant proposal submissions.
- Hindered ability to meet the demand of undergraduate and graduate students for existing required courses and new electives as enrollment expands.

### IV. Priorities and directions for the next five years

**PhD in Sociology:** The Department's top priority is to create a Ph.D. program in sociology and expand our funding streams. We would accomplish this by contributing our advanced research skills and perspectives of sociology, criminology, and criminal justice to the University's strategic core areas and strengthening departmental foci areas: (1) community and civic engagement, (2) crime, law, and social control, and (3) social inequalities and stratification. We envision a high quality Ph.D. program that will

- increase and expand sources of funded research and support interdisciplinary efforts within the emerging University's strategic core areas
  - the importance of social science, especially sociology, criminology, and criminal justice expertise, to interdisciplinary efforts, including the ability of other scientists to win nationally competitive grants, is an untapped strength. The social science expertise provided by the Community and Family Institute, the Center for Social Research, and the Terrorism Research Center constitute our departmental resources we can contribute to the University's strategic areas of emphasis. The Ph.D. in Sociology Program would greatly enhance our capability to make such contributions
- assist the University in keeping its current Carnegie classification and contribute to the University's land grant mission;
  - Arkansas is the only state in the SEC and only one of a few states nationally without a Ph.D. in sociology, putting us at a disadvantage for competitive grants and growing graduate enrollment.
  - Arkansans must go out of state for doctoral work in sociology and we believe that the citizens of the State need and deserve access to this advanced degree
- further diversify the University's graduate student population.
  - doctoral programs in sociology attract diverse students, constituting one of the most diverse disciplines with 64% women and 21% historically underrepresented minorities.

### V. Resources and university commitments needed to become stronger

- **Two New Faculty Lines:** To develop a quality Ph.D. program without negatively affecting our undergraduate teaching mission and cover eight courses that would have to be added to the Ph.D. curriculum would require the addition of two faculty lines in the strategic areas (\$65K plus fringes each and start up of \$15K each).
- **Three new GA Lines and Graduate Funding:** The Department cannot compete with other programs that offer higher graduate stipends and other forms of support. Competitive stipends and greater support for graduate research and conference travel are key elements of high quality Ph.D. programs, including Research Assistantship lines that we would use to integrate faculty and student interests via collaborative projects.
- **Space:** The Department's faculty office space has reached a breaking point. We have no offices available to provide office space for incoming tenure track faculty and our GAs are losing office spaces. To foster an environment in which faculty and students can interact and exchange ideas, all faculty and graduate students need to be housed together.

**DEPARTMENT OF THEATRE MISSION:**

*The Department of Theatre strives to create an environment in a diverse and international university community where students discover, experience and celebrate what Theatre does best:*

***Inspire the imagination, illuminate the spirit, and awaken the intellect.***

**VALUES:**

We believe in the power of engaged teaching and professional mentoring as essential to student success. We are committed to collaboration and an integrated education as a means to accomplish our work as teachers, artists, and scholars, while promoting a culture that is nurturing, supportive and encourages artistic risk-taking.

**VISION:**

In addition to the course work, central to the life of the department is the producing of plays and musicals that support our mission. We devote our physical, human, and financial resources to creating a pre-professional laboratory that blends theory and practice to enhance the cultural life of the U of A along with the Northwest Arkansas community while expanding the intellectual and emotional capacity of our students.

**ASPIRATIONS:**

Over the next five years we will continue to grow audience attendance, expand opportunities for students to participate in theatre productions, build stronger bridges between U of A theatre and the professional world, recruit a greater number of highly qualified students for both the BA as well as the MFA program, and develop additional revenue streams through the cultivation of our patron/donor base. We will secure our position as a regional and statewide cultural resource in theatre and as a destination program for future students to develop their intellect, talents, and skills.

**I. SUMMARY METRICS**

**Budget:**

Account	FY'15 Carry Over	FY'16 Budget
Theatre-Instructional Support (Maint.)	\$0	\$40,000
THTR-Teach/Lab Equipment Enhancement (TELE)	\$10,938	\$90,000
Cultural Arts "Fee"	\$11,318	\$30,000
Joy Pratt Markham	\$4,250	\$24,000 (est.)
	<b>Total:</b>	<b>\$185,000 (est.)</b>

**Faculty and Staff (current):**

Classified Staff: **1**

Tenure track Faculty: **9** (2 Assistant, 3 Associate, 3 Full, 1 Distinguished)

Non-tenure track Faculty: **6** (1 Visiting Assistant Professor, 1 Adjunct Assistant Professor, 4 Instructor)

Non-tenure track professional staff: **2** (2 Research Assistant)

Adjunct Faculty: **1** .25% Instructor

**Credit Hours Taught (AY 15-16):**

Undergraduate (Fall 2015, Spring 2016) = **5822**

Graduate (Fall 2015, Spring, 2016) = **852**

**Majors & Graduate Students (current):**

THTR Majors: **106** THTR Minors: **38** (Fall 2015) THTR Graduate Candidates: **24** (MFA)

**Research/Creative Output (Annual Average – past five years):**

Professional Plays Designed: **15** Performed: **6** Plays written: **3** Directed: **4**

Peer-reviewed papers/chapters: **10**

Non-peer-reviewed workshops/panel presentations: 20

#### Select Awards:

Acceptance into New York City's United Solo Festival – 2013, 2014; Acceptance into the National Competition, Young Designer's Forum, 2016; Graduate School Poster Competition winners, 2013, 2014, 2015; 4 designs selected for National Design Expo 2016 to be published in TD&T (Juried journal for theatre technology), 2016.

## II. DEPARTMENTAL STRENGTHS

- **Excellence in Teaching:** We believe in the power of engaged teaching and professional mentoring as essential to student success. We are committed to collaboration and an integrated education as a means to accomplish our work as teachers, artists, and scholars, while promoting a culture that is nurturing, supportive and encourages artistic risk-taking. Hosting working professionals as guest artists is vital to our academic mission. It is incredibly important for students at the University of Arkansas to understand that theatre is not only an academic major, but is an attainable career choice. Hosting industry leaders is also vital to our training. Having the ability to provide workshops and engage in conversations with working professional designers, technicians, actors, directors, and playwrights serves our students as well as the faculty in an inspiring and educational way. In 2014/15 we brought in actors, directors, casting agents, designers, and playwrights totaling 8 working professionals.
- **Professional Creative Opportunities:** In 2014/15 the Department of Theatre faculty was represented by over 30 examples of professional creative activities in the area of playwriting, directing, and design. 4 scholarly papers were presented, 16 workshops given, and 8 local, regional, and national awards were presented to U of A faculty to include a Governor's Award for Arts Community Development.
- **Professional Internships:** We have a close association with TheatreSquared, a national award-winning professional Equity theatre located in Fayetteville, which the American Theatre Wing recently named one of the top ten emerging theatres in the country. Additionally, our students quite often perform and provide technical support for productions where they earn points toward Actor's Equity Association and build connections with professional actors, directors, designers and playwrights from across the country. Students, faculty and staff from the Department of Theatre (current or recently graduated) held 108 artistic and administrative positions during the 2014-15 TheatreSquared season, making up over 65% of the creative and administrative staff.
- **Interdisciplinary Collaborations:** The Department of Theatre continues to build relationships with a number of campus units. We currently collaborate both in the classroom and on stage with the following departments and programs: College of Engineering, College of Human & Environmental Sciences Fay Jones School of Architecture + Design, Department of Art, Department of English, Study Abroad, Office of Entrepreneurship Humanities & Interactive Game Design.

## III. PRIORITIES & ASPIRATIONS FOR THE NEXT FIVE YEARS

- **Teaching Development:** It is the desire to become NAST accredited. This will take a substantial financial as well as time investment on the part of the Department.
- **Public Outreach and Community Development:** The Department of Theatre will grow the cultural capacity of the Northwest Arkansas region by offering productions that promote an energetic exchange of ideas, stimulate a robust conversation between artists and audience, and provide opportunities for students to connect their pursuits of knowledge and skills through production and performance.

Over the next five years we will continue to grow audience attendance, expand opportunities for students to participate in theatre productions, build stronger bridges between U of A theatre and the professional world, recruit a greater number of highly qualified students for both the BA as well as the MFA program, and develop additional revenue streams through the cultivation of our patron/donor base. The Department of Theatre will secure its position as a regional and statewide cultural resource in theatre and as a destination program for future students to develop their intellect, talents, and skills.

- ***Cement the Role of Theatre in Interdisciplinary Research and Teaching:*** We are excited by the relationships we've cultivated between various departments and colleges on campus and look to develop those even further. There are exciting industry possibilities between the College of Engineering and the Department of Theatre in the form of entertainment design and the use of automated motion scenery. Our practical lab (the theatres) coupled with the skills and knowledge base of the Engineering programs make for a healthy and fruitful partnership.
- ***Diversification of Faculty, Students, and Curriculum:*** One challenge we face is to find ways to reach out to our minority base in an effective and consistent way. We've had greater success in recruiting MFA candidates from diverse backgrounds than we have for our undergraduate program. We also want to continue our relationship with African and African American Studies; however, with the recent departure of our African American Theatre Studies specialist, it has changed the dynamic of our program in regards to having a presence in the African American community.

#### IV. RESOURCES AND UNIVERSITY COMMITMENTS NEEDED

***Space:*** The primary challenge the Department of Theatre faces is the lack of performance, laboratory, and rehearsal spaces. Identifying proper rehearsal and design space is a constant struggle due to the lack of dedicated spaces. With around 30 square feet of lab and performance space per student compared to Indiana University's almost 74 square feet per student, it is easy to see the adverse impact it has on student growth as scholars and theatre artists.

Ultimately what is needed for a school this size is a dedicated Fine Arts Center that can house all of the Department of Theatre's production, performance, rehearsal, classroom, and office needs. Kimpel Hall, home to 90% of our performance courses, is an academic building that serves many disciplines.

However, when acting classes, musical theatre classes, and movement classes are scheduled next to World Language, English, Communications, and Journalism classes, the pedagogical differences are made abundantly clear.

***Professional Production Staff:*** The need for professional production staff is great. Currently much of the maintenance and upkeep of the facilities as well as the equipment falls to our MFA candidates and faculty members. The addition of a professionally staffed theatre would not only protect the investment made in lighting, sound, and rigging technology more effectively, it would also serve to inspire, train, and supervise students at a much higher level of efficiency. Additionally, we employ one full time Research Assistant who performs three jobs: Ashley Cohea serves as the University Theatre Business Manager, the Box Office Manager, and our Media and Marketing Director. Additional staff is needed in this area; however, in our current facility, there is no room for offices, or even additional desks, which will make finding a "home" for any added staff a challenge.

***Tenure Track Faculty:*** The addition of, or transition from existing instructor lines into Tenure Track positions, would help spread the existing administrative and departmental service load more equitably.

Currently, with 10 Tenure Track faculty members in a department of 17 teaching faculty, the distribution of thesis committees, honors committees, departmental committees, and other service related duties tends to become the responsibility of a select few.

**Modern Equipment:** Although we've been able to make great strides in lighting and sound technology over the past 3 years and are grateful for the support Dean Shields has provided, many of our concerns fall into the category of age and use. The Fine Arts Center was completed in 1950 making it over 65 years old with most of the equipment in the building being original. There have been some upgrades over the past 25 years to the seating and fly system, but the infrastructure remains the same and it's worn out. Theatre technology has also improved greatly over the past 15 years in both function as well as safety and this building is in desperate need of a major renovation if it is going to continue to serve the students at the U of A.

## Department of World Languages, Literatures and Cultures (WLLC)

### I. Department Overview

WLLC is a nationally- and internationally-competitive research department that produces well-regarded work in such areas as modern world literature, digital humanities, postcolonial studies, and regional area studies with an emerging cluster in linguistics and 2<sup>nd</sup>-language acquisition.

WLLC is also a diverse and multi-faceted department whose contributions to strategic priorities of the university are extensive and crucial in such areas as internationalization, trans-disciplinary initiatives, diversity, and recruiting and retention, thanks to our leadership and participation in numerous interdisciplinary programs, and to our involvement in cross-college collaborative ventures, in study abroad and global education, and in honors college initiatives.

#### WLLC Fact Sheet:

Languages Taught: 11 modern & 2 classical languages.

Programs Offered: 3 M.A. Programs, 4 majors, 10 minors, 1 shared Ph.D./M.A. (Comp Lit).

Staff: 22 tenure-track, 29 non-TT, 2 Main Office, 2 Language Center, 35 GTA = 90 Total Personnel.

Student Numbers: 213 majors (70% are second or third majors); 598 minors (most in Fulbright College; Arabic minor fastest growing @ 242% last five years); 5<sup>th</sup> most SSCH in Fulbright College (24,627); 41% of current WLLC students from underrepresented groups.

Scholarly Productivity: (10-year annual average): 1.9 books; 16.4 refereed articles; 6.0 chapters; 28.3 conference papers; 11.4 invited lectures.

Revenue Productivity by SSCH: some \$1.5 million, most recent year available.

Budget: Maintenance: \$30k, TELE: \$50k; Global Campus revenues to department (2014-16): \$27k.

Study Abroad, Diversity, Online Teaching, Interdisciplinary programs: see under Strengths below.

### II. Strengths and Values; Mission and Themes.

#### 1) We house award-winning scholars that integrate teaching, research, and outreach synergistically:

\*\*5 Fulbright International Fellowships have been held by current WLLC faculty \*\*In Fulbright College we have had 12 master teachers, 2 master researchers, 3 outstanding advisors \*\*1 recent national/regional book award and 1 recent international book award.

#### 2) We take pride in our student-centeredness and our graduation and retention rates:

\*\*6-year graduation rate for WLLC majors averaging some 80%, far in excess of College and University figures (University-wide number approximately 60%) \*\*88 Honors theses directed in last 10 years; \*\*11 student papers published in undergraduate research journal *Inquiry* supervised by WLLC Faculty since 2001 (5% of total, versus expected 1.6%) \*\*Extensive student advising, including transfer-equivalency evaluations for all language courses taken by U of A

students in study abroad (UA study abroad totaled 842 students in 2014-15) **\*\*Small-class-size initiative (under-20) launched in the basic Spanish sequence, with support from Provost Gaber.**

3) We have extensive leadership of, and participation in, strong interdisciplinary programs to whose success our contributions as a department are central:

**\*\*All 22 of our tenure-track faculty participate in one or more of the 14 inter-disciplinary programs in Fulbright College** **\*\*We have 4 current program directors and 2 former program directors on WLLC faculty** **\*\*Our faculty has substantial involvement in the recent creation of 6 new interdisciplinary minors, and of course leadership of the new Tesseract (digital humanities) Center (Fredrick).**

4) National leadership in the expansion and diversification of world languages curricula, responsive to shifting demographic and socio-economic needs and realities:

**\*\*Spanish particularly has innovated, expanded, and diversified its curriculum with new programs in language for the professions, for heritage speakers, service learning, and translation and interpretation** **\*\*Business language curricula established in several languages** **\*\*We model rigorous international proficiency standards as certified administrators of the Goethe exams (German), the JLPT exams (Japanese), and the French Chamber of Commerce exam (Business French)** **\*\*Cutting-Edge technology development in Digital Humanities and Game Design applications in WLLC/CLST courses.**

5) Extensive collaboration with other Colleges across the University:

**\*\*Launched a new and cutting-edge dual degree program fall 2015 in collaboration between German and Engineering** **\*\*WLLC has had PI and/or Co-PI in 4 different U.S. Department of Education Title VI or Fulbright-Hays inter-disciplinary program development grants** **\*\*30% of students enrolled in WLLC from outside of Fulbright College.**

6) Extensive leadership and involvement in Study Abroad:

**\*\*WLLC faculty have created and conduct 7 U of A faculty-led programs + Direct Exchanges in 4 countries** **\*\*WLLC faculty advise and pre-approve transfer credit equivalencies for all study abroad language courses (842 U of A students studied abroad 2014-2015)** **\*\*Innovative summer program in Puebla, Mexico integrates several WLLC strengths and initiatives, including service learning and language for the professions, and inter-disciplinary and cross-college collaboration.**

7) Leadership in the creation and development of online instruction at the University:

**\*\*75 credit hours of online courses created and taught, including an entirely online Spanish minor within the online BA in interdisciplinary studies** **\*\*Spanish online course achieves national Quality Matters certification for the first time ever at the U of A (Benton).**

8) Substantial participation in community outreach and engagement:

**\*\*Spanish program, together with LAST, has partnered and works extensively with the Oficina Latina and the former Office of the Vice-Provost for Diversity in substantive service learning and community engagement initiatives with the Latino community (Restrepo), and these have**

greatly enhanced recruiting and retention \*\*Eta Sigma Phi, Classical Studies honors society, very active and one of several good examples both of WLLC student-centered mentoring and community engagement.

#### 9) Champions of and Leadership in Diversity and Inclusiveness:

\*\*Currently 41% of WLLC students from underrepresented classes (compared with 18% university-wide); percentage has doubled over the past five years \*\*Currently 37% of WLLC faculty of minority ethnicity \*\*Success of Latin American and Latino Studies (LAST) and African and African American Studies (AAST) programs in which we participate are key to fostering atmosphere of inclusiveness; WLLC teaching staff predominantly female (62%).

### III. Goals and Challenges Next Five Years.

- 1) We plan to continue to expand our national leadership as an exemplary and energetic R1 program in World Languages.
- 2) We want to continue to work across the College and the University to fulfill more completely our William J. Fulbright legacy as a national leader in international education, including expansion of study abroad collaborations that takes students beyond "academic tourism."
- 3) We will work to continue to expand the diversity of strategically-critical languages we offer, and to diversify the upper-level offerings in existing languages, to fulfill student demand and in support of the many inter-disciplinary programs we serve.
- 4) We need to implement forms of national or international standardized assessment more broadly and completely across all languages offered.
- 5) We would like to expand the department's leadership in study abroad and international education as well as our internationally-oriented collaborations with other colleges at the University.
- 6) We want to build strategic growth of graduate enrollments at the university by exploiting the strong potential of the various tracks in the Ph.D. in Comparative Literature and Cultural Studies for producing and placing well-trained graduates.

### IV. Areas of Resource Need to Reach the Next Level.

- 1) Raise graduate stipends to a more competitive level to attract the best students.
- 2) Make raise pool for full-time non-TT more proportional to TT raise pools to retain and reward best adjuncts.
- 3) Develop funding and personnel resources to fully implement standardized proficiency assessment across all language programs.
- 4) Allot additional GA positions specifically dedicated to Comparative Literature M.A. & Ph.D. programs.
- 5) Increase study-abroad scholarship funding for non-Honors students at the university.



**Graduate School**

**Honors College**

**School of Law**

## **The Graduate School at the University of Arkansas**

The Graduate School is a student-centered service unit furthering the goals of the University of Arkansas. Consisting of five units, the Graduate School reports to one of two associate deans for the Graduate School and International Education, Dr. Patricia R. Koski. Six years ago, the Graduate School was organizationally separated from the [then-named] Office of the Vice Provost for Research, and was combined with international education. These changes have had both positive and negative effects on our unit and have shaped our most recent past.

### Graduate Education at the University of Arkansas

In Fall 2015, the University of Arkansas enrolled 4,220 graduate students in 118 master's and doctoral programs. Of those 4,220 graduate students, 1,130 are in Ph.D. programs. Arkansas residents make up 26% of the Ph.D. students, 57% of the Ed.D. students and 73% of the DNP (doctor of nursing practice) students. Nearly 20% of the domestic graduate enrollment, including non-degree students, are from under-represented minorities, and approximately 17% are international. Women comprise 47% of the master's enrollment and 46% of the doctoral enrollment. In the 2014-15 graduation year, we awarded 1,383 master's, educational specialist, and doctoral degrees, an increase of 11% over the previous graduation year. In general, graduate education at the U of A is healthy, but there are some challenges.

### Strengths

The strength of the Graduate School is its people. Dean Kim Needy provides visionary leadership and our staff are professional, competent, hard-working and effective. They are experts on national and international trends and best practices and are highly effective even with limited resources. It would be fair to say that we have earned the trust and respect of the University community.

People outside our unit also contribute to our success. Partnerships with faculty from across campus, with our interdisciplinary program directors, and other units on campus have always been a source of pride and inspiration for us.

Our core values are service to faculty, staff and students; promotion of the University at many levels, from the local to the international; assisting the University in moving toward its goals; operating at a high level of efficiency; increasing the quality, quantity and diversity of the graduate student population; spearheading innovative programs and national best practices; and advocating for the importance of graduate and interdisciplinary students and programs on our campus.

### Weaknesses

We face challenges primarily from the following areas: budget issues, the rapid growth in the undergraduate population, an increasingly urgent need for new space, and some additional collaborations from other units. Addressing the budget deficit that resulted from the reorganization six years ago meant that former Dean Todd Shields and current Dean Needy were and are limited in their ability to initiate needed changes, particularly in the software needed for our recruitment and admissions initiatives, in the ability to pay for remodeling to add space, and to reach out for partnerships with other units.

The rapid growth of the undergraduate population has also had an impact on the Graduate School. In Fall 2009, graduate students represented 18% of the total University student population; by Fall 2015,

this had decreased to 15.8%, despite a 17% growth in the graduate population between those years. Such an imbalance in the graduate/undergraduate ratio has significant negative effects on a research university.

### Priorities

In addition to our day-to-day functioning, immediate priorities for the Graduate School are to:

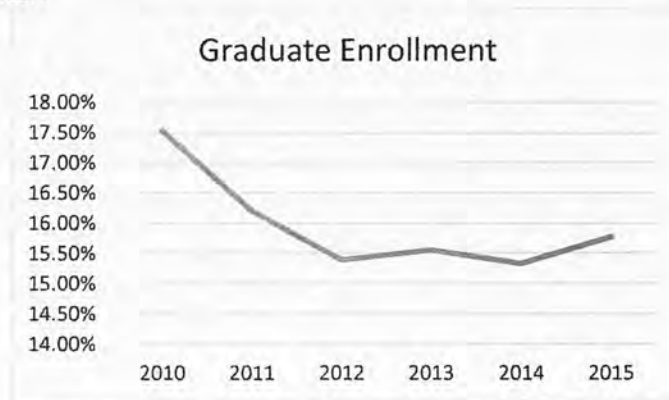
- Establish an automated Constituent Relations Management (CRM) system for recruitment and admissions.
- Further develop the effectiveness of our social media presence and our website.
- Foster growth in strategic interdisciplinary program areas and grow non-traditional graduate programs.
- Develop a strategic enrollment plan for graduate and undergraduate students.
- Partner with the Career Development Center and Student Affairs to increase the services for graduate students in their portfolios.

### Direction for the Next Five Years

We recently created a “refreshment” of our strategic plan and we reconfirmed our commitment to the core goals of advancing the visibility and promoting the reputation of the University of Arkansas within the nation and around the world; promoting GSIE to an internal audience; and efficiently addressing the many issues involved in working with these students, their sponsors, parents, and faculty, for the purpose of increasing the number, quality and diversity of graduate, international, sponsored, study abroad and interdisciplinary students, and then retaining and graduating them.

To achieve our goals we need the following resources:

- a university-wide strategic enrollment growth management process and plan;
- financial assistance for a constituent relations system and growth in interdisciplinary programs;
- financial assistance for remodeling space that could be used to consolidate our unit and add needed office space;
- a recognition of the importance of graduate and interdisciplinary programs and students
- across campus;
- and a dedicated graduate support person in the Office of Student Affairs and the Career Development Center.

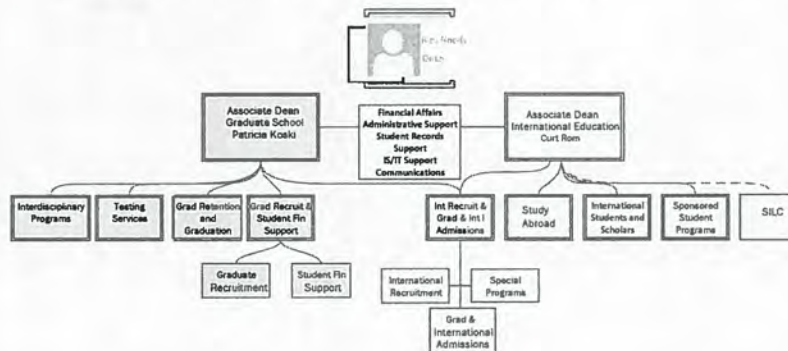


## The Graduate School at the University of Arkansas

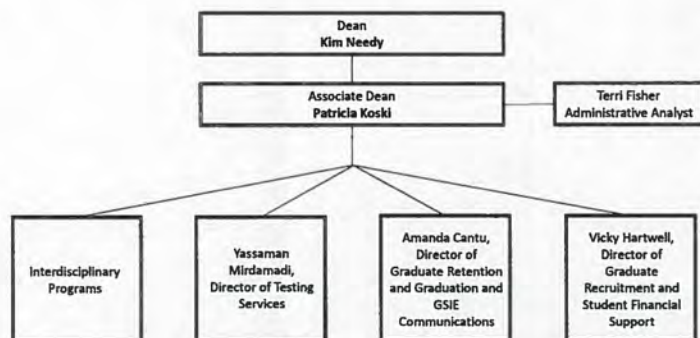


The Graduate School is a student-centered service unit furthering the goals of the University of Arkansas.

## Organizational Chart – Graduate School and International Education (GSIE)



## Organizational Chart – Graduate School



## Graduate School Strengths



<p><b>1,528</b> GRADUATE ASSISTANTSHIPS AWARDED fall 2015</p>	<p><b>4,247</b> GRADUATE STUDENTS ENROLLED </p>
<p><b>240</b> DOCTORAL FELLOWS</p>	<p><b>130</b> GRADUATE PROGRAMS</p>
<p><b>19%</b> UNDER-REPRESENTED GRADUATE STUDENTS fall 2015</p>	<p><b>1,199</b> GRADUATE DEGREES AWARDED 2014-15 academic year</p>
<p><b>19%</b> UNDER-REPRESENTED GRADUATE STUDENTS fall 2015</p>	<p><b>50:50</b> RATIO OF GRADUATE DEGREES AWARDED TO MALES &amp; FEMALES</p>
<p><b>18%</b> INTERNATIONAL GRADUATE STUDENTS</p>	<p><b>18%</b> INTERNATIONAL GRADUATE STUDENTS</p>

## International Education at the University of Arkansas

The University of Arkansas has a legacy of international education based in part upon the institution's Fulbright heritage. The campus has a history of strong programming for international students and scholars studying at the university, has facilitated international exchange and study abroad for decades, and has maintained active inter-institution relationships and agreements with countries in Central and South America, Europe, the Middle East, India, China, Japan, and Southeast Asia.

Five units related to international education at the University of Arkansas were consolidated within the Graduate School and International Education (GSIE) approximately five years ago. Those units are the International Recruitment and Admissions Office (IAO), Sponsored Student Programs (SSP), International Students and Scholars (ISS), Study Abroad and International Exchange (STAB), and the auxiliary unit, the Spring International Language Center (SILC) which provides English language and cultural training prior to matriculation. Beginning in spring 2016, the UA Rome Center (UARC) previously operated by the School of Architecture, was transitioning to become a sixth unit of international education within GSIE. The international education units are service units working to fulfill the international goals and objectives of each college and the university.

### International Education at the University of Arkansas

An overview of international education at the University of Arkansas includes (estimates based upon AY 2015-2016 data):

- 945 students studied abroad in 42 countries
- 36 faculty led study abroad classes were offered
- 406 faculty visited more than 80 countries
- 1546 international students and scholars were enrolled
  - 657 degree-seeking undergraduate students
  - 713 degree-seeking graduate students
  - 314 sponsored students
  - 43 Fulbright Scholars
  - 114 countries represented
- 60 active international agreements and memoranda of understanding were developed

### Strengths

The primary strengths of International Education at the University of Arkansas and within GSIE are the strong legacy of cooperative international activities, the visionary leadership offered by our dean and the capabilities of the people leading the individual service units.

The leaders of the International Education units listed above are long-time and loyal UA staff members and are recognized nationally and internationally for their work in international education. Prior to consolidation within GSIE five years ago, they all reported to different administrative units of the university, but were collaborative and mutually supportive. Since the units were brought together and are now provided part-time leadership with an associate dean, they are crafting a unified vision and plan of action to better serve the university and each academic college.

Other strengths include:

- Strong programs to support both incoming international students, and UA students studying abroad
- Strong risk management programs for international travel
- Service and support for program, unit, or college agreements with international institutions, agencies, or governments to foster collaboration and cooperation.

Because of the Fulbright legacy, the University of Arkansas is widely recognized for international education activities. The University has had strong international student programs with an international student organization dating back decades. Today, that has developed into a very active RSO, the Intercultural Team. The Office of International Students and Scholars has active community and outreach programs providing approximately 100 educational cultural programs each year within local schools and community groups and fostering a local family sponsors program, iFriends. The Office of Sponsored Students has developed a reputation of high quality scholarship and program management, and programs to support and foster sponsored students. The Office of International Admissions and Recruitment is active in identifying, attracting, and recruiting students, and supporting their matriculation to the University supporting many academic programs across campus. The Office of Study Abroad and International Exchange provides and coordinates quality international study experiences through faculty led programs and with third party providers supporting the academic programs of each college and the individual academic objectives of students, has a strong reputation of fostering reciprocal exchange programs sending UA students to study abroad and recruiting and fostering international students on campus, and manages all international travel registry and risk management supporting the travel of both students and faculty. This office also manages many Memoranda of Agreements between individual programs, departments and colleges to foster international cooperation and collaboration expanding the international footprint of the university. The Spring International Language Center has a good reputation of English language and American cultural training assisting students to matriculate to the university. Further, they have developed a national expertise in professional development for international sponsored students such as Fulbright Students who come to the University from across the US for pre-experience and arrival training, professional development training, and pre-departure training. SILC provides English language and cultural training to international graduate assistants to support their UA work and is developing programs to support new international Faculty.

### Weaknesses

The university has not had strong, articulated international education goals. At present, there is no university core requirement for international or global education. Likewise, there are not articulated goals for enrollment or participation in study abroad. There are no institutional goals or targets for recruitment and admission of international students to contribute to the diversity of the student body and provide scholars for graduate programs. However, GSIE has established its own goals with the understanding that international students and scholars contribute to the diversity of campus and cross-cultural educational experiences.

Since the consolidation of the International Education Units within GSIE, there have been no additional financial resources to grow staff or expand facilities to meet the increasing needs of a growing student population with expanding desire to study abroad. The growing need of faculty for quality and diverse

graduate students is limited by the ability of the university to recruit and admit high quality international candidates and to support sponsored programs with tuition incentives.

The greatest limitation to study abroad for students and international engagement for faculty is scholarships and financial resources. Outside of the Honors College and some limited college study abroad scholarships, there is limited funding for students and faculty to engage internationally. Study abroad scholarships are needed.

There are currently insufficient financial resources and staffing to fully execute the ambition of having a year-around academic program at the UA Rome Center for a broad range of UA students and disciplines, and to engage faculty within the Center.

#### Priorities

- Increased staffing, funding, and expanded facilities for the International Education units to fully function, be more collaborative and operate synergistically with each other and with the international programs of each academic college.
- Increase study abroad with scholarships for students, both undergraduate and graduate, and support for international faculty travel.
- Expand Rome Center programs with sustainable financial planning and management.
- Increase student diversity on campus with sponsored programs.
- Increase international research collaboration through strategic MOUs, sponsored students, invited scholars.
- Increase international scholars on campus with funding.

#### Direction for the Next Five Years

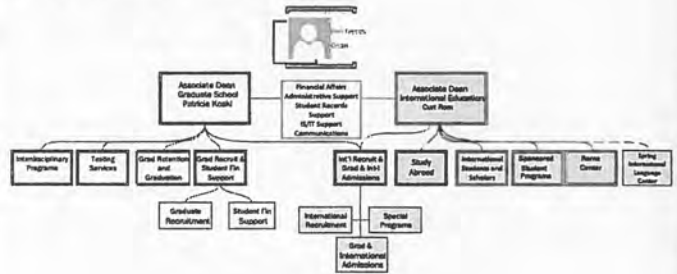
The objectives of the units of international education are to provide service at levels as required by the academic colleges they support, and help each academic unit achieve its educational, diversity, and outreach goals through strong support and service programs.

- Expand recruitment and admission of quality international students commensurate with the growth of the university population and as appropriate compared to benchmark institutions.
- Provide increased number of quality international education experiences for UA students through internationalized or globalized classes and curricula, campus activities, and study abroad experiences.
- Develop adequate staffing, facilities and resources to support and serve the institution appropriately.
- Develop year-around academic programs at the UA Rome Center to serve students and faculty, while improving its financial position, in order to provide quality educational experiences and improve the national and international reputation of the institution.

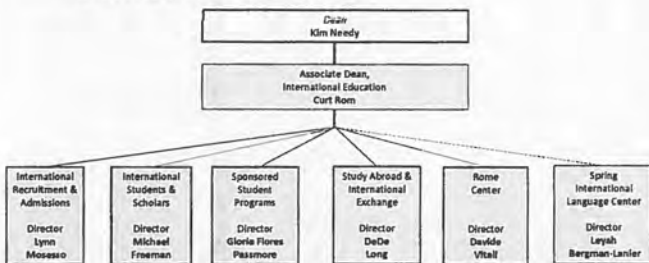
## Graduate School and International Education International Education

Bringing the World to Arkansas  
Bringing Arkansas to the World

## Organizational Chart – Graduate School and International Education



## Organizational Chart – International Education



## Bringing Arkansas to the World

**900+**  
STUDENTS  
STUDIED  
ABROAD

**51**  
COUNTRIES  
VISITED  
2014-15 academic year

**200+**  
STUDENTS SPENT A  
SEMESTER OR MORE ABROAD  
2014-15 academic year

**80**  
COUNTRIES  
FACULTY VISITED

**289**  
FACULTY TRAVELLED ABROAD

**34**  
FACULTY-LED STUDY ABROAD  
PROGRAMS

AY2014-2015

## Bringing the World to Arkansas

**830** UNDERGRADUATE STUDENTS ENROLLED

**{43}** FULBRIGHT SCHOLARS ENROLLED **331** SPONSORED STUDENTS

**47**  
EXCHANGE  
STUDENTS

**696**  
STUDENTS SEEKING  
4-YEAR DEGREES

**114**  
COUNTRIES  
REPRESENTED

**281** INTERNATIONAL SCHOLARS

**715** GRADUATE & PROFESSIONAL STUDENTS ENROLLED

AY2014-2015

## We Are International

**50+**  
INTERNATIONAL  
AGREEMENTS

**9**  
PROGRAMS IN INTERNATIONAL and  
REGIONAL or CULTURAL STUDIES

**39**  
REGISTERED STUDENT  
ORGANIZATIONS

**13**  
WORLD LANGUAGES



AY2014-2015



## Interdisciplinary Education at the University of Arkansas

Graduate-level interdisciplinary education at the University of Arkansas consists of two programs that are contained completely within an academic college (M.A./Ph.D. in Comparative Literature and Cultural Studies in Fulbright College and Ph.D. in Plant Science in Bumpers College), plus six programs that involve faculty mentors from at least two colleges (Cell and Molecular Biology, Environmental Dynamics, Microelectronics-Photonics, Public Policy, Space and Planetary Sciences, and Statistics and Analytics). We also have a graduate-level certificate in Sustainability, which is considered non-degree. This report focuses only on the cross-college programs.

### Cross-college Interdisciplinary Education at the University of Arkansas

In Fall 2015, 253 students enrolled in cross-college interdisciplinary graduate programs, 193 (76%) at the Ph.D. level. These 253 students represent 19% of the total graduate population at the University of Arkansas. In 2014-15, 18% of the doctoral degrees awarded were in cross-college interdisciplinary programs. Other notable facts about these programs include the following:

- Since 2000/01, 14% of the doctoral degrees awarded have been in cross-college interdisciplinary programs
- The largest producer of Ph.D. graduates in 2014/15 was Public Policy while both Cell and Molecular Biology and Microelectronics-Photonics ranked in the top five producers of Ph.D. degrees in 2014/15
- In Fall 2015, the largest doctoral program was Cell and Molecular Biology, with 70 students
- In Fall 2015, the 7<sup>th</sup>, 10<sup>th</sup>, and 17<sup>th</sup> largest doctoral enrollments were also cross-college interdisciplinary programs (Environmental Dynamics, Microelectronics-Photonics, Public Policy)
- Over 50% of the interdisciplinary master's and doctoral enrollment is female; 45% is international; and 17.1% are underrepresented minorities

### Strengths

The strength of our interdisciplinary programs are their incredibly committed program directors, associate directors, administrative staff and faculty, as well as the diverse, committed, talented and loyal students. Also critically important is the visionary leadership provided by Dean Kim Needy. These programs spur cutting-edge research at the intersections of disciplines and are the engines for new research centers. The programs are growing in both enrollments and graduates, and are very diverse. They serve multiple audiences and recruit students to the University of Arkansas who would not be interested in more discipline-based programs. The programs contribute in significant ways to the success of the University of Arkansas and we look forward to their role in the new vision for the University.

While each of our interdisciplinary programs contributes in many ways, we would like to highlight one or two facts from each of the programs:

- In Cell and Molecular Biology, 43 students (46% of its enrollment) are on non-UA sources of tuition; 41 are sponsored students
- Women comprise 50% of the enrollment in Environmental Dynamics, which is our oldest interdisciplinary program and just recently was moved to GSIE from Fulbright College

- Over \$2 million in research was generated by Microelectronics-Photonics affiliated faculty/students in 2014
- Over 31% of the Fall 2015 domestic student enrollment in Public Policy was under-represented minorities; Public Policy is also a popular option for U of A employees
- Over \$1 million in research was earned by Space and Planetary Sciences affiliated faculty/students in 2014
- 51 faculty from five participating colleges are involved in Statistics and Analytics

### Weaknesses

While the interdisciplinary graduate programs are true gems of the University, they would be even better with increased support and a committed financial base. In particular, we face these issues:

- While the tension between deans/department heads on our campus is less than faced by other universities, increased cooperation would be beneficial – this requires the support of central administration
- Funding for these programs has varied according to the means by which they were created, so funding is uneven across the programs. Some programs have no commitment of funds
- There is no consistent policy or method across colleges for evaluating and rewarding interdisciplinary directors and associate directors; salaries are typically set by the undergraduate deans and evaluations may not take interdisciplinary leadership and administration into account
- Our interdisciplinary programs typically do not have dedicated space for students, graduate assistants, meeting rooms, offices, etc. This reduces the campus presence of these programs.

### Priorities

Thus, our priorities for the interdisciplinary programs are:

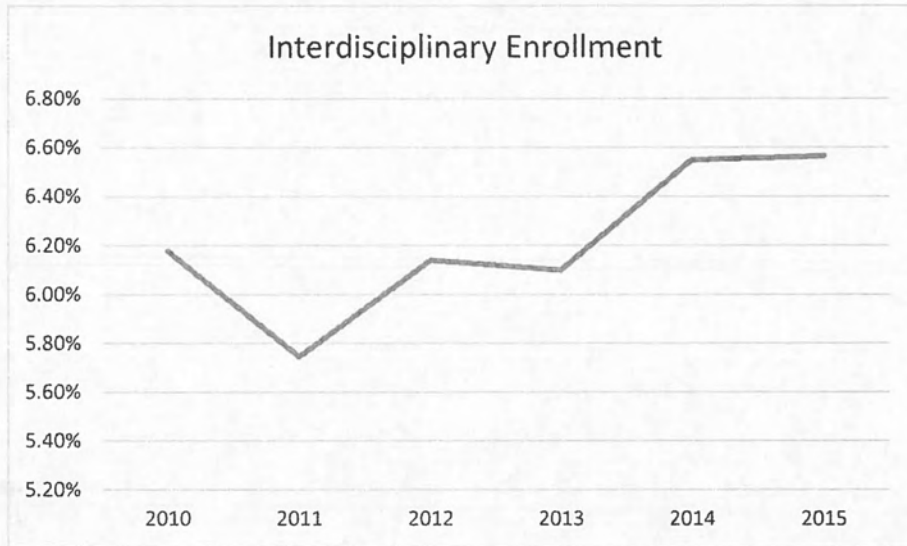
- Establish a consistent funding plan across programs and fund each program at an appropriate level
- Encourage increased cooperation between academic units and address the issue of “credit”
- Develop a consistent policy for evaluating directors and associate directors of the programs, and faculty involved in the programs.
- Find space for each program

### Direction for next five years

Our goals for these programs are to continue to grow enrollments and degree output, while maintaining the diversity of the students and faculty. We would also like to strategically develop new interdisciplinary programs reporting to GSIE which would serve as engines for student (and faculty) recruitment. We hope to increase interdisciplinary research and leverage interdisciplinary research centers.

To achieve our goals we need the following resources:

- Central administration support
- Financial resources
- Space

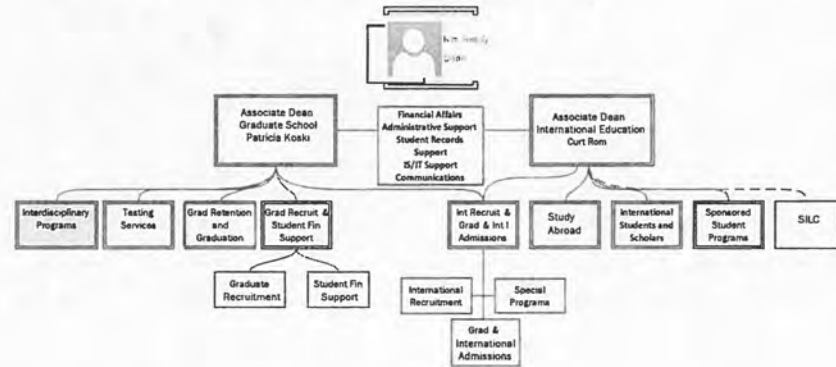


Interdisciplinary enrollment as a percentage of total master's and doctoral enrollment, Fall semesters

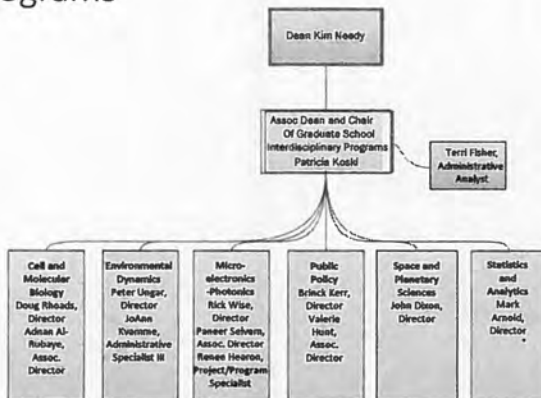
# Interdisciplinary Education is the Future

Cross-college interdisciplinary graduate programs contribute in significant ways to the success of the University of Arkansas.

## Organizational Chart – Graduate School and International Education (GSIE)



## Organizational Chart – Interdisciplinary Programs



## Interdisciplinary Program Strengths

35+ DISCIPLINES INCORPORATED INTO PROGRAMS



253 STUDENTS ENROLLED IN INTERDISCIPLINARY PROGRAMS

500+ PROGRAM ALUMNI

## Honors College Report for Chancellor Joe Steinmetz -- May 31, 2016

Founded in 2002, the Honors College encompasses all disciplines on campus and provides transformative learning experiences for over 3,000 undergraduate honors students who work with more than 700 research-active honors faculty. The Honors College is nationally recognized for the high caliber of students it admits and graduates, consistently producing Fulbright, National Science Foundation, Truman, Marshall, Gates Cambridge and Goldwater Scholars, among others, over the past 10 years. The Honors College has also led in creating a culture of international education, undergraduate research and interdisciplinary, problem-focused learning for top students and professors.

### *Strengths*

**Recruitment:** The Fall 2015 cohort of 3,055 Honors College students had an average 4.0 high school GPA and average ACT score of 31. The decision to increase the fellowship award to \$17,500 per year has helped the Honors College recruit the highest-achieving cohort of fellows ever. Here is a snapshot of our Fall 2016 class of 88 fellows:

- 31 National Merit Scholars – up three from last year.
- Average GPA of 4.19 – an all-time high.
- Average ACT composite score of 33.77 – an all-time high.
- 26.1% of them will be first-generation students.
- 81.8% of our new fellows come from Arkansas.

**International Education:** We have created a culture where study abroad is expected, rather than a rare exception. Participation in study abroad by *all* UA students has more than doubled since 2002.

- 50% of honors students have studied abroad by the time they graduate – that's triple the national average of 14%.
- In an effort to raise that percentage to 70% we are offering new grants, simplifying grant applications for faculty-led programs, and funding more of students' costs.
- Last year, we awarded \$513,000 in grant funding to 161 students – a jump by nearly one-third in total amount awarded and number of students funded. Of these, 28% had never traveled outside of the U.S., and 81% had never studied abroad.
- This year, thanks to changes in grant funding and a new communications initiative, we've seen an 87% increase in study abroad grant applications.

**Retention:** 6-year graduation rate for students who touched honors is 83% – that's 30% higher than students who never participated in honors. In order to further boost overall retention at the U of A, we are working to raise 6-year graduation rate for students who touch honors and to increase the percentage of students who graduate with honors.

### *Challenges*

**Diversity:** Competition to enroll honors-eligible students from underrepresented populations is fierce. We need to continue efforts to widen the pool of eligible students, to recruit those students, and to mentor them once they arrive on campus.

- Currently 14.5% of our students are from underrepresented groups.
- Through our Path Program and strategic partnerships across campus, we're working to raise that figure to 20% by 2025.

**Financial Restrictions:** We have profited primarily from a single donor, the Walton Family Charitable Support Foundation, and yet we have not received new funding from them. Our discretionary funds are extremely limited, which hinders fundraising efforts, especially as we head into a new capital campaign. We need to grow our donor base!

**Course Bottlenecks:** The rapid growth in student enrollment – nearly 40% since 2008 – coupled with relatively static growth in tenure-track faculty ranks, has challenged our ability to deliver a quality honors experience. The University needs to make good on our promise that there will be stimulating honors courses and colloquia, small classes, and faculty-led research opportunities.

## *Priorities and Directions*

### **Adding Staff:**

- Honors College needs a full-time director of development (\$80,000), who will propel us into the next level of national visibility and make possible the initiatives in research/service, teaching/learning, outreach/engagement detailed in this report.
- Honors College should add an additional recruiter/grants manager (\$55,000) to extend our efforts in the eastern and southern parts of Arkansas and to administer grants more efficiently.
- Honors College would benefit greatly from another HEI Program Coordinator (\$30,000), who would lend much-needed administrative support to three key areas: recruiting, retention, and communications.

### **Supporting Development Efforts:**

- The Honors College needs unrestricted funds for development efforts.
- The Campaign for Arkansas provides an opportunity to fund research-based and international service learning, sponsor interdisciplinary initiatives, foster philanthropy among our young alumni, and cultivate new donors – provided we have the funding we need, and a Director of Development to work on our behalf.

### **Incentivizing the Path Program:**

- The Path Program has been very successful in moving talented students from underrepresented groups into the Honors College (50% of the first Path cohort).
- The Path Program must add scholarships to attract and retain high caliber students; equally important is identifying a donor for an endowed international scholarship fund for Path students.

### **Augmenting the Endowment for International Education:**

- International Education, whether in the form of traditional study abroad, service learning, or research abroad, is one of our most effective recruiting tools.
- International Education grants were up 87% this year; efforts to increase the number of honors graduates who have international experience have been highly successful to date, so much so that the original Walton Family Foundation gift will need supplementing in the near future.

### **Keeping Honors College Fellowships Competitive:**

- HC Fellowships must keep pace with the national price tag for attending four-year universities and small liberal arts colleges
- HC Fellowships must be augmented and endowments sought over and beyond our traditional donors, the WFF and the Bodenhamer family.

## *Research and Service*

**Undergraduate research:** The Honors College has sparked a culture of undergraduate research here at the U of A, with many professors noting that honors students conduct graduate level research, and quite a few students publishing their work in peer-reviewed journals. Last year, we awarded \$398,230 in research and travel funding to honors students and their faculty mentors. This year, we have expanded support by launching the following initiatives:

- International Research Grants support full-time honors thesis research abroad.
- Faculty Equipment and Technology Grants help faculty invest in equipment and technology that will have transformational impact on undergraduate research programs.

**Service learning:** The Honors College provided early and ongoing support for service learning programs in Belize, Mozambique and Vietnam and continues to lead in this area.

- We are a founding partner of the new Service Learning Initiative and are exploring service learning opportunities at home and abroad.
- This year, we are piloting international service learning grants by sending 9 students around the world to tackle a diverse array of projects and issues: studying traditional health and medicine in rural India, researching conservation in Bali, and working and researching in a high school in a South African township, for example.

## *Teaching and Learning*

**New Curricular Initiatives:** The Honors College is creating new opportunities to engage top faculty and students on campus, cutting across academic silos to spur interdisciplinary explorations.

- The Honors College is launching a series of new series of “Signature Seminars” led by top scholars and focused on cutting-edge, interdisciplinary issues, including Teeth, Prosecution, Cancer, Aging, Concussion, Water, etc.
- We are developing H2Passport, a new embedded study abroad experience for faculty and students participating in the Honors Humanities Project (H2P).

**Mentoring and Advising:** Our fellows have long benefited from advising by fellowship financial manager Kelly Carter, who monitors academic progress, provides study abroad and research planning, and offers tips on wellness and time management. Her support has contributed to a 6-year graduation rate of 94% for our fellows. Recently, we’ve expanded this “360 degree advising” to other students:

- Path students benefit from peer mentoring that explores academic resources, wellness and development of resiliency and self-advocacy. It’s working: 50% of our first-year Path cohort joined the Honors College.
- Recently we hired a new Director of Retention and Student Advising who is charged with extending these proven techniques to all honors students. The goal is to help all honors students develop a personalized plan that includes global involvement, research, engagement, academics, and life after the degree (national awards and graduate/professional programs).

## *Outreach and Engagement*

**AP Summer Institute:** For this annual, four-day institute, we bring in “master teachers” – experienced, energetic consultants from across the nation – to teach pre-AP and AP teachers from all corners of Arkansas and beyond. Our goal is to ensure these pre-AP and AP teachers have the training they need to stay up-to-date on College Board AP curricula and to expand AP course offerings in their schools. Benefits include:

- Career advancement for our teachers: Participation in AP is rapidly growing, so APSI training opens up new opportunities for teachers who want to prepare students for AP exams and ultimately, for college rigor.
- AP certification: The College Board endorses our APSI, which allows our institute to work with ADE to certify teachers to teach AP and Pre-AP courses in the state of Arkansas.
- Graduate credit: Participants may pursue graduate credit for the courses that they take. To do so, they must apply for admission to the University of Arkansas Graduate School.
- Networking opportunities: Our highly-rated program encourages informal collaboration and exchange of ideas with some of the best and brightest AP and pre-AP teachers from our region and further afield.
- Expand access to AP courses: Course offerings vary from year to year, but core courses such as Pre-AP Math, Science, and English, and AP courses in Calculus, Chemistry and U.S. History help to ensure that teachers are certified.

**Promotion of STEM education in Arkansas:** The U of A is boosting STEM education across the state. The Honors College is contributing by lending the time of Honors College Associate Dean Carol Gattis, one of three faculty members who lead this initiative.

- Since 2006, this interdisciplinary team has received over \$4,000,000 in Arkansas Department of Education grants to fund a decade of training workshops for K - 8<sup>th</sup> grade math and science teachers.
- Focus is on using hands-on activities to teach math and science while sparking critical thinking and enthusiasm in kids.
- Over 250 middle school math and science teachers and 67,000 children in Arkansas have benefitted from the researchers’ professional development training for teachers in the 10 years since the first workshop.
- Standardized assessment has shown a 32% improvement in teachers’ instructional practices and a statistically significant increase in the interest and performance of students in both math and science in the classrooms of teachers participating in the workshops.

**Summary Report**  
**University of Arkansas School of Law**  
**May 31, 2016**

The University of Arkansas School of Law's priorities and direction were generated through a strategic planning process in which a committee of faculty members considered accomplishments within the school over the past five years and where the faculty and administration would like to see the school in the future based on its strengths and weaknesses as well as the challenges to overcome.

The school's focus includes five priorities: attracting the best possible students, increasing and stabilizing bar passage rates, improving and maintaining programmatic offerings, supporting faculty and creating budget certainty.

**Priority: Attract the best possible students through funding scholarships and supporting recruitment efforts.**

Law school applicants typically apply to multiple schools (known as overlap applicants). The University of Arkansas School of Law's level of scholarship support is significantly lower than many of its overlap schools, which results in losing some of the most promising potential students. Although another school may cost more overall, once scholarship support is added, it ultimately costs the student less than attending the U of A.

Recruitment efforts require the support of faculty and staff – particularly in a climate when overall law school applications are down nationally.

**Strengths:**

- A strong Law School Committee for Campaign Arkansas with members who understand the need for scholarships and professorships to attract and retain top students and faculty.
- Improved national rankings among the *National Jurist's* best values in legal education (top 20 since 2011, peak of #1 in 2014) and *U.S. News and World Report's* top public law schools (top 50 since 2010, peak of #33 in 2013).
- A committed and experienced recruitment team, including associate dean Jim Miller, who has been working with law school students and admissions since 1976.
- Development and external relations professionals who are committed to advancing the institution.

**Weaknesses:**

- Low scholarship support when compared with overlap schools.
- Measurement fluctuations in criteria used for national rankings.

**Challenges:**

- Due to the measurement methods used in many rankings, small changes in one or two criteria can result in drastic fluctuations in numerical standing.
- Increasing applicants at a time when law school applications have been down nationwide: lower recruitment numbers among law schools nationally, when overall application numbers are down, as in the current economic climate, make recruiting and retaining a diverse student body more challenging.

**Priority: Increase and stabilize bar passage rates by offering bar preparation support and hiring a director of academic excellence.**

The school must demonstrate an average bar pass rate of 75 percent or more (or a pass rate not significantly lower than the overall pass rate of the applicable jurisdictions where its students take bar exams, or fit within various exceptions and explanations). University of Arkansas School of Law students typically pass at rates of 85-90 percent, or higher – a tradition the school intends to continue.



Dean Stacy Leeds led efforts to find funding for a person to remove the burden of academic enhancement and support from the job responsibilities currently assigned to the director of externships. The school's first director of academic excellence will join the University of Arkansas School of Law this summer.

**Strengths:**

- Administration is attentive to bar pass rates and communicates this information promptly to the faculty for consideration and discussion.
- Students, on average, score above the required minimum and higher than average pass rates in the state (85-90 percent, or higher).
- Hired a director of academic excellence.
- Offer an online, semester-long course focused on the substance of the bar exam and exam-taking strategies.

**Weakness:** For the past year, the director of externships has also been responsible for academic excellence and enhancement, leaving little time to focus specifically on increasing bar passage skills.

**Challenge:** Disappointing pass rates on the February bar exam for past two years.

**Priority: Improve and maintain programmatic offerings by adapting to new American Bar Association standards, what students want, what the local Bar needs and experiential learning enhancements.**

The practice of law is organic and experiences continual adjustment and improvement. Law schools must adapt to the changing landscape shaped by professional standards, student expectations, needs of the legal community and opportunities provided through externships, legal clinics and pro bono involvement.

**Strengths:**

- May 2015 reaccreditation ruling from ABA, without qualifications.
- Continuing education and expertise: director of Young Law Library and information technology services attended conferences with specific sessions on new ABA Standards and best practices for compliance.
- Addressing diversity requirements/expectations by creating pipeline programs (seven programs in five years).
- Curriculum innovation, flexibility and options:
  - two new certificate programs, reforming first year required courses, bar skills courses, new advising programs and expansion of externship program.
  - studies, activities and field placements outside the United States.
  - strengthen and expand the LL.M. in Agricultural and Food Law.
  - experiential learning opportunities: seven legal clinics (32-40 positions/semester), nine types of externships (≈40 positions/semester), a range of simulation-based classes.
  - focus on legal writing: requisite eight credits of legal research and writing instruction: six in the first year and at least two in a faculty supervised certified upper level legal writing class.
- High employment rates for graduates.
- Good to excellent bar pass rates for graduates.
- A standing strategic planning committee specifically charged with working with the programmatic outcomes, assessment and programmatic change over time.

**Weaknesses:**

- Students do not self-report the academic program as being rigorous.
- Not all faculty include individual course objectives on their syllabi.
- Programmatic goals need to be more visible on the webpage.
- A significant number of classes that teach predictive and persuasive written communication, but far fewer that cover or assess prescriptive writing ability.

**Challenges:**

- Assessments and planning underway:
  - mapping curriculum to determine potential gaps in preparing students to enter the legal profession.
  - new programmatic goals – still determining individual competencies used to assess compliance.
  - still ascertaining the extent to which written communication is taught/assessed at more than an introductory level and opportunities for students have to develop mastery of legal writing skills.

- Faculty policies still speak in terms of “skills” classes, when it would be clearer to have language that indicates courses are designed to be experiential learning.
- Barriers to students having sufficient hands-on work, access and assessment in judicial externships.

**Priority: Support faculty members thorough increasing diversity and promoting community life.**

As diversity is more accepted as a critical component of a student body, the logic is extended to the faculty – as well as the legal profession as a whole. The University of Arkansas School of Law is focused on continuing to diversify the faculty in every way – from personal demographics, to legal philosophies, to fields of study.

In order for a diverse group of individuals to thrive, there must be a strong sense of community. The school is committed to enriching community life among its faculty and the entire law school population.

**Strengths:**

- Tenured and tenure-track faculty hiring resulting well-qualified and diverse candidates (nine hires in five years).
  - with degrees from: Cedarville University, Franklin and Marshall College, Harvard, New York University, Northwestern, Princeton, Rutgers, Yale and the universities of Arkansas, Florida and Michigan.
  - with expertise in: administrative law, constitutional law, criminal law, education, energy, environmental law, equity and equal protection, gender-based violence, handwritten wills, history of cities, human rights, human trafficking, indigent defense, legal research and writing, mergers and acquisitions, natural resources, post-conviction relief, property, race and the law, taxation, unpaid wage cases, violence in informal property systems, workers justice and zoning regulations.
- High faculty effectiveness, according to recent student evaluations.
- Compliance with the University Academic Policy addressing diversity in recruiting and hiring faculty.
- Advertise faculty positions in a range of publications and on listservs likely to reach a wide array of applicants.
- Compliance with the Association of American Law Schools Statement of Good Practices for the Recruitment and Retention of Minority Law Faculty Members.
- Of the 33 tenured or tenure-track faculty as of Spring 2016:
  - 15 are female and 18 male.
  - 24 percent is racially diverse: eight (six women and two men) self-identify as people of color.
- A Community Life Committee organizes service projects, social gatherings and other community building events throughout the year.

**Weakness:** Diversity can always be increased.

**Challenge:** Recognizing that despite the successes, this is a continual goal rather than one that is “reached.”

**Priority: Create budget certainty by addressing court filing fee uncertainty and creating stable funding for long term planning.**

**Strengths:**

- Increased annual expenditures from \$11.97 million in 2011 to \$14.23 million in 2015.
- Current prepaid building debt balance \$1.2 million.
- Creating a Dean’s Circle, which will work with the dean to address the immediate challenges and help create a reserve of discretionary funds for critical needs.
- Starting the public phase of Campaign Arkansas in September 2016.
- Policies and practices in place for both short and long-term financial planning.
- An active development staff and the support of the university.
- A modest operating reserve.
- University costs are posted daily. The budget director can access current information about resources and costs.
- Books are closed out monthly to allow regular reports about our financial situation.

**Weakness:** Funding is generally stable, but the continued decline in court fees funds as a source of state revenue is an ongoing concern.

**Challenge:** The general economic climate for law schools.

**Walton College**



May 23, 2016

Dear Chancellor Steinmetz and Campus Planning Team,

We are writing the requested memo to summarize the accounting department's strengths, weaknesses and challenges with an eye toward our future. We are delighted you would ask us for our input. We presented to you and your team in early April and this summarizes that discussion.

## Background

We staff the undergraduate in accounting, the integrated MAcc program, the MAcc program and the PhD program in accounting. We also house the business law department.

We feel that we are a solid, top-20 public department, but that we can quickly lose that if we don't carefully stay on task and attend to compensation issues, teaching loads, credit hour production, etc.

## Strengths

- **Retention and Graduation:** As of the most recent statistics, we had 89.2% retention after the first year (compared to the university rate of 82%). And our graduation rate after six years is 88.1% (compared to the university rate of 62.5%).
- **Placement:** We placed 88% of our undergraduates and 89% of our MAcc students by graduation at salaries greater than \$51,300. The demand for our students is very strong. We believe we could easily place 100 more students each year.
- **Top 20 Public Research Ranking:** We ranked 17<sup>th</sup> public in accounting research; 7<sup>th</sup> public in archival accounting; 4<sup>th</sup> in archival audit research and 2<sup>nd</sup> in archival AIS research (Source: BYU Rankings)
- **PhD Placements:** With our strong research profile, we are placing our PhD students at schools like Vanderbilt, Missouri, Virginia Tech, Tennessee and BYU.

## Weaknesses

- **Compensation Behind Market:** We are 10-20% behind market salaries of our benchmark institutions. We have lost five faculty this year primarily due to compensation (and teaching load, see below). If this is not remedied, we will likely lose more faculty soon.

- **Teaching Load:** Despite the top 20 ranking in accounting research, our research-active faculty have excessive teaching loads compared to benchmark institutions. We teach four courses compared to three courses for virtually all of our competing schools. It is difficult to retain faculty when our workload in terms of both number of classes and number of students in the classroom is so much higher than the benchmark schools.
- **Largest Credit Hour Production in WCOB:** We teach 11,328 credit hours in our department (in Fall 2015), more than 3,000 credit hours more than the next highest producing WCOB department (ISYS). Per tenure-track faculty member we teach 944 credit hours (in Fall 2015). That is more than 150 more credit hours per tenure-track faculty member than the next highest producing WCOB department.
- **Reliance on Too Many Adjuncts:** Given our dramatic growth in accounting majors and MAcc students, we rely to an overwhelming extent on adjunct professors. While adjunct professors have an important role, it is hard to depend on them to carry out many of our core courses.

### Opportunities

- **Grow Graduate Enrollment:** We feel we could grow our MAcc program from 55 to 80 students or so students with one additional clinical faculty member. We have a proposal ready for the university and college to consider.
- **Online Opportunities:** We feel we could grow our online programs with an undergraduate degree in accounting, an online MAcc degree, as well as business certificates and self-paced courses and even potentially a masters of taxation online. This makes these degrees available to a wider audience. We believe they will give additional financial and teaching resources to the department, college, university and global campus.
- **More Tenure-track Faculty:** We believe more tenure-track faculty will allow us to keep and improve our research and teaching quality. Our tenure-track faculty numbers has not changed in 20 years; whereas our student load has at least doubled. We believe we would be much more effective with sufficient faculty.

So, in summary, we think we have made dramatic progress and on many dimensions are ranked among the best in the nation, but don't have sufficient resources to staff our current classes or potential future ones.

I really appreciate this chance to share our vision.

**May 24, 2016**

**To: Chancellor Steinmetz**  
**From: Bill Curington**  
**Chair, Department of Economics**  
**Subject: Economics Academic Department Meeting Follow Up**

### **Department Overview**

The Department of Economics administers undergraduate economics major and minors in both the Walton College and the Fulbright College, MA and PhD programs in economics, and the Walton College Bachelor of Science in International Business. The Fall 2015 enrollment in these programs was as follows:

- 478 Walton College BSBA Econ majors
- 90 Fulbright College BA Econ majors
- 138 Econ minors (both WCOB and Fulbright)
- 362 BS International Business degree students
- 14 MA and PhD students

The enrollment in the Walton College economics major has increased by 316 percent in the last five years (Fall 2010 – Fall 2015). Undergraduate economics majors have won a number of nationally competitive awards (Truman, Rhodes, Freeman-Asia, Fulbright, and Boren Scholarships). At the Spring 2015 commencement, 74 percent of undergraduate economics majors had been placed in employment with an average salary of \$47,278. In the last five years, all doctoral students have been placed in academic or business/government positions with the most recent placement being with the U.S. International Trade Commission.

As of Fall 2016, the department faculty will consist of seven professors, one associate professor, seven assistant professors, one clinical professor, and three clinical assistant professors. In the 2014-2015 academic year, economics courses enrolled 5762 students and produced 17,258 SSCH --- 35 percent more than the next Walton College department. The economics courses include three University core courses (ECON 2013, 2023, and 2143) and thus touch numerous students across the University. The department also teaches core courses for other doctoral programs.

The department's FY 2016 financial resources consisted of a maintenance budget of \$30,857 and a leadership allocation from the Walton College endowment of \$25,500. Unlike other Walton College departments, the Economics Department does not have a departmental endowment. The department also has the fewest number of endowed faculty in the Walton College.

### **Strengths and Strategic Direction**

Over the last five years, the department has been building on our strengths via focused faculty hiring in two areas of specialization: 1) experimental and behavioral economics and 2) international economic development and trade. Of the fifteen tenure-track faculty, five specialize in experimental/behavioral economics (1 professor and 4 assistant professors). Six of the faculty specialize in international development and trade (3 professors and 3 assistant professors). The department has chosen to enhance or strength in these fields because they align with the Walton College's strategic goals in retail, supply chain, and globalization.

***Experimental/Behavioral Economics:*** The department has a growing international reputation in experimental economics – a method of using laboratory experiments to test economic hypotheses. The Walton College houses the Behavioral Business Research Lab (BBRL) which is a world-class facility for lab research in a variety of business disciplines. Cary Deck is the Economics Department's senior researcher in experimental economics and serves as the BBRL Director. Dr. Deck is a research affiliate at the experimental lab of Nobel Laureate Vernon Smith and has published 30 refereed journal articles in the last five years. The four junior faculty in this field have very active research programs and are quickly adding to the department's reputation. A visiting scholars program has enhanced the department's efforts recently.

***International Economic Development and Trade:*** There are significant research and teaching components to the department's strength in trade and development. Highlighting the recent research in this field are a World Bank grant for field experiments in Indonesia, pathbreaking research on the impact of foreign aid using NASA satellite data, and extensions of network analysis to study international trade and global supply chains. The department jointly hosts an annual conference on network analysis with a research institute in Montreal. In contributing to the Walton College's global education goals, the department manages the Bachelor of Science in International Business degree program. Departmental faculty lead summer study abroad programs in China, Brazil, Japan, Belize, Mozambique, Vietnam, and teach summer classes in the University's Rome Center. Dr. Amy Farmer directs the University's Global Community Development Program and three departmental faculty have led the Walton College's Global Engagement Office.

***Research Productivity:*** During the 2014-2015 academic year, departmental faculty published 18 refereed journal articles and had 16 more accepted for publication. The department's research productivity is enhanced by the faculty's willingness to collaborate both within and outside the department. The department has had research collaborations with the Education Reform faculty, the Center for Advanced Spatial Technologies, and faculty in experimental psychology. Two faculty members, Amy Farmer and Gary Ferrier have been recognized in a European Economics Association study as being among the top two percent of economists worldwide based on the volume and citations of their research. In the 2015 world ranking of the top 200 economics departments based on research productivity (<http://www.shanghairanking.com/SubjectEcoBus2015.html>), the University of Arkansas was in the 51-75 group. South Carolina and Vanderbilt in the SEC are in the same group while Texas A&M (28<sup>th</sup>) is the only SEC school with a higher ranking.

***Teaching Excellence and Innovation:*** The department has a history of teaching excellence. Four faculty are members of the Teaching Academy and several have served as directors of the Teaching and Faculty Support Center. Robert Stapp, Clinical Professor, has won every teaching award at the University and several external awards. The department is the home for the Bessie Moore Center for Economic Education, a nationally recognized resource for K-12 educators.

The department pioneered the use of supplemental instruction in the Walton College, developed the curriculum for the Bachelor of Science in International Business, and played a lead role in the development of the online BSBA degree. Under Robert Stapp's leadership, the department has implemented a teaching development program for economics doctoral students. This consists of a progression of teaching responsibilities through the department's courses, a monthly teaching seminar, and periodic classroom visits with feedback. The impact of this program is being seen in the students' academic placements

**Outreach:** Two of the Walton College's outreach centers are affiliated with the department: the Center for Business and Economic Research (CBER) and the Bessie Moore Center for Economic Education. The department and CBER produce the Survey of the Labor Market for PhD's in Economics which is presented annually at the American Economic Association Annual Meeting. Jointly with CIRANO, a research institute in Montreal, the department hosts the annual Conference on Networks in International Trade and Finance.

### **Challenges and Opportunities**

The greatest challenge facing the department is funding for research, graduate assistantships and undergraduate scholarships.

**Research funding:** Experimental subject payments are essential to the department's research in experimental economics. Without sustained funding (about \$3,000 per study – or \$30,000 per year), the department's growing international reputation in experimental economics will decline. Research in international economic development and trade entails periodic travel and data collection in emerging markets. Without sustained funding for the international travel associated with this research, the department will not be able to sustain our strength here either. The department's development efforts have recently led to a planned gift, the Joseph A. Ziegler Experimental Economics Excellence Fund. Plans are being pursued to develop annual funding through the Ziegler fund.

**Graduate Assistantships:** While the economics doctoral program has shown marked improvement, progress is hindered by the number of students supported and the time period of their support. Currently 13 students can be supported, so we can admit cohorts of 3-4 students expecting them to be on assistantship for four years. Our own experience and that of benchmark schools shows that, if students can be supported for five years, publications that result significantly improve the quality of subsequent job placements. Ideally, the department would have twenty graduate assistantships to support cohorts of four students for a five year program.

**Undergraduate Scholarships:** At the undergraduate level, the department only had three small endowed scholarships allowing, most recently, twelve annual awards of approximately \$400. In 2015, there were almost 100 applicants for scholarship funding.

**Endowed Chairs and Departmental Endowment:** With one fully endowed chair (Martin Chair held by Amy Farmer), one endowed professorship (Epley professorship held by Gary Ferrier) and one minimally endowed chair (ConocoPhillips Chair held by Raja Kali), the department has the fewest endowed positions of any department in the Walton College. In addition, every other department in the College has a departmental endowment to support departmental activities.

**Opportunities:** While increased University investment in the department would be welcome, as economists, we understand the challenges of allocating scarce resources. So, we face the opportunity/challenge of developing external funding sources. The challenge is that economics, as a discipline, does not have the same natural constituency as other business disciplines (e.g. accounting or finance). Our efforts to identify an external constituency include identification of alumni, many of whom are employed in positions where they do not directly use their economics training. We also seek to "sell" economics to the business community by making them more aware of the capabilities of our analytically and quantitatively trained students. We think that, with the right stimulus, the Economics Department future is bright.





May 16, 2016

## STATE OF THE DEPARTMENT

### *Teaching and Research*

The department offers a highly successful, well-received principles and practice-based education program. On undergraduate student enrollment and number of degrees awarded, finance majors rank 7th and 6th respectively which represent: 2.9% and 14.6% of university and WCOB student bodies; and 3.6% and 12.9% of university and WCOB degrees awarded. The graduation rate for finance majors is 82.5% compared to 59.4% for the university. First-year retention rates for finance majors and university at 82.1% and 82.4% are similar.

Using a balance of adjunct and tenure-track faculty, the department has significantly improved faculty teaching productivity in the last five years with an SSCH/FTE of 418 compared to 464 and 218 for the WCOB and university respectively. Faculty resources have not risen commensurately with higher teaching loads. In the last decade, there has been no change in the number of tenure-track faculty lines and no significant change in adjunct faculty compensation. EE&G expenditures to SSCH is \$333/credit hour for the department compared to \$351 and \$340 for the WCOB and university respectively.

The department, through the Garrison Financial Institute, supports experiential learning activities for finance majors. The department has the third oldest student managed investment fund and portfolio management classes at the undergraduate and graduate levels allow students to manage over \$10 million of real money. Over the years, many prominent Arkansans are alumni of the portfolio management classes.

The Garrison Financial Institute also sustains the Global Trading Center which has 62 workstations, a real-time data wall, 12 Bloomberg professional workstations, 25 Morningstar Direct subscriptions, TD Ameritrade "Think or Swim", S&P Capital IQ, Zephyr Style Analytics, and WRDS support. In the trading center, students have a window and access to financial markets that are available to financial professionals.

Additionally, the institute sponsors a guest speaker series which features exceptional individuals and assists students with securing internships at and supports student field trips to corporations and financial institutions in Fayetteville and Little Rock, Dallas-Fort Worth and Houston, New York City, St. Louis and Kansas City, and Bartlesville OK.

Last but not least, the department advances lifelong student success. Career placements span asset management, investment banking, corporate and energy finance and average salaries have risen in the last 5 years. 90% of finance majors are placed at graduation at average salaries that are above the college.

At the graduate level, the department has 4 of 11 tenure-track faculty involved with the WCOB MBA programs; and 9 of 11, in the finance doctoral program. There is an average of 12 students in the doctoral program and an average 2 to 3 students graduate each year.

The department successfully recruited three new tenure-track faculty in the last five years

which significantly raised research competencies and productivity. Department faculty have published in leading finance and economics journals and serve on editorial boards. The teaching responsibilities associated with a large number of students in undergraduate and graduate programs impairs research productivity. Department faculty have higher teaching loads and mentor more doctoral students than their colleagues at peer or aspirant universities. The availability and amount of summer research support is also insufficient for tenured faculty.

### ***Service***

To advance financial literacy, the department offers two undergraduate courses in finance which are university electives. A junior level course in Personal Finance represents 2.1% of total SSCH at the Walton College. A new freshman level course on Money & Credit, initiated in 2010 to address financial stress as a critical factor in prompting student dropouts to seek employment to service debt, saw significant student interest and represents 1.2% of total SSCH at the Walton College. A recently approved new concentration in Energy Finance is an interdisciplinary program which involves the Accounting and Geology departments. A new concentration in Actuarial Science in conjunction with Mathematics department is in progress.

Through the Garrison Financial Institute and participation of its board members, a state-wide program on retirement for senior citizens sponsored by the Investor Protection Trust and with the support of the Arkansas State Securities Department and Arkansas Library System was a huge success. AETN aired the program and audio-visual materials are available to the general public.

Last but not least, through the Garrison Financial Institute, department faculty maintain and develop industry relationships recognizing that these relationships are important in making students aware of key issues of the day and in advancing opportunities for student internships and careers. Industry relations are with national as well state regulatory agencies, global professional certification organizations, and local financial institutions.

### **PRIORITIES**

Faculty salaries in the department are well below colleagues at peer and aspirant universities ranging from 12.5% to 41.5%, and across assistant, associate and full professor ranks ranging from 19% to 26%.

The department needs additional tenure-track faculty lines to meet higher demands of research expectations and graduate programs. In addition, the availability and amount of summer research support is also insufficient for tenured faculty.

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**Mission:** "A top 5 Information Systems Department with a significant global impact is guided by World-class Enterprise Systems. World-class Enterprise Systems drive our Excellence in Research, Excellence in Teaching and Excellence in Outreach; creating a synergy where the whole is much greater than the sum of the parts."

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## STRENGTHS

**Research:** The primary focus of ISYS faculty's research is on behavioral and organizational issues related to the management, development, use, and performance of information systems, with some research on: health informatics, social networks and social media, enterprise computing, business analytics, and big data. ISYS ranks consistently in the top 5 schools in the world in publications in the leading information systems journals. For example, we published 13 articles in the top two ISYS research journals (*MIS Quarterly* and *Information Systems Research*) during 2013-15 and are ranked joint 1st worldwide for research productivity (<http://top100.utdallas.edu/>). We published 9 papers in these journals, and ranked 4th worldwide, in 2007-9. Thus, the department is a leader worldwide in research productivity, and its productivity has increased over time, despite a drop in TTT faculty (from 13 during 2007-9 to 10.67 during 2013-15). Seven of the current ten TTT faculty have published in these journals in the past five years. One of the department's faculty members (Dr. Venkatesh) consistently ranks among the top three ISYS researchers worldwide, while another (Dr. Sykes) recently ranked first in research productivity among ISYS assistant professors who received a Ph.D. after 2000. The research productivity of ISYS faculty enables excellent placements of Ph.D. students (e.g., Indiana, HEC-Montreal, Cincinnati, and Alabama).

**Service:** ISYS faculty perform directorships of the Institute for Advanced Analytics and the Information Technology Research Institute. They have been playing important roles on campus, including in the Higher Learning Commission accreditation, the interdisciplinary Master of Statistics and Analytics, and the Teaching and Faculty Support Center. They serve as editor-in-chief or senior editor at prestigious journals, and often receive awards for service,

research, and teaching from the Walton College, the University of Arkansas, and beyond (e.g., IBM Big Data and Analytics Faculty Award, Sam Bruno Lifetime Service Award, and AIS Fellow Award).

**Outreach and Engagement:** ISYS has excellent connections with senior industry executives at IT vendors as well as other companies. Departmental faculty visit companies regularly to maintain the strong ties. Strong industry connections with companies such as Acxiom, Conoco-Phillips, Dillard's, General Motors, Hewlett Packard, J.B. Hunt, IBM, Phillips 66, SAP, SAS, Teradata, Tyson, and Wal-Mart: ensure that they are aware of the excellent quality of our students; provide us with insights into how to best prepare our students; and enable frequent class visits by industry executives.

The strategic partnerships with major IT renders enable us to have an excellent **technology infrastructure**. We have real, large-scale enterprise systems similar to Fortune 500 companies. By combining the latest enterprise technologies with large, realistic databases from Acxiom, Dillard's, Hallux, Sam's Club, Tyson, and Nielsen, we provide outstanding educational benefits to the University of Arkansas faculty and students as well as external academic users. Since Fall 2011, the ISYS department has helped raise an average of about \$22.5 million per year (a cumulative total of about \$113 million over five years) in on-going in-kind gifts from IBM, Microsoft, SAP, SAS, and Teradata).

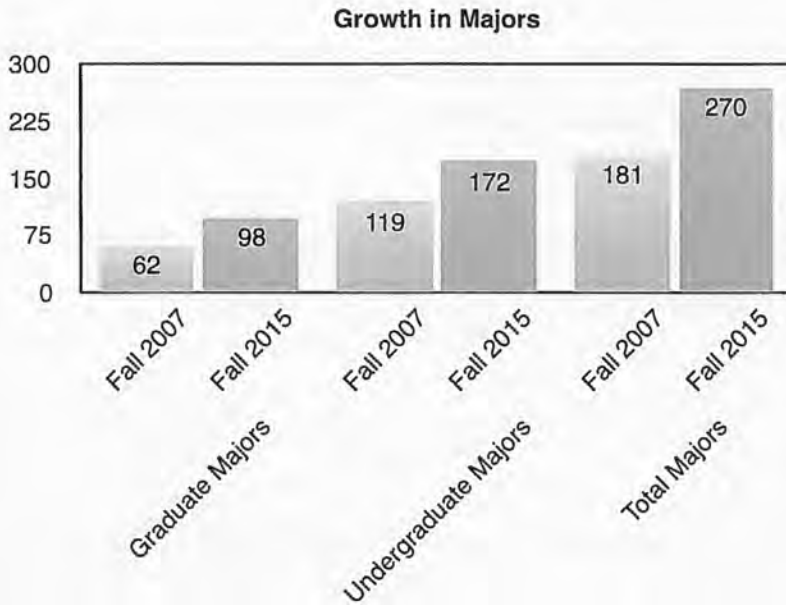
**Teaching and Learning:** The excellent quality of our faculty, technological resources, industry connections, and continued strong support from the Walton College and the university enables us to offer strong and innovative programs at both graduate and undergraduate levels. **Continuous programmatic innovations** include creating and offering: a graduate certificate, an undergraduate concentration, and a Walton College minor in Business Analytics; and

blended delivery formats for the Professional MIS program and graduate certificates. In addition, we were able to obtain **STEM designation** for our programs in 2014. The department currently offers: a

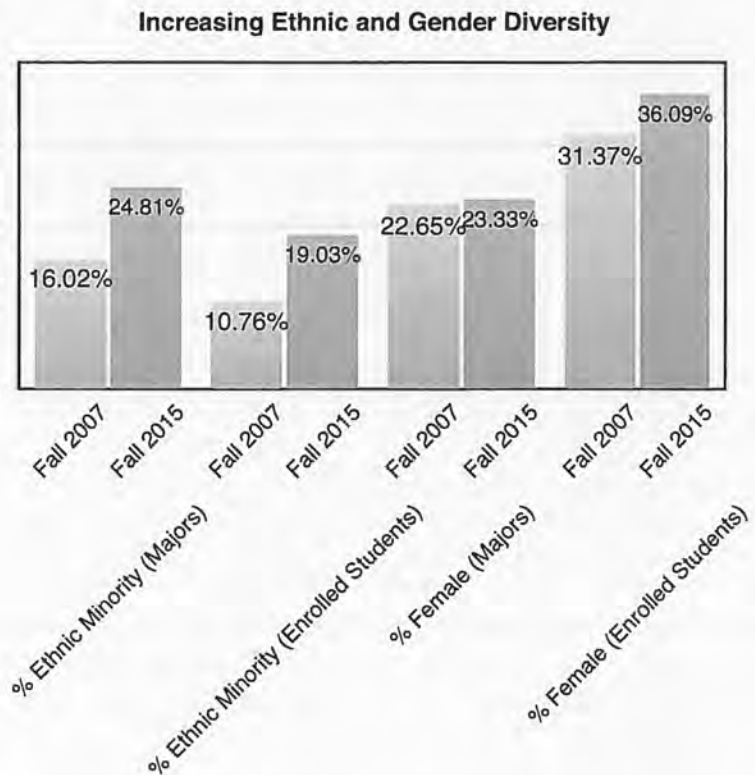
Our programmatic innovations have led to **sustained growth** in both ISYS majors and ISYS enrollments. From Fall 2007, undergraduate, graduate, and total ISYS majors have grown by 58.06%, 44.54%, and

49.17%, respectively. Similarly, enrollments in all ISYS courses have increased by 43.10% from 2007-8 to 2015-16. The growth in majors and enrollments has been accompanied by **an increase in diversity** of our students in terms of both ethnicity and gender. From 2007-8 to 2015-16, the ethnic minority in ISYS majors and ISYS enrollments has increased by 54.9% (16.0% to 24.8%) and 76.8% (10.8% to 19.0%), while female percentage in ISYS majors and ISYS enrollments has increased by 3.0% (22.7% to 23.3%) and 15.0% (31.4% to 36.1%).

We focus on small class sizes due to pedagogical reasons, but attract **excellent students**, who perform well in the programs and subsequent



Full-time and a Professional Masters in Information Systems degree; three Graduate Certificates; three undergraduate concentrations; and two undergraduate minors. The department also offers Business Analytics curriculum through interdisciplinary programs at both the campus level (Master of Science in Statistics and Analytics) and the Walton College level (minor in Business Analytics). The department also leads the development and delivery of a new online remedial course to enhance computer competencies. The continual evaluation and enhancement of the department's curricula is led by excellent faculty (who include a distinguished professor, a university professor, and three members of the University of Arkansas Teaching Academy) and based on insights through our strengths in outreach and research. Continual improvements in our programs and pedagogy led to the ISYS department receiving the Walton College Innovation Award in 2014.



careers. This leads to positive outcomes such as high level of learning, student satisfaction and

consequently low attrition, and excellent performance in obtaining internships and jobs. In 2014-15, 92% of ISYS graduate students and 93% of ISYS undergraduate students who were seeking jobs had one or more job offers prior to graduation, compared to national averages (obtained from annual survey by Association of Information Systems) of 65% and 80%, respectively. The mean starting salaries of our graduate and undergraduate majors was \$89,900 and \$57,200, respectively, compared to national means of \$67,600 and \$57,800.

## CHALLENGES AND WEAKNESSES

**Research:** Other universities seeking to improve their research, teaching, or outreach often approach our excellent faculty. For example, one of the department's distinguished professors, Dr. Davis, was successfully pursued by Texas Tech University, and left us in Fall 2015. Although we are optimistic of successfully replacing him with another top scholar in the field, we are susceptible to our other faculty being similarly targeted by other schools.

**Outreach and Service:** Our strong industry connections (and the resulting excellent IT infrastructure) depend considerably on the relationships carefully nurtured by Drs. Douglas and Cronan. These esteemed colleagues have been increasingly mentioning potential retirement. We have been preparing to sustain the industry connections in their absence, but it will be tough to replace them as their strong industry ties have been developed over more than three decades.

**Teaching and Learning:** The growth in ISYS enrollments, students majoring in ISYS, and variety of courses and programs, has been achieved despite a decrease in TTT faculty from 13 to 10, and in total full-time faculty from 18 to 16, during the period from 2007-8 to 2015-16. This has created pockets of potentially compromised student learning, with less than 80% of sections being taught by FT faculty, and less than 50% by TTT or clinical faculty. The growth in students and programs also requires improvement and growth in computer labs for students, physical space, and IT support and infrastructure.

With several senior faculty performing service roles and reluctant to teach overloads, we are further

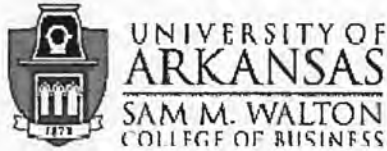
constrained in terms of ability to cover demanding courses, especially Ph.D. and masters courses, with the best possible faculty. Graduate courses are more difficult to fill using adjuncts. Dependence on Ph.D. students and part-time adjuncts for teaching is risky.

## PRIORITIES OVER THE NEXT FIVE YEARS

**Grow Strategically:** Employers seem to demand more students than we currently graduate. An important reason for our appeal to employers is that students are taught with considerable hands-on experiences and individual attention from instructors, which requires small class sizes. Moreover, we are planning to double the size of our masters program, and have been increasing efforts to market ISYS through newsletters, ads, sponsorships, receptions, etc. Therefore, to meet the increasing enrollments, as well as the demands for business analytics among MBA and EMBA students, we need to offer new courses and additional sections of current courses. Overall, growth needs to be pursued strategically, and enabled through the hiring of needed new faculty, to continue to excel in research while growing and innovating with high-quality programs.

**Nurture Faculty:** We need to minimize motivation for our best faculty (in terms of research, teaching, outreach, and collegiality) to enter into conversations with competing universities. Therefore, we should continue to be proactive in terms of salary raises, research and teaching support, and opportunities for growth and development.

**Enhance Synergies:** Opportunities exist to further leverage our strengths. For example, a departmental industry advisory board might help in more explicitly seeking industry inputs for curriculum development and student mentoring. Greater synergies could also be sought between the excellent research and programs (beyond the Ph.D. program) and between research and industry connections. We have been seeking opportunities for greater collaboration with other colleges at University of Arkansas (e.g., with industrial engineering and computer science in the College of Engineering). We will seek to strengthen these connections through more frequent dialogs. In addition, we believe there are opportunities for greater, and mutually beneficial, collaborations with other WCOB departments.



Business Building 402  
1 University of Arkansas  
Fayetteville, Arkansas 72701-1201  
(479) 575-4007  
(479) 575-3241 (FAX)

Management Department

MEMO

To: Chancellor Joseph E. Steinmetz

From: Alan Ellstrand, Chair, Management Department

Subject: Management Department Summary Report

Pursuant to your memo of January 12, 2016 and following-up on our meeting of March 4, 2016, the following is a report on the Department of Management in the Walton College of Business.

### **Faculty**

The Department of Management currently includes 11 tenured and tenure track faculty as well as two full-time clinical faculty distributed as follows:

- Full Professors: 9
- Assistant Professors: 2
- Clinical Professors: 2

One of our Assistant Professors was recently promoted to Associate Professor with tenure and a newly hired, advanced Assistant Professor will be joining us in fall 2016. We will also be recruiting to fill an Assistant Professor position. When we successfully fill this position, we will have 13 tenured or tenure track faculty to begin the 2017-18 academic year. Seven of our faculty have endowed positions.

Our faculty provide a significant contribution to the leadership of the College and the University. Six of our 11 faculty hold key administrative positions:

- Anne O'Leary-Kelly—Senior Associate Dean
- Vikas Anand—MBA Director and Director of Strategic Planning
- John Delery—Walton College Honors Director
- Carol Reeves—Associate Vice Provost for Entrepreneurship
- Jon Johnson—Founder and Chair of The Sustainability Consortium
- Alan Ellstrand—Chair, Department of Management

The leadership we provide to the College and University is a reflection of the experience and talent of our faculty. While we are grateful for the opportunity to serve the institution in these important positions, it is a key challenge for our department and limits our ability to perform our core functions. Nonetheless, in spite of these administrative demands, we continue to be remarkably productive in terms of research, teaching and service.

### **Research**

Our faculty include world-class scholars in both micro and macro fields of management. Our research expertise is well known among the community of management scholars in the following areas:

Micro	Macro
Negative workplace behaviors	Corporate governance
Organizational identity and identification	Top management teams
Compensation	Ethics and corruption in organizations
Strategic human resources management	Corporate social responsibility
Employee motivation and performance	Lobbying and government/business influence
Social class	Sustainability

Our department was ranked 54<sup>th</sup> among 180 management departments included in the Texas A&M Research Productivity Rankings in 2014. Over the period 2010-2014 we were ranked 64<sup>th</sup> out of 293 departments listed. We have a core group of very productive young scholars (Chris Rosen, Jennifer Kish-Gephart and Jason Ridge) who will continue our strong research tradition well into the future. Our research is consequential and widely cited—eight of our faculty have been cited over 1,000 times and collectively our work has been cited by management researchers over 25,000 times. Our faculty serve on the editorial boards of most of the top-tier management journals and our faculty have held leadership positions in our professional society, the Academy of Management.

We have a vibrant doctoral program with 11 PhD students. Our recent doctoral student placements include the University of Rhode Island, Colorado State University and Miami University. Other graduates of our doctoral program have faculty positions at the University of Minnesota and Hong Kong Polytechnic University. One of our graduates is the incoming editor of the discipline's leading journal, the *Academy of Management Journal*.

### **Teaching**

Management faculty contribute to the teaching mission of the Walton College at all levels. Our department offers three concentration areas at the undergraduate level including leadership, human resources management and entrepreneurship. We also offer three undergraduate core classes and five on-line courses. Our department is the greatest contributor to our Executive MBA program, and we also offer several classes to our full-time MBA program. At the doctoral level, we offer four management seminars and provide the research methods seminar to PhD students across the College. We are increasing our involvement in executive education programs by developing programs in human resources management and strategic management for business executives.

We offer innovative classes including SAKE (Students Acquiring Knowledge through Enterprise), a successful student-run business. This year we implemented a new version of this class, SAKE Innovation Lab—a class designed to encourage students to develop new product ideas to be marketed through SAKE. We are also developing a social entrepreneurship program that will include classroom experiences and practical experiences in the community and across the globe. Our department has offered an India Study Abroad program to students since 2007. Well over 100 students have visited India through this program making it one of the most successful study abroad programs on the University campus.

Our faculty have received a great deal of recognition for their excellence in teaching. Four members of our department are members of the University of Arkansas Teaching Academy. Three of our faculty have won University-level teaching awards. In addition, our colleague Carol

Reeves is the top faculty advisor for student business plan teams in the world. Her teams have won nearly \$2.5 million in cash prizes at business plan competitions. In addition, her successful teams have resulted in 19 business start-ups that raised almost \$50 million in venture capital.

### **Students**

We have a growing undergraduate Management program with over 400 majors across the concentration areas of Organizational Leadership (179), Human Resources Management (158) and Entrepreneurship (80). We also have responsibility for administering the General Business program for 183 majors.

In 2015 our students had a 77.9% six-year graduation rate and 85% were placed at graduation. Starting salaries for Management majors averaged \$47,120 in 2015. Our students were placed in a wide variety of businesses including J.B. Hunt, Walmart, Tyson Foods, Arvest, and Unilever.

### **Specialization Areas**

#### *Entrepreneurship*

In addition to her success with our business plan teams, Carol Reeves, Associate Vice Provost for Entrepreneurship, offers an annual Commercialization Retreat that brings innovative faculty from five campuses together to discuss innovative research ideas. The program has resulted in numerous joint grant proposals and research projects. Additionally, our emerging social entrepreneurship program will offer students a variety of programs designed to support worthy causes locally and throughout the world.

#### *Sustainability*

Jon Johnson, Founder and Chair of The Sustainability Consortium, has emerged as a leading expert in the area of business sustainability. The Sustainability Consortium comprises over 180 organizations including corporations, NGOs and educational institutions, and is responsible for developing an innovative sustainability measurement and reporting system for consumer goods. The Sustainability Consortium and its predecessor organization, The Applied Sustainability Center, have raised over \$38 million in support of sustainability initiatives.

### **The Future**

Over the next five years, the Department of Management will continue its tradition of excellence in research, teaching and leadership to the College and University. Important priorities for the future include:

- Research support—Research is a key strategic initiative area of the Walton College and continuing our strong support of research is critical to the success of our department. We will continue to seek endowed positions to support our most productive faculty.
- Entrepreneurship—As a key strategic initiative area of the Walton College, developing our entrepreneurship program will be a priority area for the Department of Management. We intend to hire additional entrepreneurship faculty and develop research expertise in this area. We also anticipate building our social entrepreneurship program.
- Interdisciplinary programs—Developing interdisciplinary partnerships across campus will help to connect the Management Department with other areas of excellence throughout the University. Our expertise in entrepreneurship and sustainability positions us well to facilitate these cross-campus affiliations.



*Spring Meeting with Chancellor Steinmetz  
Department of Marketing, Walton College  
Jeff B. Murray, Department Chair*

**Introduction**

On April 15, 2016 the Department of Marketing in the Walton College met with Chancellor Steinmetz, Laura Jacobs, and Marcia L. Overby. The purpose of this meeting was to present departmental strengths, weaknesses, and the priorities and direction for the department over the next five years. The presentation covered the traditional mission areas of research and service, teaching and learning, and outreach and engagement. Ten faculty members from the Department of Marketing spoke at the meeting including: Dub Ashton, Scot Burton, Betsy Howlett, Molly Jensen, Tom Jensen, Jeff Murray, Molly Rapert, Sue Sedberry, Ronn Smith, and Anne Velliquette.

**Marketing Department Story**

In terms of the number of majors, the Department of Marketing is the largest department in the State of Arkansas with 893 majors, 381 minors, 42 retail majors, 23 retail minors, 178 graduates in 2015, and 6 doctoral students. The department's first year retention rate is 84.5% and the sixth year graduation rate is 83%. The Marketing Department believes in paradigmatic diversity and encourages each professor in the department to nurture a distinctive academic identity. Yet, at the same time, we can recognize common threads. These common threads define the department's strengths and opportunities. The most general thread can be described as *shopper marketing*. Faculty in the department investigate the cognitive, behavioral, and cultural dimensions of this phenomenon. Other faculty apply what is learned from these dimensions and create innovative marketing plans and strategies. Shopper marketing fits well with retailing and consumer insights, areas of strength in Northwest Arkansas given the presence of Walmart and the vendor community. The dominant methodological orientation in the department is experimental, making the Behavioral Business Research Lab an important focal point. This type of research resonates well with the approach found in the Psychology Department and the cognitive research being developed in the Music Department. Research in the cultural dimension resonates well with research taking place in the Sociology and Anthropology Departments. This cultural dimension also connects in interesting ways to some of the research taking place in the Classical Studies Department, particularly the current research examining market system dynamics in ancient Rome. Thus, there are some creative

connections between the Department of Marketing and the Fulbright College. This discussion brings us to department strengths.

### **Marketing Department Strengths**

Three department strengths were discussed in the faculty meeting. First, the department's connection to public policy issues as they relate to market systems; second, our contribution to food marketing and health care; and finally, research and teaching in the field of retailing. Professor Scot Burton presented our connection to public policy. This connection focuses on studies at the intersection of consumer health and welfare and public policy. Published outcomes generally offer implications for consumers, CPG companies, retailers, and policy makers such as the Food and Drug Administration. Drawing on information processing models from the cognitive tradition in psychology, much of this research has focused on methods of information provision that has critical health and welfare implications. In general, the overarching goal has been to better understand the factors that influence and moderate consumers' judgment and choice processes, including effects on product evaluations, consumer beliefs, attitudes, purchase intentions, and choice outcomes. This department strength has resulted in two members of the marketing faculty being asked to serve as special external consultants to the Food and Drug Administration Risk Communication Advisory Committee.

Professor Betsy Howlett presented our contribution to food marketing and health care. This research stream includes a wide range of related subjects. Recent publications have investigated topics such as: 1) calorie labeling on menus for national chain restaurants; 2) front-of-package nutrition labels designed to aid consumers in obtaining information important to health; 3) graphic pictorial warning on tobacco packaging, and in advertising, to communicate risks of smoking; and 4) e-cigarette risk warnings (proposed recommendations from the Food and Drug Administration came out in 2014 and are pending).

Professor Tom Jensen presented research and teaching in the field of retailing. The University of Arkansas is 30 miles away from the headquarters of the world's largest business, Walmart (\$485 billion in revenue). Many of the other fortune 500 companies located in Arkansas such as JB Hunt and Tyson Foods owe at least part of their success and growth to Walmart. In addition, Walmart has attracted around 300 suppliers/vendors to open offices in Northwest Arkansas. Professor Jensen served as a consultant to Walmart marketing during 2014-2015 while he was on off campus duty assignment. Walmart executives often speak to classes and engage with

faculty and other business executives through the Center for Retailing Excellence that was formed as part of the Walton gift. The Center for Retailing Excellence has 57 member companies from supplier, logistics, and customer insights. This Center, the Marketing Department, and the Walton College have created a retail nexus that has funded research, led to a shopper marketing emphasis, and created an innovative retail major that is growing in popularity.

### **Marketing Department Challenges**

Three Department challenges, framed as opportunities, were discussed in the faculty meeting. First, our department's potential to engage with the new retail lab; second, our department's potential to contribute to service learning; and finally, challenges and opportunities related to growing our doctoral program. Ms. Sue Sedberry discussed the McMillon Innovation Studio. This is an interdisciplinary design lab currently engaging over 40 students from a range of departments across campus. The Studio creates opportunities for project managers, faculty research, curriculum assignments, extra credit, and testing of near-ready consumer products. The potential for this Studio is just now being discovered—we had over 150 visitors just last week—this focal point is bringing positive energy and public relations to the College.

Professor Molly Jensen presented opportunities related to service learning. The Department of Marketing is the only department in the college that has service learning classes in the regular semester and in the student catalogue; this includes both nonprofit marketing and integrated marketing communications. Our department is making this a strategic initiative for growth—we already represent 15.6% of all service learning on campus but we can do more.

Professor Ronn Smith presented opportunities related to growing our doctoral program. The department believes that the key to our research strategic initiative is a strong doctoral program. Currently, we have six full-time doctoral students. Given the number of faculty and the current developing research agendas, the ideal size of a doctoral program in marketing is 8-10.

In conclusion, the priorities and direction for our department in the future include: 1) hiring two new assistant professors for fall 2017; 2) continue to develop and nurture our strengths as discussed above; 3) increase involvement with the McMillon Innovation Studio; 4) development of our service learning initiative; and 4) grow and develop our doctoral program in marketing. If I can elaborate or provide additional information, please do not hesitate in getting in contact with me [jmurray@walton.uark.edu](mailto:jmurray@walton.uark.edu).



To: Dr. Joseph Steinmetz, Chancellor, University of Arkansas at Fayetteville  
From: Dr. Brent Williams, Chair, Department of Supply Chain Management  
Date: May 28, 2016  
RE: Department of Supply Chain Management Summary Report  
cc: Dr. Matthew Waller, Dean, Sam M. Walton College of Business

Dear Chancellor Steinmetz,

The Department of Supply Chain Management in the Sam M. Walton College of Business formed as a standalone department on July 1, 2011. At the time of this report, the Department is almost five years old. At the conclusion of this first five-year period of our history, the Department is a vibrant and growing department. In this report, you will find comments related to our perceived strengths and our directions and priorities for the future. Further, you will find comments related to our weaknesses, which present opportunities to strengthen the Department of Supply Chain Management and help the Department to achieve its future objectives.

#### Strengths:

A key strength of the Department is its research productivity. While our faculty of eight tenured or tenure-track faculty is relatively small, the Department was listed among the top five most research productive supply chain management departments in the world in a study published in 2012. Further, the Department was ranked fifth globally in empirical supply chain management research on the 2016 SCM List. These two rankings indicate that the Department is making a significant impact through our research. Our Department has been successful in creating a clear research identity. We are particularly known for our research in retail and consumer packaged goods supply chain management. This research reputation has served the Department and College well over the past five years.

Another key strength is our undergraduate program. This program has grown from just over 100 majors in 2011 to over 450 majors in 2016. This growth is at least partially attributable to the Department's dedication to teaching excellence. The size of the undergraduate program is particularly important to our external stakeholders. In particular, companies such as Walmart and J.B. Hunt cited the need for more talent as a reason for supporting the creation of the Department in 2011.

A third key strength is the Department's connection to industry. This linkage is largely facilitated through the Supply Chain Management Research Center. This Center has approximately 35 companies who actively engage with students and faculty. This linkage not only facilitates placement of students, but also facilitates collaborative research between faculty and those industry partners. We have also built a unique relationship with J.B. Hunt Transport Services, Inc. Through J.B. Hunt University powered by Walton, our Department regularly builds and conducts executive education programs for J.B. Hunt employees.

## Directions and Priorities:

Going forward, the Department of Supply Chain Management seeks to increase its research productivity, while at the same time, increasing our interdisciplinary research efforts and outcomes. The Department feels that solving today's complex problems requires an interdisciplinary approach. Thus, faculty members throughout the Department are intentionally building research relationships across campus. Thus far, we are actively engaged in research with faculty from the College of Engineering and the Bumpers College of Agriculture, Food and Life Sciences.

From an interdisciplinary perspective, we are also looking to build joint undergraduate programs where there is a market need. For example, we are working with the Department of Poultry Science to build concentrations where supply chain management majors can concentrate in poultry science, and vice versa.

The Department is also interested in growing graduate programs. Demand for supply chain professionals currently exceeds supply of talent by a ratio of six to one. This talent gap is projected to significantly widen in the coming years (U.S. Bureau of Labor Statistics). In response, the number of undergraduate supply chain management programs has increased 25 percent since 2006, according to AACSB, which is increasing the demand for qualified supply chain faculty. Therefore, we want to increase the size and quality of our Ph.D. program. Typically, the program has six students enrolled. We would like to get to a steady state of eight to ten students. This increase would also directly support the research productivity of the Department

In addition, the greatest need for supply chain professionals over the next 5-15 years is projected to be mid-career professionals. Given the shortage in supply chain management talent, many corporations are drawing talent from other functions and seeking to retrain them in supply chain management. Thus, the Department is interested in establishing a Masters program in supply chain management. Our sense is that the market for specialized graduate programs in supply chain management is ripe. We believe this is an important step in becoming a holistic program and serving an unmet and growing need.

In response to this need for mid-career, supply chain management education, the Department of Supply Chain Management would like to grow its portfolio of executive education programs. In particular, the Department is interested in growing online executive education programs. These programs will further increase our connection to our industry partners and create net revenue for the Department and the Walton College.

## Weaknesses:

In order to achieve our objectives, we will need to continue to grow our faculty and have greater flexibility in how we allocate faculty resources. While our student population has grown dramatically over the past five years, like the rest of the University, we have not been able to grow our faculty at a similar rate. In particular, our tenured and tenure-track faculty has only grown by one during these five years. However, we have been able to grow our clinical faculty. We have added three clinical faculty during this timeframe. It is important that we increase the

flexibility in how we structure the work of the clinical faculty. To maximize their potential, we must structure their workloads, such that they can contribute to the research priorities of the Department.

The Department must continue to build our research, teaching and executive education reputation in retail supply chain management. To do so, we must allocate the resources we currently have toward that objective, and as we obtain incremental resources, we must focus those resources on this objective as well.

In conclusion, we believe the Department of Supply Chain Management is a healthy, growing department. We would like to thank Chancellor Steinmetz and his staff for visiting our Department during the Spring semester. We enjoyed meeting you and look forward to your leadership of the University of Arkansas.

Sincerely,

A handwritten signature in black ink, appearing to read "Brent D. Williams". The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

Brent D. Williams  
Chair, Department of Supply Chain Management

# **Centers & Institutes**

The Arkansas Center for Space and Planetary Sciences (SCTR) serves two distinct but interrelated roles at the University. Created initially in 2000 with funding from NSF, it is a research center which maintains facilities, equipment, instrumentation, and associated infrastructure for interdisciplinary research over a wide range of topics in space and planetary sciences, with a growing engineering component. Additionally, the Space Center administers the interdisciplinary graduate degree programs in Space and Planetary Sciences (SPAC), created in 2005. The great majority of graduate students conducting research in the Center are PhD students in SPAC. As a result, SCTR and SPAC function together as an integrated research and graduate education organization.

## I. Summary Metrics

**Budget:** VPRED provides 2 months of summer salary support for the SCTR Director, up to 25% salary support for the Research Assistant Professor, up to 80% salary for the lab manager, and \$2500 per year in operating expenses. RIF provides major funding for lab operations. Total annual non-RIF budget for Space Center operations, including salaries, is \$75,000.

### Faculty and staff:

Staff: 1 full time lab manager

Participating faculty: 15 who are full time in their respective home departments; 1 full time Research Assistant Professor in SCTR

### Student researchers:

SPAC majors: 15

Other majors (grad and undergrad): 6

### SCTR research funding:

	Research funds in effect	Proposals submitted	Proposals newly funded	New research funding
2014-2015	\$2.5M	28	8	\$1,300,000
2013-2014	\$2.7M	17	10	\$181,000
2012-2013	\$2.5M	27	9	\$782,000

### Annual research output directly related to SCTR (Average over past three years):

Peer-reviewed journal articles and book chapters: 23

Presentations at national and international conferences: 50

**Teaching:** In addition to teaching in their home departments, participating SCTR faculty teach 8 courses per year in the SPAC graduate degree program

## II. Strengths

**Interdisciplinarity:** Participating faculty are from SCTR, BISC, ELEG, GEOS, MEEG, and PHYS. Most SCTR research involves faculty from multiple departments.

**Quality and diversity of graduate student researchers:** 45 different undergraduate institutions, 15 DDF and DAF fellowships since program began, 18 female SPAC graduates produced out of 33 total.



**Placement of program graduates:** SCTR researchers who become SPAC graduates are highly sought after in the space science and engineering communities. A partial list of placements includes: NASA – Johnson Space Center (3), NASA – Jet Propulsion Lab (2), NASA – Ames Research Center (2), NASA – Marshall Space Flight Center (2), NASA – Glenn Research Center, NASA – Goddard Space Flight Center, Northrup-Grumman, Southwest Research Institute (2), Bear Fight Institute, UC-Boulder, Harvard University, Brown University, UC-Riverside, University of Connecticut, Swinburne University (Australia).

**Successful research funding:** SCTR is averaging about 2.5 million dollars each year in active research grants. Although most of the dollars are from NASA, there are numerous smaller grants from the Arkansas Space Grant Consortium and small collaborative efforts with other universities.

**Excellent research productivity:** SCTR research results in over 20 refereed journal articles and 50 national and international conference presentations per year. Virtually all of the journal articles have student co-authors and the majority of the presentations are delivered by student researchers.

**Diverse outreach program:** SCTR researchers are in constant demand as speakers for K-12 programs, averaging over 10 off-campus events per year. We also offer public astronomy observing sessions through the SPAC-student-led SPACE Hogs astronomy club and a meteorite identification service for the public, which usually results in disappointment.

### **III. Priorities and directions for the next five years**

**More Center-wide funding:** We now have sufficient faculty to begin seeking larger, center-type funding, in addition to our typical specific science and engineering research grants. This may require appropriations funding to acquire the types of additional laboratory resources necessary to be competitive.

**More collaborative funding:** We will seek new opportunities to collaborate with other universities and research organizations to develop multi-institutional research programs. We have done this to only a very limited basis thus far, but it is a model which has proven successful for others.

**Increased number of faculty:** Although we have a strong core of dedicated faculty, we need to attract more young faculty into the program. Adding more departments is also of interest. (CHEG and CHBC were previous participants, but the individual faculty involved with SCTR are no longer at the University.)

**Increased number of student researchers:** We have the facilities and faculty to support about 25-30 graduate student researchers and would like to grow to that number. This will require more research funding and university-supported TA/GA positions.

**REU funding:** Our previous REU summer programs were an excellent source of potential grad students. We have not been successful recently in obtaining continued NSF support for those programs but will continue trying to do so.

### **IV. Resources and university commitments needed to become stronger**

**Graduate student funding:** Our biggest issue is grad student recruitment. Without the SPAC students, we cannot perform our research functions. We can easily attract some of the best students in the country, but the mechanics of making them assistantship offers is severely hampering our efforts. We have only a single dedicated GA position, provided by GSIE. We are totally reliant on the participating departments for TA positions, and, although they are generally supportive, their own students take priority. At the time when

offer letters are being sent to prospective new grad students, it is impossible for us to predict how many students we will be able to support. This can be corrected with a combined approach: additional, dedicated GA positions that we may use at our discretion, and TA positions reserved for us whereby we can place our qualified students into participating departments as TA's.

**SPAC program support:** Although not a direct SCTR issue, staff support for the SPAC graduate degree programs is seriously needed. Currently, SCTR faculty are spending significant time processing grad student paperwork that would normally be a staff function.

**Permanent research positions:** The single Research Assistant Professor in SCTR is responsible for the majority of the funding and research output. It is, however, a soft money position. A permanent, funded position for him will cement his relationship to the University and release grant funds to be used for graduate student support. In addition, a funded post-doc position will relieve faculty of many of the organizational chores associated with the research programs.

## **ARKANSAS HIGH PERFORMANCE COMPUTING CENTER (AHPCC)**

Computational Science (not to be confused with computer science or computer engineering, though it relies on these disciplines) is the “third leg of science” accompanying both theoretical and experimental practices. A significant portion (and growing daily) of research domains could not exist without significant computational resources far beyond what the desktop can provide. The Arkansas High Performance Computing Center (AHPCC) provides the necessary expertise, high performance computing hardware, storage, support services, and training to enable computationally- and data-intensive and research on the University of Arkansas Fayetteville campus. AHPCC resources and staff are available to faculty, staff and students at all of the Arkansas public universities, and to their collaborators inside and outside of the state.

### **Background**

- Approved by ADHE as a Center in 2008
- First NSF MRI award in 2005 for the Star of Arkansas Cluster
- Designated as University Core Research Center in 2012
- Hardware/Software is entirely grant funded
- Annual operating budget
  - \$400k salary and fringe
  - \$12k maintenance
  - \$66k NSF XSEDE support
  - \$8k Travel (CASC dues, SC)
- Staff (2.5 FTE)
  - service distribution (11 years, 7 years, 4 years)
  - Combined 58 years of High Performance Computing experience.
- XSEDE Tier III Institution, provides 0.5 FTE support in addition to the above
- Advisory Board currently consists of the following UA faculty members. It is the intent of the Center and the current Board to expand membership in the future.
  - ANSC Koltés
  - BISC Alverson
  - BISC M.E. Douglas
  - BISC M.R. Douglas
  - BMEG Qian
  - MEEG Millett
  - PHYS Barraza-Lopez

### **Research Areas/Funding**

- Since its founding, AHPCC resources have been used in \$50M of externally funded research. Federal funding from NSF, NASA, DoE, DoD, DoI, NEH, USDA, DHS, USGS. State funding from AEDC and Arkansas Biosciences Institute. Private and nonprofit including St. Jude Children’s Hospital.
- Grants supporting AHPCC infrastructure ~\$10M (NSF)
- Collaborated on infrastructure grants with NCSA (University of Illinois, UC), Oklahoma University, University of California San Diego, West Virginia University, University of Missouri, Washington University, University of Arkansas Medical Sciences

## Supported Research Areas

Table 1: Summary of selected current external funding and cluster use. An \* indicates a grant listed more than once.

Research Area	Investigator	Current Active Funding	Cluster Users		
			Senior	Grad	Ugrad
Materials Science	Zou	NSF \$438K; NSF \$20M* (CASE); ARK \$15K	1	2	1
	Bellaiche	NSF \$285K; ONR \$783K*; ARO \$473K; DOE \$450K; ONR \$75K; DARPA \$84K; AFSOR \$340K	5	12	25
	Kemp (ASU)	NSF \$350K; NSF \$400K; NSF \$20M* (CASE)	5	2	5
	Fu	ONR \$783K*;	1	3	
	Millett	NSF \$412K; DOE \$50K; DOE \$796K; NSF \$20M* (CASE)	1	6	2
	Goggin	NSF \$3M		4	
	Mortazavi (UAPB)	AFSOR \$725K; NSF \$20M* (CASE)		1	3
Biology, Genomics, Biomedical Engineering	Alverson	NSF 439K; ABI \$61K	1	2	9
	Qian	NSF 300K; BARD 160K		3	
	Koltjes	USDA \$500K; UA \$10K		4	10
	Siepielski	NSF \$400K; NSF \$202K		3	1
	Shi	NSF \$300K; NIH 87K	1	2	
Spatial Sciences and Remote Sensing	Cothren	NSF \$277K*; DOE \$900K (recommended); NSF \$899K (recommended); NSF \$20M* (CASE); DOI \$254K*; EAST \$175K; USFS \$43K; DHS \$93K; USACE \$275K; ARK \$245K*; NEH \$275K; DOE \$206K; EU \$292K*	11	3	
	Feng	NSF \$418K	1	6	5
	Opitz	NSF \$277K*; NSF 60K; NEH \$20K	1	1	
Archaeometry	Limp	NSF \$277K*; Leica Chair \$75K; DOI \$254K*; ARK \$245K*; EU \$292K		1	
	Terhune	NSF \$115K; NSF \$800K	1	1	
<b>Totals</b>	<b>Current Selected Research Funding:</b>	<b>\$45.9M</b>	<b>29</b>	<b>53</b>	<b>61</b>

## Teaching Support/Labs/Equipment/Software

- CSCE 3213/5013 - Intro to Cluster Computing
  - Cluster computing solves problems too large in terms of memory or run time for a single workstation. Common approaches to these problems combine the resources of multiple computers to collectively find the solution. High performance computing is quickly expanding to areas including: chemistry, physics, mathematics, engineering, bio-informatics, finance, logistics, etc.
- “How To” and Guest Instructor Workshops
  - AHPCC offers a series of workshops available to faculty, staff and students, as well as affiliated researchers. These workshops are intended to provide instruction for

accessing and running applications on the clusters at an introductory level and can be scheduled as one-on-one or group workshops. Additionally, from time-to-time, AHPCC arranges for guest instructors to visit campus and discuss a topic in more depth. .

- Support for Campus Courses using HPC Resources
  - Supporting courses in 5 different departments with 8 different offerings, in addition to many visits to classes to discuss how their research can benefit from HPC.
- REU Program Support
  - Each Summer the AHPCC gets involved with the REU Program by giving tours of the data center and introducing high school students to HPC.

#### **Challenges, Untapped Resources and Opportunities**

- AHPCC should consider moving to become Arkansas' primary High Performance Computing Center. To do so we must leverage the existing Track 1 EPSCoR grant and use it to develop funding models (institution, state, industry and federal) to...
  - Expand the distributed storage system across the state,
  - Develop a statewide Science DMZ (virtual wide area network) connecting compute nodes in Fayetteville with instruments and visualization resources in Fayetteville and across the state,
  - Collaborate closely with AREON to deepen their optical network,
  - Develop browser-based access to compute resources in Fayetteville.
- Need to identify steady revenue stream / source of funding for hardware
  - Collaborate with UITS when and where it makes sense to leverage their purchasing power.
  - Work to improve our efforts at recruiting industry to use our existing resources and expand them.
  - Continue to submit federal grants to NSF but also identify other federal funding opportunities.
- Further develop and expand condo computing and storage models in which research active faculty can contribute compute nodes and storage cost-effectively without having to manage it themselves.
- Consider working with the University and the State to provide funding to make it possible to become an NSF XSEDE Level II provider. This would provide national visibility, better access to XSEDE resources, access to higher NSF funding levels, and provide a structure for allocating resources that will be crucial as the Center grows.

## **CENTER FOR ADVANCED SPATIAL TECHNOLOGIES (CAST)**

CAST research spans the social and physical sciences, engineering and the humanities, applying expertise in the observation and analysis of spatially referenced, multi-scalar data and processes. Much of our work is in the area of spatial data science and visualization and focuses on spatial and temporal integration and analysis. We assess the past, understand the present, and make predictions about the future across spatial scales, combining our research interests and expertise in service-oriented architectures, relational and graph database development, pattern recognition, and spatial data integration to create new methods of data analysis and interactive data visualization.

### **Background**

- Approved by ADHE as a Center in 1991, as a cross-cutting research center, often project based, and a “force multiplier” to new and ongoing research in multiple research areas
- Early involvement with commercial and open-source software/hardware vendors and service providers
  - Center of Excellence agreements with many companies (Intergraph, Leica, Oracle, Trimble, ESRI, BoundlessGeo)
- CAST students and staff have gone on to pursue advanced degrees and/or careers
  - Arkansas GIS Office, AT&T, Bohannon Huston Engineering, ESRI, Google, J.B. Hunt, NASA, NGA, Oracle, ESRI, NGA, and Oracle
  - Doctoral Programs (University of Iowa, University of Toronto, University of Michigan, Notre Dame, Gates/Cambridge Scholar)
- Annual “payroll” of \$1.2 - \$1.5M (all through externally funded research)
- 18 full-time research assistants/associate and techs plus varying numbers of graduate research assistants on funded projects
  - 6 PhD, 14 MS/MA, 22 BS/BA
  - 4 staff with tenure less than 4 years, 8 with tenure between 10 and 15 years, 6 with tenure longer than 15 years
- Current staff background (Computer Science (BS-PhD), Electrical Engineering (PhD), Geography (BA, MA), Anthropology (BA-PhD), Landscape Architecture (BLA), Environmental Dynamics (PhD), Geology (BS, MS), Classical Archaeology (BA), Mathematics (BS), Secondary Education (BA), Civil and Environmental Engineering (MS, PhD))

### **Research Areas/Funding**

- Since its founding CAST researchers have participated (as PI or Co-PI) in \$60M of externally funded research with \$15M in the last six years alone.
  - Federal funding from More than 18 Federal Agencies, including NASA, National Endowment for the Humanities, National Science Foundation, U.S. Army Corp of Engineers, U.S. Bureau of Energy Management, U.S. Dept of Agriculture, U.S. Dept of Defense, U.S. Dept of Energy, U.S. Dept of Homeland Security, U.S. Dept of Justice, U.S. DOI National Park Service, U.S. Environmental Protection Agency, U.S. Geological Survey.
  - State funding from more than 10 State Agencies, including AR Department of Education, AR Department of Environmental Quality, AR Department of Health and Human Services, AR Economic Development Commission, AR Forestry Commission, AR Game and Fish Commission, AR Natural and Cultural Resources Council, AR Natural Resources Commission, AR State GIS Office.
  - Private funding from more than 20 Private Organizations, including Andrew Mellon Foundation, Atlantic Productions, Bicycle Coalition of the Ozarks, Communities Unlimited, Dayco, DCI Engineering,

Delegation of the European Union to the United States, EAST Initiative, Garver Engineering, Getty Foundation, Historic Arkansas Museum, Illinois River Watershed Partnership, Leica Geosystems, National Geographic, The Nature Conservancy, Oregon Public Broadcasting, South Dakota Historical Society, and Walton Family Foundation.

- CAST Researchers have been PI or CoPI on proposals with more than 20 different Institutions and Research Centers, including many of the University of Arkansas system 2- and 4- year institutions.
  - Arizona State University, Auburn University, Texas A&M University, Boston University, Dartmouth College, East Tennessee University, Emory University, University of California – Berkeley, University of Cambridge, University of Colorado, University of Maryland, University of Michigan, Argonne National Laboratory, Oak Ridge National Laboratory
  - UA departments - GEOS, CHEG, CVEG, IENG, CSCE, SOCI, BIOL, BAEG, WCOB, SUST, LARC, MEST, ARCH

### **Notable Research Strengths**

An example that highlights the breadth of this research is our work in the natural gas shale development to minimize environmental impact while maintaining or increasing production efficiencies. Collaborating with CHEG and Argonne National Lab, we met with regulatory, industry, and environmental stakeholders for the Fayetteville Shale natural gas play. After identifying well site issues and potential problems, along with recognized best management practices, we developed a unique set of models into a web-based geospatial toolset that could be used by both industry and regulators to evaluate proposed drilling sites and infrastructure placement.

CAST has a long history of applying geospatial techniques in archaeology, and is a recognized leader in the field. One of our current key efforts is SPARC, a NSF funded program - one of two funded for archaeometry in recent years, together with MURR. Through this program we collaborate with researchers at institutions across the US on projects around the globe. We help archaeologists to apply cutting edge techniques to their field projects, and collaborate with them to analyze their data. The program advances the collaborators' research, provides opportunities for us to develop new methods, and generates further research collaborations and grant writing opportunities

CAST plays a significant role in Plant Imaging Consortium; an NSF-funded research group made up of six universities in Arkansas and Missouri. This group seeks to integrate large datasets investigating plants derived from 2-dimensional multispectral images and 3-dimensional PET scan datasets in order to gain new insights into characteristics of both leaf and root structures of various plant types, assessing their growth patterns over time under a variety of environmental circumstances, constraints, and stresses.

One of the strengths CAST offers to the University research community is our ability to transfer expertise, technology and infrastructure among research domains. For years, CAST built an infrastructure - hardware, software and staff expertise - to process geospatial images. This same infrastructure allowed us to quickly develop and deploy an image-based phenotyping infrastructure at UA and ASU for PIC –a \$3M Track 2 NSF EPSCoR project.

### **Teaching Support/Labs/Equipment/Software**

- We provide teaching support to professors from at least 10 departments on campus through our specialized educational lab facilities. (AGRI, BIOS, GEOS, ANTH, LARC, and others). Relationships forged with a number of industry leaders help us maintain a wide array of research software that is also used in both the public and private sector, so students that take advantage of the course offerings here have a chance to get

some experience working with those tools they will use after completing their education. That, of course, gives them a leg up on other candidates entering the job market. We're trying to provide an environment that facilitates learning both theory and practice while also keeping up with the latest in technological advancements.

- Our lab setup is unique, with a complex mixture of desktop and server-based applications, much more complex than your standard student lab, and that requires significant systems administration time to manage licenses, update software, and keep things in the labs running smoothly. But because we are running our own labs, we are able to stay flexible and respond quickly to the needs of instructors, installing new software on demand or as the latest release becomes available, which in turn allows the instructors to be flexible and adaptive to technology. We currently maintain 5 teaching labs and 3 student research labs with a total of around 200 workstations, and we've provided technical support to thousands of students and researchers over the years from at least 95 different campus departments and units. Our technical support also extends to those students participating in our online certificate program. And then there is research support, stepping in to help develop stronger methodologies and more robust analyses when we can. My support role here has led to my personal involvement in a huge range of research undertakings -- locating rattlesnake dens, examining how far milk travels before it gets to your grocery store, parts distribution for Air Force fighter jets -- and that's one of the things I really enjoy about being a part of this organization. And it is rewarding when those even sometimes very small bits of expertise help students and researchers do big things for themselves, for the university, and for the scientific community.
- CAST also maintains \$1.5 million worth of research instrumentation. These consist of sensors, including remote sensing, high definition survey, and geodetic positioning equipment; and platforms, ranging from unmanned aerial systems to tripods. Besides being used by CAST researchers for national and international projects, these are available for use by UA faculty and students, as well as collaborating institutions, through a cost-recovery account. Managing this equipment is no small task; in FY 2015, we supported over 2200 equipment-use days for this collection. With Export Compliance and Customs for international projects, this is a significant undertaking. To keep up with the location and use of these instruments, we maintain our own asset management system, where we are tracking over 700 individual items.

### **Challenges, Untapped Resources and Opportunities**

Our main challenge is to remain relevant and competitive as the state of art changes faster than ever. The kind of geospatial technologies available to the research community has expanded and our resources and expertise must likewise expand. The roles we play in research were once restricted to 2D spatial analyses, while now we routinely capture and analyze data in full 3D, often through time; where we once used powerful desktop computers we now routinely need high performance compute clusters to analyze our data but can stream and display the complex results to a web-browser. Our current reorganization involving AHPCC reflects this change in technology. Drones, hyper-spectral imagers, continuous wave LiDAR, deep learning convolutional neural networks all required significant computing resources but will play a huge role in scientific research and the economy broadly.

Proposal development - which requires active participation of our researchers - is requiring more and more resources as we meet with other universities and travel to remote locations. Funding this activity requires a combination of RIF and sponsor funding. We have effectively used the F&A funds redirected to us from VPRED and ARSC. These additional resources - taken from our own past funding successes - has been very important to us in the last year and will continue to be so.



## **Center for Excellence in Logistics and Distribution**

**Center Director:** Manuel D. Rossetti, [rossetti@uark.edu](mailto:rossetti@uark.edu)

The Center for Excellence in Logistics and Distribution (CELDi) is a university-based enterprise providing innovative solutions for logistics and distribution excellence for member organizations. CELDi started in 2002 with a Phase-I NSF I/UCRC award. The Phase-II award was granted in 2007, and the Phase-III award granted in 2012.

CELDi is the center “for excellence” rather than the center “of excellence” because CELDi cannot be successful without the active engagement of its member organizations. Like all other I/UCRCs, CELDi has been supported by NSF and a number of member organizations, which form the industry-advisory board (IAB). In Year 14, the CELDi IAB consisted of 11 members that span the government and commercial sectors of our economy, small to large organizations, and companies with and without a core competency in logistics and distribution. CELDi consists of the following core partnering universities: University of Arkansas, Clemson University, University of Missouri, Virginia Tech, and University of California, Berkeley.

The core competency of CELDi lies in the abilities of its researchers to use mathematical and computer based models to abstract a logistics and distribution problem so as to provide insight into analysis and/or design questions. CELDi delivers on the promise of an I/UCRC through member organization synergy and leveraging multiple funding sources (individual member organizations, a pool of member organization fees, and competitive funding from the NSF) for specific and generalized, basic and applied research. CELDi also provides the foundation and structure for educating the next generation of engineers in logistics and distribution systems.

### **Strengths**

The strength of CELDi continues to be the active involvement of faculty researchers from the core universities. This has produced a long history of accomplishment over the life of the center (14 years), which has built considerable brand recognition and an international presence.

- Funding: \$37.4 M total, \$3.1 M per year
- Students: 874 total, 73 per year
- Faculty: 519 total, 43 per year
- Industry Members: 307 total, 26 per year
- Projects: 336 total, 28 per year
- Publications: 287 total, 24 per year
- Presentations: 561 total, 47 per year
- More than 90 different companies over time
- 13 different universities involved over time

## **Weaknesses**

The primary weakness of CELDi is the applied nature of the research activity, which makes it difficult to generalize the findings to other companies within the center. The short-term nature of the applied work also reduces broader impacts.

## **Threats**

The main threat to CELDi is due to the requirement by NSF that Phase 3 I/UCRC's graduate from NSF and become self-sustaining. This makes it more difficult to manage the center because of the possible removal of the lower indirect rate and the lack of funds to support center administration. In addition, the center relies heavily on military members, which are able to contract the center through military inter-agency purchase request (MIPR) supplements. When the NSF Phase 3 award ends it may be extremely difficult to continue military research because an alternative contracting vehicle is not in place through the university research mechanisms.

## **Opportunities**

The graduation from NSF also provides a number of opportunities, which include:

- No rules from NSF concerning: contracting, intellectual property, meeting frequencies, reporting, membership requirements, etc.
- Ability to recruit new universities and researchers
- Simpler membership structure, which allows each university to govern the contracting and project costs
- Ability to enter into relationships with other centers, e.g. Supply Chain Management Research Center and the Center for Innovation in Healthcare Logistics

## **Priorities Moving Forward**

In the short-term the main priority is how to manage the graduation from NSF.

- Manage the transition to the post Phase 3 center operating model
- Recruit members within the new operating model
- Identify military funding mechanism to replace current MIPR process

The long-term priority of the center is to identify new research thrusts that will attract additional companies and enable the center to leverage future funding opportunities.

## Report for the Chancellor on the Institute for Nanoscale Science and Engineering

The Institute is the University of Arkansas umbrella organization that has brought interdisciplinary talents together for research and educational activities that have attracted government and industry support for nanoscale science and engineering. Our mission is to prepare the next generation of creative nanotechnology scientists, engineers, entrepreneurs and provide the infrastructure for staff, students, and faculty to work together to accomplish great scholarly work at the nanoscale.

### Why Invest in Material Science and Engineering?

1. New materials have always been the driver of America's innovation. Nanoscale materials have totally different properties than bulk counterparts and are basically new materials and enablers of technological advances that can boost the performance of devices and engineering components *by several fold*.
2. The record will show that we have been and are one of the best in the nation at nanoscale material science and engineering *and can be 10x better*.
3. Strategic Investment can *leverage* our (A) strengths, (B) turn weakness into strength, (C) create opportunities, and (D) set direction and overcome challenges. What follows is a discussion of each.

### A. The institute has unique strengths in a rapidly competitive and expanding field

- **Best growth facilities in the nation:** Solid source MBE, MOCVD, and Colloidal Chemistry for precision control over the growth and morphology of nanoscale materials (Fig.1) ranging from semiconductors, to oxides, to metal materials, to proteins. Initial work has focused on their extraordinarily rich properties and our understanding of them. These materials can bring a new era of electronics, photonics, imaging, sensors, and energy conversion.



Fig.1 UA Materials Growth Facility



Fig.2 UA Nanoscale Imaging Facility

- **Imaging facilities:** Transmission (Fig.2) and scanning electron microscopy. X-ray diffraction and x-ray Photoluminescence Spectroscopy together reveal the quality and nature of the crystal structure and bonding at the interface of different materials. These are among the best instruments in the nation and they provide the core analytical tools for the physical, life, and agricultural sciences, and engineering, as a User facility on our campus. These facilities are carefully localized, staffed, maintained, and used to support and train all students and faculty. All of our equipment in the core facility where obtained through team efforts on grants.

- **Talent:** We have the talent (Fig.3) and equipment to measure material electronic structure, photoluminescence, mobility, hardness, piezoelectric coefficient, static and dynamic dielectric responses, magnetic behavior, and magneto and nonlinear optic coefficients - and their dependence on size, strain, growth conditions, composition, and temperature. The team produces about 80 publication/year with increase of 1000 citations a year.



Fig.3 UA Materials Growth, Characterization and modeling team Facility



Fig.4 Specially designed/built for Material Science & Engineering

- **Modeling:** World class faculty, known for material science breakthroughs using first-principle simulations, effective Hamiltonian approaches, and analytical methods to predict and guide the development of coupled dissimilar nanoscale materials. For example, one of our faculty has over 50 PRL publications and many of our faculty publish in Science and Nature. Theorists are co-located with experimentalists, study the same materials, and have the tools and talent to calculate behavior at the nanoscale (Fig.4).

- **Collaborations and spin-off companies:** We have shared our samples in collaboration with researchers all over the world. A few are: Fernando Iikawa, Instituto de Fisica de São Carlos, Universidade de São Paulo; Yadong Jiang, University of Electronic Sciences & Technology of China; Maria José Instituto de Fisica "Gleb Wataghin", Universidade de Campinas; Andrian Kuchuk Lashkaryov Institute of Semiconductors Physic, Ukraine; Jihoon Lee, Kwangwoon University, South

Korea; and Euclides Marega Departamento de Fisica, Universidade Federal de São Carlos. Others are shown on the map (Fig.5). In addition we also have close collaboration with 6 of our currently active spin-off companies, the most successful of which is NanoMech with over 40 employees and winner of the 2014 and 2016 National Edison Award.



Fig.5 Worldwide Collaborations



Fig.6 Specially designed room in Nano to ignite student interdisciplinary interaction.

• **Education Approach:** 15 years ago we established the micro-electronics-photonics ( $\mu$ EP) graduate MS/PhD program based on an NSF IGERT grant. The program has grown to over 60 graduate students, over 300 graduates, and is now self-supporting. In addition to this program, the institute has redefined the university “classroom” through the creation of the new IGNITE



Fig.7 Interdisciplinary team teaching “hands-on” undergraduate course and guiding a minor in nanotechnology

program (Fig.6) which provides students with experiences based on the broad nature of industry challenges. This encourages the industry sector to play a bigger role in the preparation of the next generation of scientists and engineers with (i) innovative thinking, (ii) problem solving, and (iii) communication, all as natural skills. Finally, we have a new Interdisciplinary Nanotechnology Materials Undergraduate Minor supported by NSF and team taught by 7 faculty (Fig.7).

### B. Turn Weakness into Strength

We are currently at a disadvantage because we are unable to hire our own tenure track faculty to fill needs in our program, attract students seeking a material science degree, or compete on a level playing field with other material science and engineering programs for national resources. Basically, our significant weakness is a lack of “identity”, which is limiting our competitiveness. However, we are strongly positioned

with the people, ideas, tools, and a special building needed to establish a “*School of Material Science and Engineering*”. This opportunity has not appeared accidentally, rather the institute

faculty have worked hard over the last decade (Fig.8), winning team NSF material science awards from MRSEC, to GK12, to IGERT, to PFI, to MRI, all of which have created this opportunity. All the pieces to be a top 30 graduate program in material science and engineering are in place and we have requested support from the Chancellor to create the School.



Fig.8 History leading to request for School of Material Science and Engineering

### C. Opportunities, Priorities and Untapped Resources

As a group we see four major opportunities/priorities that can leverage our strengths and have significant impact on our program and the university. We briefly describe these below.

1. We recently won large support from NSF for a *Center on Surface Materials* lead by Prof. Min Zou. This presents an opportunity to establish a unique, world class nationally recognized research and development facility (Fig.9), to accelerate the discovery, design, development, and technology transfer of the next generation of material surfaces with never seen before properties. These will enable new and better products, ranging from low friction durable mechanical systems, to advanced aircraft parts, to antireflective solar panels, to novel multi-functional 3-D nanostructured medical scaffolds to speed-up the growth of bone and tissue.
2. We have also just received a grant and are negotiating for large grant from DOD to support a *Center for the Next-Generation Night-Vision Imaging* based on digital technology and on a novel SiGeSn material.



Fig.9 Proposed Center on 2<sup>nd</sup> floor of Nano building

The Center, lead by Prof. Yu, is proposed on the 3<sup>rd</sup> floor of Nano (similar to Fig.9). This opportunity is to revolutionize the state-of-the-art by enabling soldiers to see better at night and allow them to store and share images wirelessly, with other soldiers who may be miles away, or with aircraft to locate targets with unprecedented precision. The same technology also has potential to provide night vision in cell phones and vehicles for a big market in the general public. Moreover, since the infrared light is transparent to most material, imagine using your cell phone to tell if a watermelon is ripe or meat is fresh.

3. A third opportunity is to use high quality lab space on the 3<sup>rd</sup> floor of Nano which can support the 3 new faculty positions we are requesting as part of the School. This space has been prepared, except for the interior of the room using support we received from a proposal to the previous Governor.
4. A fourth opportunity is to leverage the experience and passion of one of our faculty, Prof. Ralph Henry. It is based on his idea called INVENT to transition university culture to one that better develops the student and faculty mindset and opportunities for discovery and invention. More specifically, INVENT (Fig.10) targets the transition from knowledge creation to innovative product by bring the appreciation and opportunity for product development within the university walls and then transitioning product development to industry.

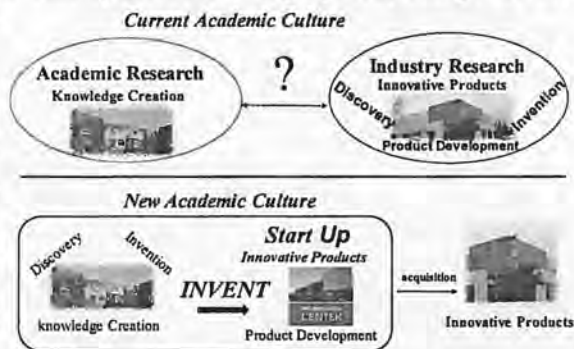


Fig.10 New role for University faculty and students

**D. Direction and Challenges: Recognized as a Top 30 Material Science and Engineering Program.**

**Research:** Our vision is based on establishing the School of Material Science and Engineering. The opportunity this could create for the university is very exciting and it would certainly become a magnet to ‘grow the pie’. As described, most of the pieces to make this happen have been built over the last 10 years and are already in place and would enable harvesting some low hanging fruit borne from efforts and investment already expended. The evidence is that we deliver on investment as shown by interdisciplinary support in the form of MRSEC, IGERT, GK-12, PFI, DOD, ERC, and EPSCoR. With this in mind, the direction for us is to establish the School; add 3 tenure track faculty over the next 3 years; discover new materials with better properties that lead to better products; connect discovery to Arkansas industry; and implement a PhD/MS degree program in Material Science and Engineering. The latter is a national need as noted by the U.S. Bureau of Labor Statistics. They reported that “the number of green cards awarded to materials scientists exceeded the number of new US materials science degrees awarded *by a factor of 5* in 2001 and remains a large ratio today. In no other field, is our reliance on imported research talent so dramatic.”



Fig.11 Opportunity: Mid-America lacks material science & engineering degree programs

**Education:** We plan a PhD/MS program next year with a curriculum built on existing courses with new courses added with proposed added new faculty. Mid-American is without a materials program (Fig.11).

**Service:** We will improve our User Facility which serves over 1000 users on campus and across the state.

Our direction in all three areas will be driven by our faculty/students of the School who are developing a new era of materials, breakthrough technology and products. To accomplish this they are exploiting several novel instruments developed at Arkansas that provides precision measurement and control over growth and a unique ability to measure their morphological, electrical, optical, mechanical, magnetic, or chemical behavior. The outcome has been knowledge that advances the understanding of mechanisms and rules that govern the changes in material properties as the material is reduced in size from bulk to the nanoscale. The new materials, database, and understanding will accelerate the development and availability of novel material properties and innovative technology that will increase the competitiveness of small and large businesses in Arkansas. We request to establish the School of Materials Science and Engineering with a vision to change the regional landscape by developing a program that is recognized especially in the mid-America region.

## DIANE D. BLAIR CENTER

*of Southern Politics & Society*

## 2016 Report to Chancellor Steinmetz

## OVERVIEW

**Mission:** The Diane D. Blair Center of Southern Politics & Society supports and promotes the critical, interdisciplinary study of the politics and culture of the American South past and present.

**Goals:** To maximize the Center's impact by producing quality **research**, educating **students**, sponsoring innovative **faculty** projects, offering **public** programs, honoring and cultivating current and future **donors**, building partnerships with **granting** institutions, and developing our **brand** within our academic discipline.

**History:** The Blair Center is a research center established in 2001 with a 3 million dollar U.S. Congressional appropriation that was put into an endowment. The center was named for the late Diane Blair, professor of political science, Clinton friend and strategist, and public advocate for Arkansas women. Her husband, Jim Blair partnered with the Walton Family to endow two assistant professorships in southern studies and Latino politics, respectively. Founding director, Todd Shields, secured a faculty line in African American politics to further support the center.

**People:**

**Angie Maxwell**, Diane D. Blair Associate Professor of Southern Studies; Blair Center Director  
**Todd Shields**, Dean of J. William Fulbright College of Arts and Sciences; Professor of Political Science  
**Pearl Ford Dowe**, Associate Professor of Political Science; Interim Director of AAST; Vice Chair PLSC  
**Xavier Medina Vidal**, Diane D. Blair Assistant Professor of Latino Politics

**Key Projects:**

- 1) **The Blair Center Clinton School Poll** (BCCS) is a presidential election year survey conducted in partnership with Knowledge Networks (Stanford) which includes an oversample of southern, African American, and Latino respondents and examines political behavior and attitudes.
- 2) **The Arkansas Poll**, under the direction of Janine Parry and Bill Schreckhise, is an annual statewide public opinion survey of Arkansas residents.
- 3) **The Blair Legacy Series** is our major conference series held in the fall of odd-numbered years. An invited group of interdisciplinary scholars examine the legacy of key figures (Clinton, Bush, V. O. Key, C. Vann Woodward, Fulbright, and 2<sup>nd</sup> Wave Feminists, thus far) in southern politics and history and publish conference proceedings in book form.
- 4) **The Blair Spotlight Series** brings influential public figures to the University of Arkansas campus to reflect on their journey from student life to the national spotlight.
- 5) **The Minor in Southern Studies** (SOST) launched in Fall 2015, includes an interdisciplinary introductory course, as well as electives in history, English, political science, and sociology, and emphasizes critical analysis of the region and its relationship to the nation.
- 6) **The Blair Graduate Fellowships** fund graduate students in the departments of English and history (per the original endowment agreement).
- 7) **The Blair Faculty Summer Fellowships** support one faculty member in the humanities and one in the social sciences conducting research on the South.
- 8) **Our Co-sponsored programs** support programming in African American Studies, Latin American Studies, Gender Studies, as well as mentoring events at national academic meetings.

## BLAIR CENTER STRENGTHS

- 1) **Unique Brand:** We are the only interdisciplinary research center focused on southern politics in the country. Our lens is critical, diverse, and builds on the unique political pedigree of the state of Arkansas. Our research, programming, teaching, and social media efforts are building this brand.
- 2) **Resources:** Our endowment generates roughly 120,000 per year. We put a portion of that aside to pay for the BCCS poll fielded every four years and the rest covers center overhead and the additional projects described in the overview.
- 3) **Productivity:** Since 2008, our four-person team (with Medina Vidal joining in Fall 2015) has received three major book awards in the fields of southern politics, southern literature, and political psychology. We have collectively published 3 books, 7 edited books, 21 refereed articles, 16 book chapters, 12 reference publications, 13 data reports, and given 32 conference presentation and 26 invited lectures. We have received \$1,120,00 in grant funding.
- 4) **Interdisciplinary Teaching:** Our team has added 12 new classes to the department catalog, almost all of which are cross-listed to serve multiple majors and minors.
- 5) **Diversity:** We are committed to it personally, professionally, and our scholarship, teaching, and programming reflect our commitment.
- 6) **Campus/Discipline Leadership:** With respect to our discipline, our team includes 2 Executive Council Members of the Southern Political Science Association, an Advisory Board Member of the Institute for Women's Policy Research, the National Co-Chair of the Politics and Policy Caucus of the American Studies Association, the Program Co-Chair, National Conference of Black Political Scientists, a member of the Committee on the Status of Latinos in the South and the Committee on the Status of Latinos in the Profession, and Editorial Board Members of *Race, Class and Gender*, *Political Behavior*, and the University of Arkansas Press. With respect to the University of Arkansas, our team members have served or are serving as Dean of Fulbright College of Arts and Sciences; Dean of the Graduate School and International Programs; Interim Associate Dean of the Clinton School of Public Service; Interim Director of African and African American Studies, 2 Directors of the Blair Center of Southern Politics and Society; and we serve on 14 university committees, 4 college committees, and 14 department committees.
- 7) **Donor Relationships:** We include our donors in our public events and we are in communication with Jim and Nancy Blair at least once to twice monthly. We usually host a VIP dinner after our public events so that they can see the kind of scholarship we are producing.
- 8) **Media Presence:** Our team and/or our research has appeared in the following national news outlets in the past few years: MSNBC, The Reid Report; MSNBC, The Cycle; NBC Nightly News; Univision; Telemundo; *New York Times*; *Washington Post*; *Christian Science Monitor*; *Huffington Post*, and XM Radio, 169, among others. We have an active Facebook group <https://www.facebook.com/groups/144145368960847/> and twitter account @Blair\_Center with a searchable hashtag #BlairCenter with daily postings.

## BLAIR CENTER CHALLENGES/WEAKNESSES

### Short Term:

- 1) This team is doing tremendous administrative work for this campus. Keeping a balance with our research could be an issue.
- 2) We have no staff for programming and no Ph.D. students for research support.
- 3) Our overhead costs are high due to the lack of hard funding in Fulbright College. The center endowment supplements both endowed chairs and the Director's salary and course reductions.
- 4) Our research focuses on sensitive issues that could be politicized.

### Long Term:

- 5) Our productivity is maximized at this point for a four-person team.
- 6) The lack of a Ph.D. program in PLSC hinders our ability to publish more at a faster rate.
- 7) The media demands, particularly during an election year, can be relentless.
- 8) Our team, particularly the diversity of our faculty, make them attractive to other institutions.

## **BLAIR CENTER PRIORITIES AND DIRECTION**

### **Research and Service:**

- 1) In order to **offset the costs of the BCCS poll**, we will evaluate the possibility of selling questions/space on the survey, paying close attention to survey length and completion rates. We could also investigate other less expensive survey companies if they can guarantee the rural samples and overall quality available via Knowledge Networks
- 2) In order to **publish faster and in greater quantities** (and absent a Ph.D. program in political science), we would like to partner with the new Data and Analytics program through a Blair Center designated graduate assistantship.
- 3) In order to **increase funding for research**, we need to apply for more grants. We believe that we have had to publish enough in our fields—since we are all interdisciplinary and challenging major aspects of the field—to be competitive. Professor Dowe is applying for an NSF and Professor Maxwell is applying for an ACLS Fellowship in 2016. External research support would allow the center use its resources to cover classes temporarily and provide course reductions for research.
- 4) In order to **broaden the research and teaching scope of the center**, we would hope to hire an expert in LGBTQ politics and culture.
- 5) In order to **solidify our expertise in southern politics**, the 2017 Blair Legacy Series conference will focus on Latinos politics in the South and produce an edited volume on the subject which include the premiere scholars in the field.

### **Teaching and Learning:**

- 6) In order to **grow the Minor in Southern Studies**, we will be adding a special topics course which will allow for one-time courses and honors colloquia to count towards the minor. Additionally, we need to reach out to other departments (art, geosciences, anthropology) in order to further diversify our offerings. Potential exists to collaborate with other colleges, particularly business and agriculture.
- 7) In order to **further mentor our U of A students**, the Blair Spotlight Series will bring two distinguished alumni to campus next year to speak about their transition from campus to real-world success.

### **Outreach and Engagement:**

- 8) In order to **increase our scholarly visibility**, we could release the 2010 and 2012 BCCS data selectively to 5-10 southern politics scholars (perhaps named Blair Fellows). This would get the name of our data set out there more quickly, but only after our team (including our new member, Medina Vidal) have published the best material from these data sets.
- 9) In order to **strengthen our brand beyond academia**, we should build relationships with the Human Rights Commission (the president is from Arkansas), the Southern Poverty Law Center, the Rockefeller Institute, and others. This can be done via the Blair Spotlight Series or other co-sponsored programs.
- 10) In order to **strengthen our brand nationally**, we should continue to capitalize on our name and our relationship to the Clinton School and former Clinton operatives. Increasing our national visibility increases our chances of successfully obtaining external funding.
- 11) In order to **establish our brand internationally**, we should seek out continued opportunities to participate in State Department grants and international academic associations and conferences.



# High Density Electronics Center (HiDEC)

Report for Chancellor Joseph E. Steinmetz

By

Simon S. Ang, HiDEC Director

May 27, 2016

## Introduction

The High Density Electronics Center (HiDEC) was started by a DARPA grant in 1991. Initially a single thin film clean room and a few auxiliary labs, the Center now houses tools and processes for low temperature co-fired ceramics, reliability, electronic assembly, and nanoscale processing. HiDEC facilities and tools are accessible by both university researchers and technology-based companies on a 24/7 basis.

Since inception of the Center, HiDEC researchers have gained a worldwide reputation in the area of electronic integration. Over the years, HiDEC has been involved with the development of state-of-the-art new materials, design methods, and processes that allow electronics to be built smaller and run faster. In one example, HiDEC and its industrial partner, Space Photonics, developed space-qualified optical transceivers that were installed in the International Space Station in November 2009 on a 10 year program life mission. HiDEC, APEI, ROHM (Japan), and Sandia National Laboratories fabricated a 1,200V, 150A, 250°C SiC inverter module and won an R & D Magazine R&D 100 award in 2009.

Research, education, and economic growth are all facets of the HiDEC mission. The Center supports activities in each of these areas by leveraging the expertise of dedicated staff to provide safety and equipment training, transfer knowledge to students and researchers, and properly maintain equipment and facilities to maximize availability for HiDEC researchers.

## Research and Service

HiDEC core activities have centered on research since its inception. HiDEC staff and affiliated faculty have long used the Center to perform activities associated with large-scale research contracts at the University.

Over the past 5 years, approximately \$28M in funding from research contracts, including an NSF Engineering Research Center, has been brought to the University partly as a result of the expertise at HiDEC. This number includes only larger-scale awards and does not include many smaller scale efforts that also brought funding to various University faculty and/or groups.

HiDEC facilities are also used by industrial clients to carry out their own research activities, prototype products, and verify the reliability of components. While many companies in the Arkansas Research Technology Park (ARTP) leverage the resources at HiDEC, there are also companies from around the world using these facilities (e.g., Toyota). Arkansas Power Electronics Inc. (APEI, now Wolfspeed Inc. after acquisition by CREE Inc.) licensed HiDEC's multi-chip power module patent developed under the DARPA grant and still exclusively uses HiDEC facilities to develop and evaluate their own products.

## Teaching and Learning

HiDEC supports four courses at the university, ELEG 5243L, ELEG 5293, ELEG 4223, and ELEG 5273/MEEG 5273. Over the past 5 years, these classes have impacted approximately 500 undergraduate and graduate students. In the coming years, these courses will continue to be supported and new courses will be developed to cover topics of interest associated with the Power Optimization of Electro-Thermal Systems (POETS) Center, a center that began last year and is planned to last for 10-years. Over the next 5 years, HiDEC will play a significant role in the instruction of students and the development of courses as POETS efforts unfold.

While the aforementioned courses are primarily targeted at graduate students, HiDEC also provides training for undergraduate students that are involved in the Research Experiences for Undergraduates (REU) Program. HiDEC will also be participating in the Research Experiences for Teachers (RET) Program that will be starting in the summer of 2016 as a part of POETS and anticipates involvement in that program for at least the next 5 years.

## Strengths and Weaknesses

HiDEC has unique facilities and capabilities utilized by faculty researchers and industrial clients. HiDEC power electronic module technology is well-known in the field and has attracted industrial clients such as Rohm Inc. (Japan), Toyota R/D, United Technologies Research Center, and others. The low temperature co-fired ceramic (LTCC) laboratory at HiDEC is a unique capability; there are only a few facilities like it world-wide found on a university campus. This unique capability gives the Center a funding edge over many universities, including those that are larger in size, and it enables many unique technologies such as brain microprobes, e-fabrics, and high frequency interconnect, and nanostructured packaging materials.

The research and development efforts related to electronic integration and, in particular, power electronic module packaging, are also a core strength and helped the University of Arkansas to win the NSF POETS Engineering Research Center in 2015. We hope to further build this strength by expanding HiDEC facilities to become a strong industrial prototyping resource wherein companies of all sizes can perform experiments to improve high volume production. HiDEC invested more than \$2M in new equipment and capability through gifts (~\$500K), project funds (NSF ~\$1M), and other revenue sources in the last 10 years. While this opportunity will require considerable time and funding to realize, it is one way to further differentiate the Center from university laboratories elsewhere.

One challenge faced by HiDEC is how to continue upgrading existing facilities and equipment while balancing a revenue stream in the budget that often fluctuates with the state of the economy, the political climate, and the availability of Federal and private funding for research. The budget is further complicated by events that are common in research laboratories, such as unanticipated equipment repairs. In one example, "turbo" pumps are used on a number of processing tools at HiDEC, and in the event of a failure where a complete replacement is required, the replacement cost can be \$30K or more. Planning for these types of events is difficult when it is not possible for the Center to "bank" emergency funds. This challenge is currently addressed by careful budget projection and planning on a weekly basis.

One issue we face is the need to attract new and existing faculty members to use our facility. More involvement from faculty leads not only to additional funding, but also brings new ideas

for research. We have recently started a push to make improvements in this area by introducing ourselves to new UA faculty in pertinent research areas; we plan to expand our efforts to encourage more involvement over the next few years. For example, HiDEC provides support to early career faculty in Electrical Engineering by providing free access to the ultra-high vacuum processing laboratory, and to early career Mechanical Engineering faculty through facility usage and support.

To stay at the forefront, HiDEC must develop new research areas and capabilities. This not only increases revenue, but also enhances research infrastructure. Center-affiliated faculty and staff are encouraged to develop new research areas using existing tools and research infrastructure when possible. While this has led to many research proposals being submitted, continuous investment in resources and capabilities are needed to be competitive and win proposals. This need is addressed now by re-investment of Center revenue in incremental equipment/facility upgrades; we plan to increase these investments over the next 2-5 years.

HiDEC long-term plans are to increase participation in established Manufacturing Innovation Institutes and research areas of National interest, and we are currently on a path to do so over the next 5-10 years. In particular, Center faculty continue efforts to seek partnerships and funding in e-fabrics, high frequency microsystem integration, high-power/voltage power module integration, and the Advancing Innovative Neurotechnologies® (BRAIN) Initiative. In e-fabrics, HiDEC is currently collaborating with a defense-related company on military e-fabric and is a consortium member of the Revolutionary Fibers & Textiles Manufacturing Innovation Institute (RFT-MII) led by MIT. Starting this year, we are collaborating alongside 7 other universities on a 10-year effort with Honeywell FM&T in Kansas City to develop next generation radar systems. In high-power/voltage power module integration, HiDEC is a member of the NSF POETS ERC. HiDEC also works closely with Wolfspeed, Inc. and United Silicon Carbide, Inc. Additionally, HiDEC is collaborating with the Neuroscience Research Institute of North Carolina on the NIH's Advancing Innovative Neurotechnologies® (BRAIN) Initiative.

## Conclusion

HiDEC has a 25 year history of excellence in the area of electronic integration and continues to make lasting impacts at the U of A in the areas of education, research, and service. Following the trend of the past five years, it is anticipated that revenue will continue to grow in the coming years and allow us to build additional capabilities that benefit researchers within the University and the State of Arkansas. In addition, HiDEC will continue to play a significant role in the training of student researchers in the areas of electronic integration, microfabrication, and electronic packaging. Training in these areas instill skills in U of A students that are highly sought after by the leading technology and manufacturing companies in our Nation. Our partnerships and strengths in targeted research areas enable HiDEC to make significant contributions to the research mission of the U of A; we are proud of our history and are excited to be entering a future where we can positively impact the University, our State, and our Nation.

The Terrorism Research Center in Fulbright College (TRC) is housed in the Department of Sociology and directed by Brent L. Smith, Distinguished Professor of Sociology and Criminal Justice. The TRC was created upon Smith's arrival at the University in 2003. The center is host to *The American Terrorism Study* (ATS) that Smith created in 1988 with assistance from the FBI's Terrorism Research and Analytical Center. After the Oklahoma City bombing in 1995, the ATS attracted considerable national attention and Smith testified in two of the four Congressional hearings about domestic terrorism that year. In 1996, representatives from the National Institute of Justice, the FBI, and the House Judiciary Subcommittee on Crime met to work out a strategy for Smith to receive bi-annual lists of persons indicted under the FBI's Counterterrorism (C-T) Program. Due to Privacy Act concerns, the House Judiciary Subcommittee on Crime was identified to serve as the official sponsor of the project. After the September 11 attacks in 2001, Senator Sessions (AL) asked to serve as the sponsor through the Senate Judiciary Committee. The Senate Judiciary Committee remained the sponsor until Smith's departure for the University of Arkansas.

The TRC has been strictly a research center funded off "soft money." Since its inception, the TRC has generated over \$6.5 million in competitive federal funding from the National Institute of Justice, DHS via the START Center of Excellence at the University of Maryland, Department of Defense, and the National Memorial Institute for the Prevention of Terrorism. The Center is currently comprised of a Director, a full time Associate Director and grants manager, a post-doctoral student, four graduate students, and two affiliated faculty members.

## I. Strengths

### External Funding:

The TRC has averaged over \$500,000 per year in external federal funding over its existence. Currently, the TRC is managing four federal grants – two from the National Institute of Justice and two from the Department of Homeland Security/START Center of Excellence.

- "The Longevity of American Terrorists: Factors Affecting Sustainability. NIJ. Smith, P.I. and Project Director, 1/1/16 - 12/31/17. \$400,000.
- "Terrorism and Extremist Violence in the United States, DHS/START. Smith, P.I. and Project Director. UA component \$1.57 million (Yr. 6, \$198,573).
- "Sequencing Terrorists' Precursor Behaviors: A Crime Specific Analysis. NIJ. Smith, P.I. and Project Director, 1/1/15 - 12/31/16. \$470,383.
- "Spatial Analysis of Terrorists' Precursor Behaviors." DHS/START, CSTAB funding. Smith, P.I. and Project Director, 6/1/12 - 5/31/17. \$270,000.

### TRC Grant Productivity CY 2014-15

Grant Expenditures	\$800,000
Indirect Costs Generated	\$274,900
Salary Savings	\$142,000
GA/Post Doc Support	\$160,000

### Teaching and Mentoring:

Although the TRC has no formal instructional program, the Center is noted for its undergraduate and graduate mentoring efforts. During the past five years, the TRC has:

- Fully funded five graduate students and one post-doctoral student off federal grants.
- Been awarded three Fellowships for undergraduates through the DHS/START Undergraduate Research Program. (One was awarded first prize at the DHS/START annual meeting for undergraduate research).
- Placed four graduate students with the FBI, one with WalMart Global Security, and two were awarded funding in Ph.D. programs (Michigan State University and Indiana University).
- Provided opportunities for over 120 undergraduate internships.
- Provided mentoring/funding for over 25 undergraduate and graduate students at national professional meetings.
- Provided mentoring and data use agreements for doctoral students to use the ATS at Rutgers University, Washington State University, University of Oklahoma, and the University of Texas-Dallas.

## **Service and Outreach:**

TRC affiliates are frequently invited to speak at national or international symposia or to research meetings of federal agencies. A sample of these have included presentations to:

- International Association of Chiefs of Police (plenary session on domestic radicalization) 2015.
- NIJ Radicalization and Violent Extremism Conference, 2015.
- Human Factors Division/Science and Technology Directorate, DHS, 2013.
- Anti-Terrorism Advisory Councils, various U.S. Attorneys meetings at various locations in the United States (2013, 2012, 2010).
- National Counterterrorism Center (NCTC), 2010.
- U.S. House of Representatives Homeland Security Committee, full committee hearing, 2009.
- National Fusion Center Conference, 2009.
- Max Planck Institute, Friburg, Germany, 2009.

The TRC has also been asked to perform analysis on data or validation of governmental programs relating to terrorism. These have included:

- Validation of the FBI/DHS Suspicious Activities Reporting System (SARS), 2015.
- For Official Use Only (FOUO) presentations to DHS Intelligence and Analysis Division (2012) and the National Counterterrorism Center (2012).
- Analysis of domestic terrorism patterns for a National Intelligence Estimate (NIE) through the NCTC, later classified, 2011.

## **II. Weaknesses**

- Our best graduate students move on to Ph.D. programs elsewhere, creating a lack of continuity in our grant activity. By the time we train a GA on the database, they have to move on. This past year, two of our four graduating MA GAs went to Ph.D. programs at Indiana University and Michigan State University, one accepted an analyst position in Global Security at WalMart, and one is completing the hiring process for an intelligence analyst position with the FBI.
- The lack of a Ph.D. program also prohibits us from competing for Ph.D. fellowships for our students. We are unable to apply for DHS or NIJ money to support our graduate students through their doctoral fellowship programs. As an example, one of our graduating MA students went on to a Ph.D. program elsewhere, was awarded dissertation funding from DHS, then used our data for her dissertation through another university.
- Our funding streams are too narrow. Terrorism funding has been limited to a few federal agencies, primarily NIJ and DHS. Although we have an excellent track record with these agencies, their resources are limited and intermittent. For example, NIJ will not have a "radicalization to violence" solicitation this year, therefore, we have had to look elsewhere for funding.

## **III. Priorities and directions for the next five years**

### **Expanding Funding Streams**

The TRC is seeking to expand its funding opportunities in three ways: 1) by identifying other federal opportunities for terrorism research; 2) procuring funding from private foundations and 3) through expansion of the ATS database to include other types of criminality that might result in commercializing the database and/or increasing the number of potential vendors.

In an effort to accomplish the first of these objectives, we are moving beyond the NIJ portfolio of research on "radicalization to violence." NIJ funded three of our proposals over the past four years through this solicitation. In May 2016, we submitted a joint proposal with Michigan State University through an NIJ "policing" solicitation in an effort to expand our footprint with this agency. Secondly, in April 2016 we were invited to submit a full proposal (based on a successful white paper submission) to the Bureau of Justice Administration. This project is in

collaboration with colleagues at Rutgers University. Both of these projects utilize either new or innovative methodological strategies or use the ATS data to examine a different type of issue relating to terrorism.

**Proposals Under Review**

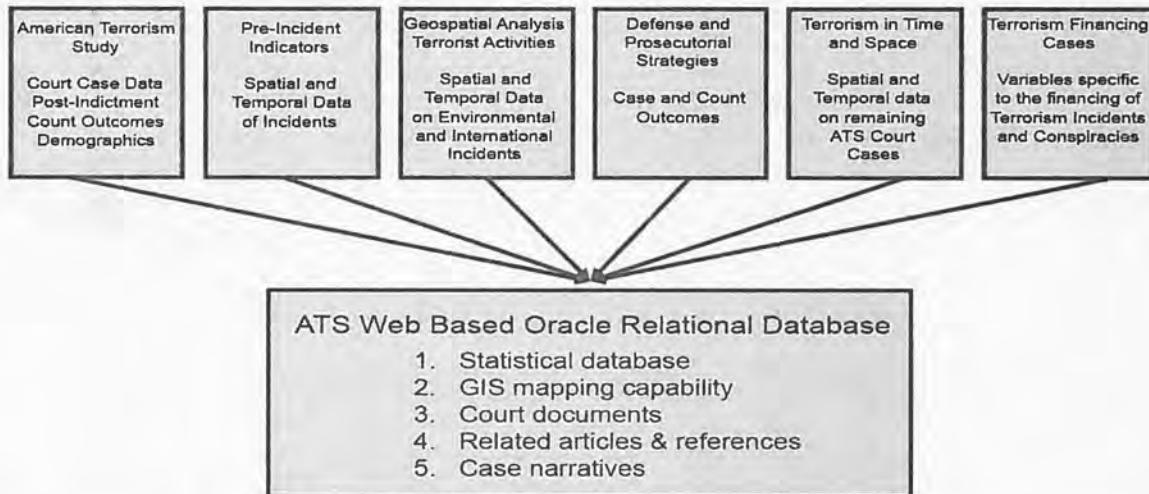
<u>Topic</u>	<u>In Collaboration with</u>	<u>Source</u>	<u>Amount</u>
The Impact of Community Oriented on the Policing Success of Terrorist Plots	Michigan State University	National Institute of Justice/DOJ	\$680,000, (UA component \$200,000)
Using Risk Terrain Modeling (RTM) to Predict Terrorist Activities	Rutgers University	Bureau of Justice Assistance/DOJ	\$500,000

**New Directions in Research**

Terrorism, like many other forms of criminality, is evolving. Cyber-related offenses are rapidly becoming the dominant form of criminality for many offenders. As such, the American Terrorism Study is well positioned to examine the manner in which offenders who commit cyber-related crimes or cyber terrorism are investigated and prosecuted.

Opportunity for conducting analysis using multiple techniques

*American Terrorism Study Database Components*



In a collaborative effort with the Center for Advanced Spatial Technologies (CAST, Fulbright College) and the Center for Information Security and Reliability (CISR, College of Engineering), the TRC submitted a proposal to an anonymous donor to create a specialized "institute" focusing on cyberterrorism and cybercrime. The proposal was accepted for funding, but a delay in obtaining matching money prevented the TRC/CAST/CISR from securing the gift. We expect this opportunity to remain available this year and are hopeful of receiving these funds later this fall.

If this takes place as expected, the proposal calls for interdisciplinary, undergraduate and graduate certificate programs in cybersecurity and intelligence analysis administered through the three centers named above. In addition to these educational opportunities for students, the proposal also calls for the creation of a cybercrime database for the Arkansas Attorney General's office and a web portal and dashboard for training investigators and prosecutors.

## Center Overview

The Mack-Blackwell Transportation Center (MBTC) has been in operation since 1992. Directed since 2007 by Dr. Heather Nachtmann (Industrial Engineering), MBTC falls under the Department of Civil Engineering in the College of Engineering. The multi-disciplinary MBTC averages approximately \$800k in annual federal funding, primarily from the U.S. Department of Transportation (USDOT) through the University Transportation Centers (UTC) program and the U.S. Department of Homeland Security. MBTC is dedicated to improving the quality of life in America through our transportation research, education, and workforce development programs.

MBTC currently serves as the administrative umbrella organization over three research centers:

1. The Maritime Transportation Research and Education Center (MarTREC) is a Tier 1 UTC funded by a \$4.2M USDOT 2013-2018 grant. MarTREC is a consortium led by the University of Arkansas with Jackson State University, Louisiana State University, and University of New Orleans and focusing on building economic competitiveness through efficient, resilient, and sustainable maritime and multimodal transportation systems.
2. MBTC is a partner in the USDOT UTC Southern Plains Regional Transportation Center (SPTC) led by University of Oklahoma. SPTC focuses on climate-related issues of the region's transportation infrastructure and public safety. The U of A SPTC site is directed by Dr. Kevin Hall (Civil Engineering).
3. Directed by Dr. Stacy Williams (Civil Engineering), the Center for Training Transportation Professionals (CTTP) provides workforce development and certification programs to public and private transportation professionals throughout the State.

## Center Strengths

### *Relationships with External Stakeholders*

MBTC has a strong working relationship with the Arkansas State Highway and Transportation Department (AHTD), which has provided significant matching funds (\$8M+) to research and educational activities of the Center. The current and former AHTD directors serve on MBTC's advisory board along with leaders of the Arkansas Waterways Commission (AWC), U.S. Army Corps of Engineers (USACE) – Little Rock District, ABF Freight Systems, J.B. Hunt Transport, Arkansas Trucking Association, Arkansas Transit Association, and Ouachita River Valley Association. Nationally MBTC has strong ties to the USACE Engineer Research and Development Center and U.S. Coast Guard.

### *Campus Priority*

Transportation and logistics is a research and educational priority for the College, Campus, and State. Because of this, MBTC benefits from strong support of campus leadership including VPRED Jim Rankin and VCGR Randy Massanelli, State agencies including AHTD and AWC, and Arkansas' Federal delegation, most recently Senator Boozman and Representatives Westerman and Womack.

### *Faculty Expertise*

Primarily supported by the civil and industrial engineering departments, MBTC has access to talented, research-active faculty who work in our research areas of expertise. These faculty lead research teams of graduate and undergraduate students who focus on transferring basic research into practice. MBTC makes it a priority to support faculty in their scholar activities and development of preliminary work to leverage additional external funding with a priority to put technology into practice through match funding programs.

### *Educational Programs*

MBTC benefits from strong BS, MS, and PhD degree offerings in civil engineering, industrial engineering, and supply chain management. The student researchers participating in MBTC research teams have access to more than sixty transportation-related courses. Students also benefit from experiential learning opportunities including internships with local and regional transportation companies and agencies, study abroad programs, undergraduate research experiences, and service learning opportunities.

### *Workforce Development & K-12 Outreach*

MBTC's CTPP began operations in 1996 and offers short courses, workshops, seminars, presentations, web-based training, certification events, training and instruction (both classroom and laboratory) to transportation professionals. CTPP was initially supported by UTC grant funds but is now self-sustaining. Approximately half of CTPP's students are AHTD personnel, and the others are employed by more than 100 private construction firms. Over the past five years, nearly 2800 technician certifications have been issued. CTPP performs a critical service to the State and facilitates significant technology transfer of state-of-the-art research into practice. In addition, MBTC hosts a Distinguished Lecture series, bringing world-renowned researchers and practitioners to campus to interact with our MBTC researchers. MBTC participates in the many College of Engineering K-12 outreach programs that introduce young students to engineering as a major and career choice.

### **Center Weaknesses**

#### *Facilities*

Research facilities available to support additional MBTC research are very limited as lab space within the College of Engineering is rapidly reaching capacity. Administratively MBTC is a lean organization with a very small footprint but our research teams have increasing research space needs as our Center is more successful. There are current efforts to build a Civil Engineering Research and Education Center (CEREC) building, which will support a portion of our transportation structure research.

#### *Graduate Research Assistance*

MBTC would benefit from additional high-quality doctoral students to support its research teams. Occasionally our PIs will need to request no-cost extensions to their projects due to a lack of qualified GRAs to fund. The quality and timeliness of the Center work product would be improved with a deeper pool of doctoral student recruits in the transportation area.



### *Research Support*

The quality of faculty principal investigator (PI) support from the Research Support and Sponsored Programs office continues to decline. Proactive and personal support for PIs in preparing grant proposals and managing active grants has continually diminished, which has increased the administrative burden on our PIs. MBTC's experience with new grant specialists is that they are not well-trained or cross-trained, and proposal system upgrades are designed without faculty input and place additional burden on the PIs. Almost all of the center proposal development and startup efforts falls onto the responsibility of the PI.

### *Funding Uncertainty*

Over time, MBTC has expanded its portfolio of funding sources to include non-federal sources, which helps to provide a sustainable research program. Administrative operations and educational activities primarily depend on funding from the USDOT UTC program. Funding through the UTC program depends on successful competition through each new Federal transportation bill. This is a significant proposal writing effort that becomes more competitive each cycle.

### **Center Priorities and Direction**

MBTC will continue its research, education, and workforce development work and seek funding in its core area of transportation and logistics. In May 2016, we submitted a lead proposal to re-compete MarTREC as a Tier 1 UTC under the FAST Act competition. In this proposal, we maintained our maritime and multimodal transportation focus and added two additional consortium partners, Texas A&M University and Vanderbilt University. We also partnered on two additional proposals, one to re-compete SPTC with University of Oklahoma and one in the pavement area led by University of Pittsburgh. I would like to see MBTC endowed by a regional transportation industry partner, which would provide sustained funding for our center operations and educational activities.

Thank you for the opportunity to provide this input to the campus planning effort. Please direct questions or request for additional information to Dr. Heather Nachtmann at 479-575-3484 or [hln@uark.edu](mailto:hln@uark.edu).

## **MSCAD-NCREPT-GRAPES-POETS-SEEDS Report**

Alan Mantooth, Executive Director, 21<sup>st</sup> Century Research Leadership Chair  
Distinguished Professor of Electrical Engineering

This report covers the main contributors to the largest research concentration at the University of Arkansas – electronics research. Electronics research at the UA supports many applications including energy, transportation, space exploration, and to smaller extents medical and environmental. The program consists of four major centers and one of the world's largest academic laboratories in this area. Over time Dr. Mantooth's team built a nationally unique, vertically-integrated program that allows pursuit of research at all levels of electronics development from material properties and computer-aided design and modeling of components; to module and device design, construction and testing; to circuit and system-level integration and prototype testing. The unique nature of this program provides opportunities to the students, university research partners, and industrial collaborators not available anywhere else in the country. This report contains a description of each of the five major efforts that make up this research group. Dr. Alan Mantooth is the lead faculty member for this research on this campus, but the centers listed below represent the work of 10 research and teaching faculty from three departments and two colleges on this campus alone, as well as dozens of other faculty members and industrial collaborators at schools across the country and around the world. These centers have and continue to impact hundreds of students here and at partner sites. The team continues to expand its efforts to improve the generation of the UA's most important product – students.

### ***Mixed-Signal Computer-Aided Design Laboratory (MSCAD) – est. 1999***

The MSCAD Laboratory is Prof. Mantooth's research laboratory. It consists of three research associates that assist him in managing and advising 25-30 graduate students at any given time in five areas of research: semiconductor device development and modeling, analog and power design automation, analog integrated circuit design, power electronic circuit design, and power electronic packaging. The MSCAD lab has been supported by funding from industry partners, NSF, NASA, DARPA, ONR, ARPAe, DoE, and DTRA. The MSCAD lab has produced award-winning research through two R&D 100 awards (2009 and 2014) and laid the groundwork for every center contained in this report. Its activities continue to produce graduates, publications, and awards at a consistently high level in addition to the outputs produced by the centers. MSCAD's most frequent faculty collaborator is Prof. Jia Di, who directs the TruLogic lab in CSCE, on NASA-based extreme environment electronics.

The strengths of the MSCAD lab lie in people. Most of the areas of research listed above are Prof. Mantooth's primary areas of expertise, while a couple (packaging; power circuits) have developed through collaborations with other faculty. Records indicate that the lab has been the recipient of financial support from a nicely balanced portfolio of companies and federal sources allowing the lab to mix its research agenda between shorter and longer term efforts. The lab has produced over 90 masters and doctoral degrees in 17 years. The challenges have always been funds for equipment. The MSCAD lab has had to scrape and save to fund itself in terms of basic instrumentation. Only through larger efforts, such as the founding of NCREPT, has such equipment been obtained. The creation and support of the centers below have helped to address some of the needs of the MSCAD lab, but it continues to be a struggle to find sources of funding for instrumentation that costs between \$10,000 and \$100,000.

### ***National Center for Reliable Electric Power Transmission (NCREPT) – est. 2005***

NCREPT was started by a congressional appropriation through the U.S. Department of Energy in 2005 as a result of the 2003 Northeast Blackout. This was the first attempt to bring together the power systems and power electronics efforts at the UA for the purpose of solving energy-related issues with advanced power electronics. The team was a few years ahead of most federal funding agencies in this regard, and with that initiative took the lead over the next decade and established the UA as one of the premier research programs in the world in power electronics for electric grid and transportation applications. NCREPT hosts visiting researchers from all over the world, and this program also sends

students abroad. NCREPT began operations using an industry member-based model that gave way to GRAPES when it was formed in 2009. The name NCREPT now mostly represents the 6 MVA test facility more often than the center it once operated as a result of this evolutionary event. NCREPT as a test facility has a Managing Director, T.A. Walton, and a Test Engineer, Chris Farnell. It is currently being expanded by 4000 sq. ft., which is needed to support GRAPES, POETS and SEEDS. Its strengths are that it is a world-class facility boasting the largest power rating at any U.S. university. The main challenge for NCREPT is that of sustaining its staff on soft funds. This has been successfully accomplished, but does not easily allow for adding a second, desperately needed, test engineer. The level of work and safety requirements lead to the need to have some centrally-supported positions assist in the operation and maintenance of this important university core facility.

***NSF Industry/University Cooperative Research Center for GRid-connected Advanced Power Electronic Systems (GRAPES) – est. 2009***

GRAPES' mission is to accelerate the adoption of power electronics into the electric grid. GRAPES is classified as an Industry/University Cooperative Research Center (I/UCRC), with Prof. Mantooth serving as Executive Director. Currently a two-university center with the UA (Dr. Juan Balda, Site Director) as lead site and the University of South Carolina (Dr. Roger Dougal, Site Director) as a partner site, GRAPES is eligible to apply for three five-year phases of NSF support – for a total of fifteen years. GRAPES is now in the second year of Phase II (year seven). While Phase I was focused on establishing a research core and a model organization, Phase II is focused on growth involving additional industrial members and university research sites. GRAPES recently began collaborating with the University of Wisconsin – Milwaukee (currently seeking NSF recognition as a third domestic university site) and are focusing on the Western region of the U.S. for further domestic expansion.

The strengths of GRAPES are numerous including: leveraged industrial research dollars (8:1 per NSF); qualified and trained graduates to satisfy personnel needs of members; diversified industry membership spanning component manufacturers, equipment manufacturers and utilities; common interests of members (subgroups of utility providers and equipment manufacturers interested in technological advances); and strong collaboration which keeps researchers 'in touch' and helps guide the direction of research. Challenges faced by GRAPES include: membership turnover which provides the challenge of an ever-changing mix of interests; variability in funding level, which is driven by the variation in numbers of members year to year; impacts of the economy and politics, which affect members' internal budgets and public affairs impacts; inertia (slow adoption of power electronics based on proven reliability concerns); and variation of members' needs (varying levels of interest among membership based on their primary need for research, technology or qualified personnel for the workforce). The priority for Phase II is growth, and for Phase III is sustainability as NSF support will cease after year fifteen at the end of Phase III.

***Cybersecurity Center for Secure, Evolvable Energy Delivery Systems (SEEDS) – est. 2015***

The SEEDS Center is funded by the U.S. Department of Energy. The UA leads this effort and is joined by Lehigh, Florida International University, Carnegie Mellon University, University of Arkansas at Little Rock and Arkansas Electric Cooperative Corporation as full partners.

SEEDS' vision is for future energy delivery systems that are able to survive cyber incidents while sustaining critical energy functions to customers. The goal of this program is for partners in power systems engineering, cybersecurity, and the electric power, oil and gas industries to work closely together to identify and analyze needs (i.e., risks and vulnerabilities), research solutions that address these needs, develop tools for rigorous testing, evaluate the efficacy of the solutions, and demonstrate these technologies in order to evaluate their value for broader deployment and commercialization. The SEEDS products are the tools and methods that the researchers create to address cyber vulnerabilities.

One major strength of SEEDS is its close partnerships with other academic institutions and industry partners across energy sectors. It is through such collaborative efforts that solutions and methodologies will be more likely developed to address the broad scope of potential cyber vulnerabilities. Another

strength of the center is the interdisciplinary nature of the research. These partnerships and the interdisciplinary collaborations between power systems engineering and computer scientists have allowed for both a short-term research agenda as well as a long-term research plan to address these issues.

The major challenge for SEEDS will be in achieving sustainability in five short years when federal funding for the center ends. Though there is a sustainability plan for the center (an I/UCRC model), it will not be clear for a few years whether this plan will be viable. For the UA, the challenge will be in keeping the center staffed, such as Dr. Shannon Davis, Managing Director, because such centers cannot survive without those who manage all of the day-to-day activities of the program.

#### ***Center for Power Optimization of Electro-Thermal Systems (POETS) – est. 2015***

POETS is an NSF Engineering Research Center led by the University of Illinois at Urbana Champaign and includes the UA, Stanford University and Howard University. Prof. Mantooth is the Deputy Director.

The vision of POETS is to be the pre-eminent research and education organization driving the integrated, optimized, concurrent movement of thermal and electrical power in tightly constrained environments. The mission of POETS is overcoming the challenge of increasing power density in mobile systems as they become ubiquitous in fulfilling societal needs. POETS' ambitious and innovative goal is to increase the power density of current mobile electrified systems by 10-100 times over current state-of-the-art systems.

The products of the integration of mechanical, materials and electrical engineers will create innovative research results as well as develop complementary, inclusive educational programs to develop the next generation engineering professionals. The industry results of these strengths will be cutting edge research and future scientists and engineers who will impact nearly every aspect of modern life.

A major strength of the program involves integrating traditionally separate research efforts in mechanical, electrical, and materials engineering. This emphasis on cross-disciplinary research and the determination to solve modern power optimization challenges crosses disciplines to solve various pieces of the research puzzle. Another major strength of POETS is the educational programs. Such educational programs are interdisciplinary with a strong systems engineering emphasis. Such programs include project-based approaches that will assemble students from different backgrounds to tackle problems with multiple power domains. These interdisciplinary projects will be vertically integrated throughout the undergraduate program from pre-college programs through capstone senior designs. The approach is to break down the silos and inspire diversely talented students from the start of their engineering curriculum. POETS also has a strength in the development of an innovation ecosystem that includes the input from industry partners who will participate in a member-based organization and develop an industrial advisory board providing guidance regarding applications of the research deliverables, help to commercialize final products, engage students and ultimately improve systems.

Challenges POETS faces include overcoming silos and still having the technological capability to overcome the research barriers to addressing the lofty goals of the program. Also, sustainability of the program following the end of NSF funding will be a challenge. For the UA, the challenge will be in keeping the center staffed as the federal funding decreases.

Priorities and direction for all of these efforts are defined in the strategic plans and roadmaps of each center. These are well-documented for NSF and DoE and available if needed. As the director of these efforts at the UA, Prof. Mantooth helps to orchestrate the efforts here and center wide in each case. His main concerns are center sustainability, stable staffing, graduation of world-class students, and the production of groundbreaking research results to ensure that the highest quality products are produced by an internationally respected research and education program.

May 27, 2016

Chancellor Joseph Steinmetz  
University of Arkansas  
c/o [sally@uark.edu](mailto:sally@uark.edu)

### Chancellor's Campus Planning Initiative: University of Arkansas Community Design Center

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#### UACDC Mission

UACDC is an outreach center of the Fay Jones School of Architecture and Design, and one of a few university-based teaching offices in the United States dedicated to delivering urban design work. Originated in 1995, the center advances creative development in Arkansas through design, research, and education solutions. Nationally recognized in public-interest design, the center has its own downtown facilities and five professional design/planning staff who also teach. The center's work has garnered 125 design and planning awards over the last twelve years. Beyond the focus on individual design projects, UACDC has developed eight place-making platforms to shape civic design and public policy at state and municipal levels. These interdisciplinary platforms include *agricultural urbanism*, *transit-oriented development*, *context-sensitive street design*, *watershed urbanism*, *big box urbanism*, *smart growth*, and *low impact development*, vocabularies which are locally articulated but hold universal currency. Appointed the Lower Midwest Regional Design Studio of the National Resilience Initiative in 2015, UACDC is one of six inaugural university programs leading this network formed by the American Institute of Architects (AIA) in partnership with the Rockefeller Foundation and the Clinton Global Initiative. The center partners with private sector firms and university-based expertise across disciplines on design and planning projects. Recent work includes housing for the aging, tornado recovery planning for the communities of Vilonia and Mayflower, a municipal-scaled urban watershed framework plan, a downtown arts park, and the forthcoming master plan of a former Dole pineapple plantation repatriated to the State of Hawaii. The latter will be prepared collaboratively with the UA Office for Sustainability and the University of Hawaii.

#### UACDC Strengths

- **UACDC has developed a national voice on urban design and the emerging science of resiliency in the built environment.** Resiliency involves the development of new design methods and advocacy tools to improve the ability of complex systems like cities, ecosystems, and resource supply chains to rebound and grow stronger from shocks and chronic stressors. The center is often selected by the AIA to represent the latter's interests in national discussions on resiliency and public-interest design. UACDC's reputation in public-interest design attracts international design talent seeking staff positions, and project sponsors outside of Arkansas seeking design and planning services. UACDC's staff is invited to speak on urbanism at national and international venues (e.g., China, Bangladesh, and Malaysia this year). The center's work is regularly exhibited at world design exhibitions and biennales, and published in international design magazines and journals.
- **UACDC offers a unique educational experience for FJSoA+D students that enhances their marketability among their national cohort.** In addition to internship, independent study,

and work study opportunities, the center offers an advanced community design studio each semester to fifth and fourth year students in architecture and landscape architecture (sometimes with ecological engineering students). Students collaborate with project teams and stakeholders on current work at the center. Student design work has garnered more than 35 national education awards, creating visibility for the school, while employers and graduate programs seek students with experience at UACDC. Graduate programs in urban design including Georgia Tech, Berkeley, University of Michigan, Harvard, and Washington University in St. Louis have contacted the center about establishing direct pathways for students to enter their programs. Additionally, UACDC implicitly models disruptive career paths for students interested in alternatives to private architectural practice. A former student is now the Executive Director of the Mayor's Institute for City Design in Washington D.C., a signature program of the National Endowment for the Arts. UACDC has been cited as a major determinant in the FJSoA+D top 25 rankings over the last five years by *Design Intelligence*.

- **UACDC planning and design work has created a major economic impact for Arkansas clients, helping them to garner \$70 million in direct funding for project development.** Despite low project fees and negligible investment by the state in its cities (Arkansas' university system lacks a planning program), UACDC leverages its design services through federal funding and university support to provide award-winning plans for project sponsors. More importantly, the center's advocacy work has led to reform of state policy frameworks and city codes to encourage best design/planning practices. For instance, over the last eight years the center has worked with the Arkansas Natural Resources Commission to shift USEPA 319(h) Non-point Source Pollution program funding from exclusive investment in the agricultural sector to include investment in cities, particularly in building green urban infrastructure. At the municipal level, UACDC and its partners developed a model Low Impact Development (ecologically-based stormwater management, or LID) code for Fayetteville—one of a handful nationally and now copied statewide. UACDC and its partners built a demonstration LID neighborhood in Rogers, visited by national authorities on LID. The center's iconic project for the revitalization of Little Rock's Main Street dubbed the Creative Corridor, is an EPA-funded demonstration green street project, whose first phase of construction has attracted over \$120 million in private investment to the downtown corridor. UACDC's work is primarily dedicated to building prosperity in Arkansas through excellence in design and planning.
- **UACDC has developed transferable technologies and best practices benefitting the commercial design and engineering sectors in Arkansas.** UACDC and its partners have collaborated with three large statewide engineering firms on pioneering LID applications. The collaborations gave the private sector new experience in green street design, allowing them to grow a market for LID design and engineering services. Likewise, our *Food City* planning scenario helped to create a more permissive urban agriculture code in Fayetteville, paralleling new collaborations among local food nonprofits aiming to implement aspects of the *Food City* plan. Meanwhile, our introduction of the trend-setting pocket neighborhood planning concept to Arkansas through the center's construction of the *Habitat Trails* project in Rogers—for which we had to secure 30 zoning variances from the City—has inspired development of similar projects in the region.

#### UACDC Weaknesses

- **UACDC revenue model is challenging since there is no state discretionary funding for design and planning, nor is design traditionally factored into private or public business models within Arkansas.** Almost all of UACDC's external funding comes from federal agencies, including grants passed through Arkansas agencies. The center has exerted considerable energy in making the case for the value of good design and planning in tandem

with building local capacity to implement proposals. Besides funding challenges, towns and nonprofit clients lack essential administrative capacities to implement planning recommendations (only 23 cities of more than 500 in Arkansas have a population over 20,000, while all but a few mayorships are classified part-time posts). Meanwhile, large economic interests have remained agnostic—when not oppositional—toward the roles of place-making and design in achieving sustained economic development. The challenge remains to show the value of design in shaping economic and social development.

- **National grant programs for design and planning are scarce, and award amounts are traditionally low.** Awarded 10 National Endowment for the Arts (NEA) design grants over the past eight years—leading the nation among design organizations in number received—NEA awards average under \$30,000 and new rules limit the university to one grant application annually. However, UACDC is a sub-awardee on NEA’s more lucrative Our Town grant program for cities, where the center has averaged \$40,000 per grant. Design grants from foundations like Kresge, Surdna, and the Rockefeller Foundation are typically under \$75,000 with 5-10 percent award rates as project demand far outstrips funding supply (few to Arkansas as the state’s nonprofit sector is commonly seen as having an outsized asset base). UACDC has received two \$490,000 grants from USEPA by partnering with ecological and civil engineers. Structurally, the design professions lack the robustness of a public health model that fuels policy and funding support for medicine as a profession (see discussion below under Priorities and Directions).
- **Securing and retaining talented UACDC staff is very challenging.** The design professions are currently at full employment, creating a significant talent shortage—particularly of designers and urbanists with an interdisciplinary range. Clients are asking the design professions to solve for complex—*wicked*—problems unfamiliar to the design professions, and for which traditional design practices are underprepared to address. Due to UACDC staff’s reputation and experience with difficult project types, they are targeted by large firms capable of doubling UACDC salaries. Some staff will extend their stay as they enjoy the integration of teaching, research, and practice at the center, but greater pay and career opportunities elsewhere create a steady employee churn. UACDC pay scales and long work weeks favor young staff, who naturally move around, while Arkansas’ remoteness is a recruitment challenge.

#### **UACDC Priorities and Directions: Advancing a Public-Interest Design Model**

The adage that the health of a profession is directly tied to its relationship with its public governs ongoing work. The center advances the language of public-interest design as a model akin to public health in medicine. This entails further development of existing design platforms, including extension of UACDC’s work in agricultural urbanism to forthcoming commissions: development of neighborhood food hubs in Hawaii and an agricultural arts/theater complex in Freeman, South Dakota. In 2017, the center will extend its award-winning work on context-sensitive street design to an eight-block revitalization project in downtown Hot Springs. UACDC is also conducting new explorations into neighborhood and housing typologies responsive to *aging in community* rather than simply of aging in place. The project explores pocket neighborhood housing products in light of new gerontological research on cities for aging. Beyond individual projects, three general initiatives will support development of a public-interest model and design language.

- **Develop a unique graduate program in Resilient Communities and Urban Landscapes, complementing allied interdisciplinary graduate proposals under preparation at FJSoA+D.** While most new graduate programs in urban design focus on the global city, this proposed program is dedicated to solving for pressing public-interest issues at the scale of community where a majority of the world lives—mid-sized cities and small towns. The program’s strength is its structured design inquiry across architecture, landscape architecture, urban design, and ecological engineering in the context of a teaching office. The centralization of

outreach in design education is unique, allowing the degree program to evolve an ever-resourceful learning community with partners and stakeholders that impact place and profession beyond the classroom. The program will eventually share courses and service-learning projects in sustainability with the UA Office for Sustainability and the Colleges of Business and Engineering.

- **Assist in developing AIA's National Resilience Initiative.** Working with AIA staff in Washington D.C. and the five partner universities in NRI, UACDC is developing a public-interest model focused on resilient community design. The center has submitted NSF and USEPA grants applications in partnership with other network universities. It is anticipated that network universities will eventually provide training modules to the Rockefeller Foundation for the municipal Chief Resilience Officers funded through the foundation. Another major objective of NRI provides guidance on integrating resilience within university-based design curriculums.
- **Continue publication of work through books and manuals, including a comprehensive monograph on UACDC's work.** Following the commercial success of UACDC's *Low Impact Development: a design manual for urban areas* (self-published in 2010 with close to 7,000 copies sold over two editions, and since translated into Chinese) FJSoA+D is in negotiation with a publisher to issue a monograph on UACDC's work. The center also has a book proposal on watershed urbanism under review by the same publisher's editorial board. UACDC is currently working on another publication proposal addressing new housing concepts for *aging in community*.

We excel in content production. Our priority over the next five years involves triangulating publication efforts, development of a graduate curriculum, and work at the national level with the AIA as opportunities to frame a larger, coherent discourse about a public-interest model. Our bottom line, however, is always to deliver exemplary design and planning products, since, in the end, we are makers.



Stephen Luoni, Director  
*Steven L. Anderson Chair in Architecture and Urban Studies*  
Distinguished Professor of Architecture



## **University of Arkansas Technology Development Foundation: Summary Report**

### **Description and Mission**

The Arkansas Research and Technology Park (ARTP) is the focus of the University of Arkansas, Fayetteville's efforts to improve the economic base of the State of Arkansas by working in cooperation with other economic development organizations of the state and northwest Arkansas region. In advancing the University's economic development mission, ARTP assists entrepreneurial University faculty in the transfer of technology for use by society including the commercial development of inventions, technology or other intellectual property including, where appropriate, the creation of new startup companies. In supporting the University's economic development mission, ARTP serves a vital role in providing access to research facilities and infrastructure necessary to nurture, grow and sustain technology-based companies. At present, the facility inventory at the ARTP totals 285,000 square feet and includes the Engineering Research Center, the High Density Electronic Center, the National Center for Reliable Electric Power Transmission, the GENESIS Technology Incubator, the Innovation Center and the Enterprise Center. At full build-out, the ARTP is designed to create nearly 750,000 square feet of research and development capacity, housed in several buildings providing over 2,000 high-skill, high-wage jobs.

The mission of the ARTP is to stimulate the formation of a knowledge-based economy in the state of Arkansas through partnerships that lead to new opportunities for learning and discovery, build and retain a knowledge-based workforce and spawn the development of new technologies that enrich the economic base of the state. The ARTP is managed by the University of Arkansas Technology Development Foundation (UATDF), a supporting organization of the University of Arkansas, Fayetteville.

### **Strengths**

The UATDF was formed in 2003 and began operations in 2004. Over the past several years, the UATDF has shaped a dynamic environment for innovation where University research is being translated into innovative products supporting high-skill, high-wage jobs. Today, the ARTP is recognized as a regional hub for innovation where business enterprises benefit from collaborative opportunities that provide access to intellectual capital, leading-edge research resources and a technologically-skilled workforce. Highlights of the first 11 years of ARTP operation illustrating UATDF core competencies include:

#### Site Development

Since 2003, over \$25 million has been invested in new and improved facilities expanding the inventory of research and development assets by nearly 100,000 square feet. In addition, over \$5 million has been invested in basic infrastructure improvements to add thoroughfares, sidewalks and trails. The funds to make these improvements came from a variety of sources including over \$8.2 million from the University, \$5.3 million from federal government, \$2.1 million from state government, \$1 million from the City of Fayetteville and approximately \$13.1 million from private sources. As a result, a strong platform of R&D infrastructure now exists to provide corporate partners of the ARTP access to facilities and equipment essential to technology development in the areas of power electronics, human health, animal health, advanced materials, water quality and renewable energy.

### Partnership Development

Building partnerships that lead to the development and commercialization of new technologies is at the core of the ARTP's mission. Since 2004, the UATDF has formed working relationships with over 60 public/private entities whose commercial pursuits address an array of issues confronting society. With the support of the UATDF and others, several ARTP corporate partners are now delivering innovative products to the marketplace.

### Entrepreneurial Development

Working in concert with the University's Office of Entrepreneurship and the University's technology licensing arm, Technology Ventures, the ARTP continues to promote the translation of University research into groundbreaking innovations that are fueling a growing entrepreneurial culture.

### Workforce Development

Technology-based economic development is highly dependent on the supply of skilled workers able to fill the demand of rapidly-growing technology companies. For that reason, the primary thrust of the strategic plan for the ARTP is to create an environment that generates a demand for high-wage, high-skill jobs that provide University of Arkansas graduates more opportunities to live and work in Arkansas.

In that regard, corporate partners of the ARTP have accounted for hundreds of jobs, paying well in excess of the per capita personal income recorded for the state. In fact, for the period 2005 to 2015, tenants of the ARTP were responsible for \$139.7 million in direct labor income. What's more important, many of the jobs created at the ARTP are being filled by graduates of the University of Arkansas contributing to the retention of a technologically-skilled workforce.

### Economic Development

According to the economic impact analysis conducted by the University of Arkansas' Center for Business and Economic Research, the operations of the ARTP, including the business expenditures of the affiliate companies and the associated construction activity, have exceeded \$216.9 million since 2003. More importantly, these economic activities have had a combined economic output impact of \$575.9 million on the state of Arkansas. In addition, labor income generated by these activities totaled \$228.3 million and \$19.7 million in state and local taxes have been generated.

## **Goals**

The overarching goal of ARTP is to foster, grow and retain promising new firms that augment the economic ecosystem of the state and region. By concentrating cutting-edge facilities together with a rich pool of talent and innovative technology, the ARTP is providing its corporate partners a competitive advantage that will provide tangible benefits to the state and region such as the creation of high-quality, high-wage jobs in the technology industry. In that regard the primary goals of the ARTP are:

- To serve as a hub for innovation and product development, stimulating the formation of a collaborative community of companies whose commercial pursuits are strategically aligned with the core research strengths of the University of Arkansas;
- To promote the commercialization of inventions, discoveries, and processes devised by members of the University community;
- To promote and sustain a thriving entrepreneurial culture in Northwest Arkansas;
- To build a technologically-skilled workforce by providing opportunities for Arkansas' "best and brightest" college graduates and entrepreneurs to remain and thrive in the state; and
- To improve the economy of Arkansas by creating high quality jobs and generating tax revenues.

### **Prioritized Measureable Objectives**

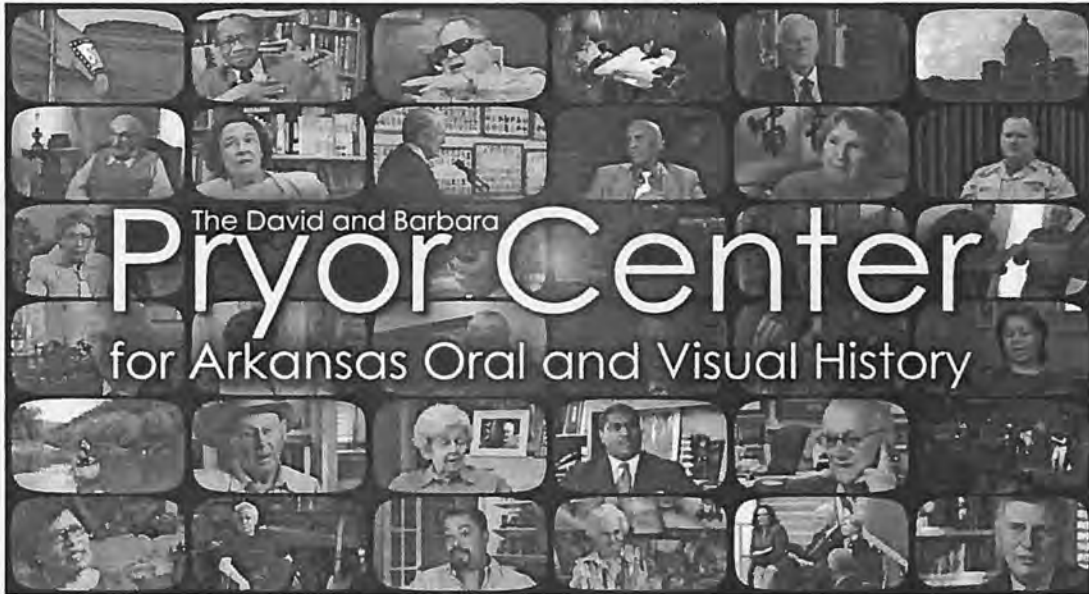
The ARTP is making a positive impact on the economy of Arkansas and is contributing significantly to the development of an ecosystem essential to growing and sustaining a knowledge-based economy. Sustaining this momentum is essential to enable the UATDF to nurture areas of collaborative activity into clusters of companies working in a common area of interest. The measureable objectives of the ARTP are therefore as follows:

- **At build-out, the ARTP will create approximately 2,000 permanent jobs:** UATDF will monitor the employment impact of the ARTP on an annual basis to track progress toward reaching the projected employment targets.
- **At build-out, the total impact of operating the ARTP on regional economic output is projected to be approximately \$1,569,000,000:** the UATDF will monitor the expenditures of ARTP affiliate companies on an annual basis in order to calculate the cumulative regional economic output.
- **At build-out, the operation and construction of the ARTP is expected to generate \$54,102,600 in state and local tax revenue:** the UATDF will update the economic impact analysis of ARTP operation and construction activities every 5 years in order to comprehensively assess the economic impacts and the generation of tax revenues at the state and local level.

### **Summary**

The ARTP is having a positive impact on the economy of Arkansas and is contributing significantly to the development of an ecosystem essential to growing and sustaining a knowledge-based economy. Sustaining this momentum is important to enable the UATDF to nurture areas of collaborative activity into clusters of companies working in a common area of interest. Doing so will result in the ARTP providing tangible benefits to the University through partnerships that promote industry sponsored research, technology licensing, opportunities for corporate giving and recruitment of graduates.

**University of Arkansas**  
**The David and Barbara Pryor Center for**  
**Arkansas Oral and Visual History**  
**Summary Report**



## **Description and Mission**

The David and Barbara Pryor Center for Arkansas Oral and Visual History is an oral history program with the mission to document the history of Arkansas through the collection of spoken memories and visual records, preserve the collection in perpetuity, and connect Arkansans and the world to the collection through the Internet, TV broadcasts, educational programs, and other means. Interview transcripts, audio and video recordings, and photographs are available to students, researchers, documentarians, educators, or anyone interested in Arkansas history on our website at [pryorcenter.uark.edu](http://pryorcenter.uark.edu).

## **History**

The Pryor Center was created in 1999 at the urging of former U.S. Sen. David H. Pryor and Barbara Pryor of Arkansas, who have long had an interest in Arkansas history. The center was developed under the leadership of Dr. Jeannie M. Whyne, who was the chair of the University of Arkansas Department of History. From 2007 to 2009, the center was administered by the University of Arkansas Libraries, Special Collections. Today the center is part of the Chancellor's Office and maintains close partnerships with Special Collections and other academic units across the university. The center is currently managed by Director Randy Dixon, and its advisory board is chaired by Archie Schaffer.

## **Pryor Center Services**

- Provide research and educational materials to the public
- Accept nominations for Arkansans to be interviewed
- Record life-history interviews for the Arkansas Memories Collection
- Provide digital audio kits to the public to conduct personal interviews in the field
- Digitize, preserve, and maintain KATV news footage archive
- Provide on-site, on-camera interview facilities to the public via the Arkansas Story Vault



## **Strengths**

- Uniqueness of program
- Location on the Fayetteville Square and public access to the facility
- State-of-the-art facility and equipment
- Installation of permanent studios
- Experienced staff
- Involvement and support of David and Barbara Pryor
- Chancellor's office support
- New Campaign Arkansas Committee
- Extensive partnerships with other institutions

## **Weaknesses**

- Limited staff size
- Limited funding and lack of large endowments
- Lack of public awareness
- Backlog of materials to be transcribed, processed, and archived

## **Pryor Center Goals Five Years**

### **2016-2017**

- Determine plans for Phase Two construction
- Establish internship and volunteer program
- Update editing software and train staff
- Develop and schedule lecture series for the One East Center atrium
- Increase data storage capabilities
- Establish online partnership with U of A Library system
- Open Story Vault to the public

### **2017-2018**

- Install and implement second Story Vault and control room
- Open second Story Vault to the public
- Begin Phase Two construction
- Make transcription/editor positions full time
- Mass digitize KATV collection
- Increase data storage to accommodate KATV collection
- Hire additional producer/video editor
- Establish off-site data storage backup

### **2018-2019**

- Complete Phase Two construction
- Store KATV videotape collection in Fayetteville
- Purchase updated field production equipment

### **2019-2020**

- Catalog KATV collection
- Make KATV collection available on the Pryor Center website
- Install, implement, and staff basement Story Vault
- Hire additional producer/video editor

### **2020-2021**

- Develop and staff documentary unit
- Update editing software and train staff

## Sustainability Science at the University of Arkansas

### Mission

The genius of the Land Grant Mission is the focus on translation of new knowledge into economic prosperity by solving problems facing agriculture and industry. The mission of the School of Sustainability (School) is to enhance human prosperity through innovations in technology, design, and management solutions for complex sustainability challenges facing food and water supply chain systems. Solutions for these problems must be interdisciplinary in order to create systemic improvements across economic, social, and environmental domains.

### Strengths

*Interdisciplinary Model:* Sustainability science is an interdisciplinary field of investigation that addresses dynamic, multidimensional challenges such as design of healthy communities, mitigation of risks from climate change, analysis of land use impacts on water quality and endangered species habitat, and management of scarce water resources to provide for human needs while protecting ecosystem services.<sup>1</sup> Sustainability science couples fundamental research and technological developments with conceptual models from social sciences, engineering, economics, business, ecology, policy, and other disciplines to create new ways of understanding.<sup>2</sup> Sustainability science provides a robust framework for the University of Arkansas to explore academic models for interdisciplinary education and research. The academic minor in sustainability has over 400 students engaged in programmatic course work each semester.

*Leadership:* Faculty at the University of Arkansas provide leadership in the science of sustainable food and water systems. Key elements of leadership include: 1) Creation of the national framework for continuous improvement (ANSI S-629) used in every major agricultural sector in the US; 2) Development of indicators and metrics for environmental, economic, and social impacts of their supply chains for all US agricultural production sectors; 3) Defining international methodologies for Life Cycle Assessment of food and water systems; 4) Setting the international agenda for research on sustainability of food and water systems through the United Nations Food and Agriculture Organization. Faculty in the School currently serve on the US Secretary of Agriculture's Committee for the 21<sup>st</sup> Century, the UN CEO Mandate for Water, FAO's Sustainable Agriculture Metrics Committee, and the UN Foundation Solutions from the Land Workgroup. The School proposes to develop a Global Academy of Food and Water Sustainability to formalize these leadership activities.

*Innovation:* The School of Sustainability creates new knowledge and understanding of the most important and complex challenges of the 21<sup>st</sup> century through interdisciplinary engagement. The School integrates technological sciences with the humanities to invent new models of engagement, transaction, and resolution of conflicts. The School of Sustainability amplifies existing academic competencies through internal and external networking, synthesis of understanding of complex systems, and effective innovation in policy, technology, and communications. Internal networking occurs through shared student mentorship and research project implementation. The School engages stakeholders from business, finance, civil society, other academic institutions, and governmental agencies to define common challenges and create effective strategies for addressing them. The relationships developed across global food and water systems supply chains dramatically enhance the efficiency of knowledge transfer from academic institutions to the private sector. The School is a testbed for new private-public partnerships. Annual research expenditures from extramural sources for the School currently exceed \$1 million.

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<sup>1</sup> Clark, W.C. 2007. Sustainability Science: A room of its own. *Proceedings of the National Academy of Science* 104: 1737-1738

<sup>2</sup> Komiyama, H., Takeuchi, K. 2006. Sustainability science: building a new discipline. *Sustainability Science* 1:1-6.

## **Challenges for the School of Sustainability**

*Institutional Framework:* The School of Sustainability does not currently exist within the standard University of Arkansas institutional framework for academic programs. It is currently structured as an academic program administered through the Office for Sustainability (OFS) in the Provost's office. The School is led by Dr. Marty Matlock, executive director of the OFS. This is not a defined leadership role in the institution, limiting representation of the School's interests to UA leadership. The School currently administers an undergraduate minor and a graduate certificate, but plans to add interdisciplinary graduate programs at the MS and PhD levels. Academic programs in graduate studies are difficult to develop with the existing administrative structure.

*Foundation Resources:* An interdisciplinary School of Sustainability should have a foundation base for funding of at least \$10 million. This foundation base has not yet been developed. The School has developed strong relationships with a portfolio of potential donors that have expressed an interest in funding core initiatives. However, until the School has an established institutional framework fundraising will likely be limited to project-specific activities.

## **Challenges for Interdisciplinary Programs**

Universities across the US have been experimenting for more than 40 years with Interdisciplinary Environmental and Sustainability (IES) strategies.<sup>3</sup> There are almost 1,200 IES academic programs in US universities offering more than 2,000 degrees in environmental, sustainability, and energy sciences.<sup>4</sup> Interdisciplinary programs within these universities share a number of common challenges. The primary structures for administering budgets within Universities were developed to insure core competencies within disciplines, and do not support interdisciplinary programs. Federal funding programs, while aspiring to support interdisciplinary research, are still primarily structured by core disciplines, resulting in difficulty assessing the technical competitiveness of proposals.<sup>5</sup>

## **Program Direction and Priorities**

The School of Sustainability will cultivate the science of sustainability at the University of Arkansas and will engage scholars and practitioners across disciplines to create new ways of understanding and responding to complex global challenges in food and water systems. The scales of analysis will span from community to global; the program focus will be on resource scarcity and constraints, changing climate conditions, expanding communications and technology systems, social and ecological disruptions, and resource demands from an increasing population. Every discipline in the University of Arkansas has knowledge and models to contribute to this exploration. The focus of the School is addressing sustainability challenges in food and water systems using large, integrated data systems with analytical tools, including complex systems models, life cycle assessment, and cumulative risk assessment.

## **Program Strategy**

The goals of the School of Sustainability are to create new understanding of the interconnectedness of economic, social, and environmental systems; to integrate this understanding into knowledge and technological innovation; and to transform the way we design and manage our world so this generation can realize the promise of global prosperity.

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<sup>3</sup> Vincent, S., Roberts, J.T. and Mulkey, S., 2015. Interdisciplinary environmental and sustainability education: islands of progress in a sea of dysfunction. *Journal of Environmental Studies and Sciences*, pp.1-7.

<sup>4</sup> Vincent, S., Dutton, K., Santos, R. and Sloane, L., 2015. Interdisciplinary environmental and sustainability education and research: leadership and administrative structures. National Council for Science and the Environment, Washington.

<sup>5</sup> Metzger, N. and Zare, R.N., 1999. Interdisciplinary research: From belief to reality. *Science*, 283(5402), pp.642-643.



The first phase of implementation of the new graduate programs in sustainability will include partnerships with the Walton College of Business (WCOB), the College of Engineering (CoE) and the E. Fay Jones School of Architecture (FJSA) (Figure 1). The School, in partnership with each college, will create and offer three graduate courses (SUST 5XXX) that will constitute a common body of knowledge for new MS and PhD programs. The Academic elements of the School will include:

- Undergraduate Minor in Sustainability;
- Graduate Certificate in Sustainability;
- Executive MS in Sustainability Management (WCOB);
- MS in Sustainable Supply Chain Management (WCOB);
- MS in Sustainable Community Design (FJSA);
- MS in Sustainable Water Systems (CoE);
- PhD in Sustainable Systems Design (CoE).

The graduate programs will be developed by each college in partnerships with business, industry, and community leaders to connect new knowledge with existing social and economic frameworks. The School of Sustainability will integrate cooperative learning programs for students to work with industries, businesses, communities, and governments around the world as part of their formal education. The graduate programs will serve as models for other colleges to develop similar programs within their college, leveraging the common core courses offered by the School.



Students pursuing Sustainability degrees from all three colleges will take the three common core courses, creating an interdisciplinary cohort of students for the sustainability graduate program. Each college will govern the structure and curriculum for their MS degrees based upon this core from their discipline perspectives. These new MS programs will be administered and directed by the home college, and coordinated through the School. The School of Sustainability will not have faculty appointments, but rather will be composed of affiliated faculty from partner disciplines.

### School of Sustainability Research Initiatives

The School of Sustainability research program will focus on sustainable food and water systems at local to global scales. The three priority research initiatives will be:

*1. Designing sustainable communities.* Human prosperity requires resilient communities. The School of Sustainability will investigate new models of urban food and water systems, including local food strategies, water and wastewater treatment technologies, and community design elements. The common heuristic will be design of ecosystem services in human-dominated systems.

*2. Indicators and Metrics in Agricultural Supply Chains.* The School of Sustainability will develop standard methods for improving food and water system supply chain sustainability. Faculty in the School are global leaders in defining priority indicators with associated metrics. They will continue to advance the science of Life Cycle Assessment and the methods of cumulative risk assessment. Faculty in the School of Sustainability will develop models and assessment tools to support improvements across each sector of the food supply chain.

*3. Global Academy for Sustainable Food and Water Systems.* The purpose of the Academy is to define the research and policy priorities for global food systems supply chains risk management, and water systems sustainability. The Global Council will organize leadership across focus areas of food production systems (e.g. supply chain security, food system safety, famine response, etc.), standardize agricultural sustainability indicators across social, economic, and environmental domains, and define gaps in knowledge, inventory current actions, and identify immediate and long-term needs for research and policy intervention.

# **Libraries**

## University Libraries Academic and Research Services

### **Mission**

The Academic and Research Services Division supports the University Libraries' mission by providing quality services and assistance to library users in the library and from remote locations. The division provides service at Mullins Library and as well as in branch libraries in Biochemistry and Chemistry, Physics, and Fine Arts. Library users can access the libraries any hour of any day through our online resources and services.

### **Departmental Strengths**

- A knowledgeable faculty of 16 librarians (4 Asst., 6 Assoc., 4 Librarians, and 2 Distinguished Librarians) who combined for 6 refereed publications and 15 conference posters/papers, and served on 24 national committees and 30 campus committees. (2015)
- We use a variety of instruction methodologies utilizing a range of available software tools.
- In 2015, we answered a total of 23,786 questions / consultations and provided 609 instruction sessions reaching 17,636 users.
- Patrons seek out the libraries' services and spaces even into the evening hours, reaching over 1,000 people as late as 9:00pm. In one instance, library patrons at 9:00 totaled 1,124 students – more than reside in 65% (381) of the census reporting municipalities in Arkansas.
- Interlibrary Loan is speedy. We fulfilled 77,775 requests out of 87,415 submitted. (The majority of "unfilled" requests are already available in our collections.) Average turnaround time to lend an article to another library: 2.8 hours compared to a consortia average of 10 hours.
- Consortia memberships such as CRL and GWLA expand our access to research materials.

### **Challenges**

- Identifying and pursuing emerging directions of librarianship (e.g., digital projects, embedded instruction, asynchronous learning) when traditional activities still demand attention
- Marketing resources in a manner through which our various clientele gets the messages
- Integrating library instruction (e.g. information literacies, curricular mapping) into the classroom and larger campus department and university goals
- Obtaining meaningful input and feedback from our clientele regarding our services and collections
- Grappling with a publishing model that has shifted away from one-time purchases toward leasing, which can carry a greater and less predictable cost
- Providing an adequate collection of books when ongoing materials (periodicals and databases) are increasingly expensive
- Limited space for collections, study, and collaborative work
- Older facilities (lack of outlets for devices, HVAC issues)
- Identifying and staffing appropriate point-of-need services when expectations of immediate service are mounting and the types of services are changing

### **Untapped resources and opportunities**

- Greater involvement in OER opportunities and support of classroom activities
- Ability to collaborate with faculty and patrons in the areas of grantsmanship, data management, the publication life cycle, and the campus Institutional Repository
- Greater visibility in educating campus users on copyright and Open Access issues
- Connectivity between UA campuses as well as community colleges in preparing students for attendance at our campus
- Improving discoverability to library resources through new software tools
- Greater visibility in online venues

## University of Arkansas Libraries Overview April 2016

### **20/20 Strategic Initiatives and Goals:**

1. Adopt assessments that are based on outcomes aligned to the University's overarching goals and regularly modify—or discontinue—programs based on these assessments.
2. Extend the Libraries' role in scholarly communication.
3. Extend the Libraries' role in digital curation including providing access to born digital resources.
4. Implement practices and programs that make the Libraries more fiscally sustainable.
5. Implement practices and programs that make the Libraries environmentally sustainable.
6. Develop and sustain key collaborations that enable the Libraries to fulfill their goals and objectives and raise the profile of the Libraries.
7. Realign existing services to assist the learning needs of the University's students, and the teaching and research needs of the University's faculty.
8. Promote the excellence of the Libraries' personnel.
9. Increase the diversity of the Libraries' personnel and collections.
10. Apportion the resources of the Libraries in a manner that balances the current needs of all constituents and anticipates future demands due to the changes in academic and research programs and growth of the student population.

### **Strengths include:**

- Extensive manuscript collections in Arkansas history, politics, and journalism
- Growing collections in Middle Eastern Studies, Native American Studies, streaming audio & video, historical and African American newspapers
- Emerging collections in nano-science, biomedical engineering, and nursing

### **Memberships and organizations**

- Center for Research Libraries (CRL)
- Coalition for Networked Information (CNI)
- Greater Western Library Alliance (GWLA)
- Council on Library and Information Resources (CLIR),
- International Federation of Library Associations (member of Agricultural Libraries Section)
- Scholarly Publications and Resources Coalition (SPARC), open access advocacy organization
- United States Agricultural Information Network
- Inter-University Consortium for Political and Social Research (ICPSR)
- Digital Library Federation advances research, learning, and the public good through the creative design and wise application of digital library technologies

### **Programs of national significance in which we participate**

- Western Regional Storage Trust (WEST), a print journal repository serving libraries and library consortia in the Western Region of the United States.
- Agricultural Network Information Collaborative (AgNIC), -provides reliable, freely-available, digital content for agriculture, food, and natural resources information. The Libraries is the major contributor to and manages the AgNIC portal for Rice Research and Practice.
- D4: Data Federation of University Research, life-cycle management of research data

**Weaknesses include:**

- No current collection fully supports the 39 doctoral programs offered at the University
- Ability to grow collections limited by serials price escalation of 6%-8% annually
- Underfunded budget (our 2014 total expenditures: **\$13,775,696**; SEC average: **\$21,381,562**; peer university average: **\$21,058,688**; top 10 public university average: **\$34,951,106**. 2014 is the latest available data collected by the Association of College & Research Libraries (ACRL); the 2015 data will be published in June 2016. Our 2015 total expenditures were **\$15,345,923**.)
- Collection deterioration due to lack of significant funding for preservation /conservation program
- Subject liaison and collection development duties spread across too few librarians as academic and research programs and student population continue to grow
- Lagging behind peer institutions in supporting preservation and promotion of campus research
- Too few faculty and professional staff to support major initiatives and programs
- Aging buildings and facilities unequipped to meet 21<sup>st</sup> Century student needs

**Major initiatives and programs in process and development include:**

- Institutional Repository: a partnership between the University Libraries and the Office of Research and Economic Development through ScholarWorks@UARK; recently hired the Head of the Office of Scholarly Communication, Melody Herr, who will oversee this project among other campus initiatives.
- Digital Center: established in 2015
- Discovery layer: a customizable software search interface for the library catalog that allows users to find information held in the library's catalog and beyond; in process of implementation
- Off-site storage facility, \$11.4 million; projected completion date of 2018
- Open Educational Resources: a Task Force formed in collaboration with the Global Campus and UA Bookstore in 2015 is driving a campus initiative to enhance awareness and adoption of OER resources by faculty.
- Developing support for the growing demand of distance education courses; Distance Education Librarian hired in 2016 to oversee and develop a program and resources in collaboration with the Global Campus
- CUACRL: The Council of University of Arkansas Research Libraries expanded its reach in 2016 to include two-year community colleges as requested by Dr. Michael Moore of the UA system office. It is now known as the Council of University of Arkansas College & Research Libraries, and its mission is to share, maintain, promote—and thereby expand—library resources and services offered to U of A research institutions to advance learning, teaching, research, service and creativity in the state.
- Project Ceres (Center for Research Libraries) grant-funded digitization project of Arkansas Agricultural Extension Office bulletins; grant total \$7,600.
- National Historical Publications & Research Commission (NHPRC) grant-funded project to process the James D. Bales Papers; grant total \$73,989.

**Major initiatives and programs not currently funded:**

- Science Library: \$26 million
- Mullins Library renovation: \$85 million for full, \$20 million for phased minimalist project
- ARTS Library: \$30 million (American Radio & Television Script Library; valued at \$71.4 million in 2013)

# **ROTC Units**



## AIR FORCE ROTC SUMMARY REPORT

May 25, 2016

### Strengths:

1. The professionalism, expertise, and dedication of our people rank highest on our list of strengths. Our team never hesitates to overcome any challenge blocking mission of our detachment or the success of our students.
2. Tradition of excellence earned by the academic programs and our ROTC programs draw students from across the country.
3. ThunderHawks embody a servant-leader culture.
4. From academics to facilities to operating funds, Air Force ROTC enjoys tremendous university support as evidenced by our recent facility renovations.
5. University of Arkansas Room and Board Scholarships help lock-in and retain top-caliber students.
6. The Air Force ROTC Living Learning Community gives parents peace of mind and students a reinforced sense of belonging and dedication to ROTC and academic success.

### Weaknesses:

1. Recruiting pool within Arkansas not large enough to grow our program. For comparison, Arkansas high school students earned disproportionately fewer scholarships than most neighboring states:

State	Population*	AF HSSP Scholarships
Texas	27,469,114	56
Tennessee	6,600,299	23
Missouri	6,083,672	18
Mississippi	2,992,333	7
Louisiana	4,670,724	5
Oklahoma	3,911,338	3
Arkansas	2,978,204	3

\* United States Census Bureau: Vintage 2015

We need to do more to spread the word and prepare students within the state while attracting those scholarship caliber students from across the country.

2. Since the university charges additional tuition to all out-of-state students, out-of-state High School Scholarship recipients must forfeit one year of their scholarship to attend the University of Arkansas limiting our access to top-caliber students. The number of interested out-of-state students who decide not to give up one year of their scholarship in order to attend the University of Arkansas indicates we would pick up at least 4-6 additional superstar freshmen each year if we granted ROTC scholarship recipients in-state status.

3. Students attending Air Force ROTC here from our cross town schools, University of Arkansas - Fort Smith (UAFS), John Brown University, and Northwest Arkansas Community College (NWACC), find attending mandatory on-campus classes/events difficult. The main problem, parking, poses an inconvenience, but can be overcome by education (park and ride in the outlying lots) and planning.

4. Government vehicle parking poses one of the consistent staff irritants. Government vehicles must be moved every Friday before a home football game and often staff cannot find nearby parking when returning from recruiting events or presentations during the academic day. Growing these programs helps retain cross-town cadets through carpooling a buddy system for accountability. Over the past four years we have not successfully commissioned a cross-town cadet who didn't transfer at some point to the University of Arkansas.

#### **Priorities and Direction:**

Air Force ROTC Detachment 030 strives to be the benchmark large detachment with perfect recruiting and perfect training. In order to achieve our vision, we recruit and develop quality Air Force leaders and citizens of character dedicated to serving our Nation. Frankly, the ROTC departments have not grown in proportion to the university, and we do not understand why. We continue to look for new recruiting venues and academic majors of interest to the students we would most like to recruit. The following outline a few of our initiatives:

1. Partner with Engineering Perspectives to ensure all freshman engineering students understand the opportunities available as a military engineer.
2. Continue to build upon the outstanding reputation of our language department to ultimately add majors in critical languages such as Arabic, Chinese, Russian, and Japanese.
3. Continue our partnership with the university's world-class nursing program.
4. Continue to lobby for in-state tuition for out-of-state ROTC scholarship cadets.
5. Continue to stress the importance of strength through greater diversity. Partner with teams stressing the importance of healthy lifestyles, solid academics, and community



service to elementary, middle school, and high school youth who will become the first college graduates in their family.

6. Encourage the College of Engineering to add aerospace or aeronautical engineering to their list of majors as soon as feasible.



MEMO

TO: Chancellor Joseph E. Steinmetz

FROM: Lieutenant Colonel Chad Quayle, Professor of Military Science

CC: Provost Ashok Saxena, Chief of Staff Laura Jacobs, Associate Vice Chancellor Marcia Overby

RE: Department of Military Science Academic Meeting Summary Report

DATE: May 23, 2016

Given the program's mission to "*partner with universities to recruit, educate, develop, and inspire Senior ROTC Cadets in order to commission officers of character for the Total Army; and partners with high schools to conduct JROTC in order to develop citizens of character for a lifetime of commitment and service to the nation*" our efforts focus primarily in the areas of teaching and learning as well as outreach and engagement. The Army ROTC program has a very limited role in conducting, publishing, and disseminating research although we do seek to integrate and apply the latest findings and research from the field of adult education into our curriculum. In response to the Chancellor's memorandum dated January 22, 2016, this report covers the strengths, weaknesses, priorities, and direction for the Army ROTC program over the next five years.

**Strengths**

Recruiting. We have made marked progress over the past two years in attracting top tier talent to the Army ROTC program at the University of Arkansas – Fayetteville (UAF). From 2011 to 2015, the UAF program averaged 6.5 Army ROTC National Scholarship Winners per year. For the 2015-2016 academic year we had 12 National Scholarship Winners enroll; for the 2016-2017 academic year we currently have 16 National Scholarship Winners who have accepted. Our Recruiting Operations Officer, Mr. Oscar Rayford, who focuses on recruiting at both the state and regional level, has been instrumental to the program's success in this area.

The ROTC "Team of Teams." The Army ROTC program works as a part of a greater ROTC team both here on the UAF campus and across the state as a part of the University of Arkansas System. The Army and Air Force ROTC programs at the UAF work very closely together to leverage resources, share learning opportunities, and develop our cadets. We frequently conduct joint lab sessions, provide joint color guards, and work together to address support requests from the community. In a regional context, our program works with the other Army ROTC programs within the University of Arkansas System (University of Arkansas – Pine Bluff, University of Central Arkansas, and Arkansas State University) to conduct training, provide additional learning and leadership opportunities for our cadets, and share best practices within the region.

Partnership with the Arkansas Army National Guard. The Arkansas Army National Guard plays a key role in providing the Army ROTC program with resources and expertise to conduct training and educate our cadets.

### **Challenges and Weaknesses**

**Demographics.** While the ethnic and racial composition of our program closely mirrors that of the University, our male-female ratio has remained relatively constant at approximately 85% male / 15% female. Our goal is to increase the level of female participation to 22% within three years.

**Nursing and Engineering.** We face increasing challenges in recruiting qualified nursing and engineering students to the program. Increased academic requirements have challenged our cadets who initially planned to study nursing or engineering; many transfer out of these programs after their first two years at the University. We are working with the Athletic Department and the individual schools to identify ways to better support cadets who wish pursue these fields of study and facilitate their academic success.

### **Priorities**

#### **Priority 1: Cadet Education and Development**

Army ROTC teaches leadership and discipline, management techniques, cultural awareness and problem solving in order to develop young men and women from our state to prepare them for a lifetime of service to their country, state, and local community. Those who participate in Army ROTC and subsequently serve as Army officers develop leadership and managerial skills that last a lifetime, as newly commissioned second lieutenants have responsibilities that far exceed those of most new college graduates. They routinely shoulder responsibility for training, inspiring and leading more than 30 soldiers during their initial assignment.

Army ROTC designs, develops, and delivers a curriculum that aims to produce leaders possessing the skills, values, and attributes needed to effectively recognize and leverage opportunities. Practical leadership experiences occur both on campus throughout the academic year and during summer attendance at leader development courses. The summer months also offer broadening opportunities for students to travel overseas and attend schooling for specific military skills. The Army implemented a talent management program to help each individual cadet identify their best prospects for both their career track and their component (Active Army or Reserve Component).

#### **Priority 2: Faculty and Cadre Development**

The Army ROTC faculty and cadre are professionals who make significant contributions to the development of quality future officers and citizens. The United States Army Cadet Command (USACC) provides a robust formal development program for assigned military personnel. All Army personnel who serve as teaching faculty must attend the Foundation Instructor Facilitator Course (FIFC), a ten-day, 80-hour course that educates faculty on basic instruction and learning

facilitation techniques and methods. FIFC uses the “learn by doing” philosophy where students present the majority of the instruction. The Professor of Military Science will attend the Cadre & Faculty Development Course this summer. The program is a 36 credit hour program delivered over two semesters (summer 2016 and fall 2016) that leads to an M.A. in Higher Education Administration from the University of Louisville. The program presents instruction on pedagogy, curriculum and organizational analyses, and the challenges of leadership and administration in contemporary higher education.

### Priority 3: Community Engagement

Army ROTC engages with the community continuously throughout the year. We interact regularly and have enduring relationships with the Veterans Administration, local high school counselors, Junior ROTC programs, the business community, and the Military Officers Association of America. Our focus in community engagement is threefold. First, we seek to leverage the vast array of leadership experience and talent in the community to better prepare our cadets for the leadership roles they will assume in the military and in their community. Second, we seek to develop civilian employment opportunities for our cadets who access into the Reserve components. They must find meaningful employment and develop their civilian career in addition to their military career. Third, we have a responsibility to mentor local high school students to prepare them for future academic and professional opportunities.

### The Next Five Years

Army ROTC will continue to prepare cadets for the leadership roles they will assume in order to engage with the complexities of the global security environment, both now and in the future. We must recruit and retain the right personnel in order to ensure continued success. Given the trend of diminishing resources within the Department of Defense, we must identify potential cadets who have a propensity to serve and who are interested in the leadership opportunities within the officer corps and reduce the number of cadets motivated by scholarships and other financial incentives. USACC must develop predictive methods to identify quality candidates prior to contracting in order to commission the best candidates.