

College of Natural and Applied Sciences

August 21, 2013

State of the College Address

Tammy Jahnke, Dean

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PLACE

CNAS Vision/Mission

- The College of Natural and Applied Sciences at Missouri State University seeks to be recognized regionally and nationally for teaching, scholarly productivity, professional and community service, and our outstanding students and alumni.
- The College of Natural and Applied Sciences develops educated persons who, upon graduation, are prepared to make sound decisions relative to the natural and applied sciences and society and to be productive and successful in their careers – our commitment to public affairs. We are committed to excellence in teaching, research and scholarly activities, and community and professional service.



Points of Pride

- Research
 - Last year over 60% of CNAS faculty (97 total tenured/tenure-track faculty) mentored a student (undergraduate or graduate) project that led to a presentation on campus!
 - CNAS and three centers embedded in CNAS (OEWRI, Bull Shoals Field Station, and CRPM) received over \$2.7 million in external funding!
 - University-wide – Percent of Faculty as contributors – 17.97%
 - CNAS – Percent of Faculty as contributors – 30% with funding, 40% submitted a grant in FY13
 - 98 peer-reviewed faculty publications in 2012. Many of these publications have student co-authors!

Undergraduate Research Day – Faculty Mentors

- Andrzej Baran (PAMS)
- Chris Barnhart (BIO)
- Eric Bosch (CHM)
- Dan Crafts (HRA)
- Paul Durham (BIO)
- Bob Egbert (EGR)
- Kelvin Erickson (Missouri S&T)
- Katye Fichter (CHM)
- Douglas Gouzie (GGP)
- Melanie Grand (HRA)
- John Havel (BIO)
- Stephanie Hein (HRA)
- John Heywood (BIO)
- Kyoungtae Kim (BIO)
- Laszlo Kovacs (BIO)
- Day Ligon (BIO)
- Alicia Mathis (BIO)
- Bob Mayanovic (PAMS)
- Gary Meints (CHM)
- Judith Meyer (GGP)
- Kevin Mickus (GGP)
- Saibal Mitra (PAMS)
- Bob Patterson (PAMS)
- Bob Pavlowsky (GGP)
- Jorge Rebaza (MTH)
- Mike Reed (PAMS)
- Les Reid (MTH)
- Chuck Rovey (GGP)
- Matthew Siebert (CHM)
- Alexander Wait (BIO)
- Steve Watkins (Missouri S&T)
- Brian Weaver (BIO)
- Matthew Wright (MTH)
- Songfeng Zheng (MTH)

College of Natural and Applied Sciences 5/1/2013





FOR STAFF EXCELLENCE
Katie Tucker
College of Natural & Applied Sciences
Faculty and Staff Award Event
Missouri State University
Dennis J. White



FOR STAFF EXCELLENCE
2013
2013
Dennis J. White



FOR STAFF EXCELLENCE
Angela Plank
College of Natural & Applied Sciences
Faculty and Staff Award Event
Missouri State University
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College of Natural and Applied Sciences | 5/1/2013



Shared Values/Guiding Principles

- We value
 - our students and their success;
 - hands-on learning (applied and practical);
 - academic rigor and critical thinking;
 - faculty, staff and administrators;
 - excellence in teaching, research and service;
 - ethical behavior;
 - our research endeavors;
 - our community, alumni and friends; and
 - continuous improvement.



Faculty Promotions - 2013

- Professor
 - Kevin Evans– Geography, Geology and Planning
- Associate Professor with Tenure
 - Xiaomin Qiu– Geography, Geology and Planning
- Senior Instructor
 - Brian High– Chemistry
- 2013-14 applications
 - Distinguished Professor - 2
 - Professor – 3
 - Associate Professor with Tenure - 4
 - Senior Instructor - 5

CNAS New Faculty

- GGP – Assistant Professor – Ron Malega
 - GGP – Visiting Assistant Professor – Gary Michelfelder
 - CHM – Instructor – Eric Tague
 - HRA – Visiting Assistant Professor – Lamae Koogler
 - EGR – Lecturer - Todd Brewer
-
- We have nine faculty searches that will start in August/September. (BIO – 2, CHM – 2, GGP -1, PAMS – 1, MTH – 2, HRA – 1) The nine hires will be contingent on funding which could change in September.



Faculty Departures in 2012

- Tony Toste (CHM) - retirement
- Clayton Sherman (MTH) – retirement
- Annette Gordon (CHM) – retirement in early 2014
- Dianne Twigger (MTH) – resignation
- Kathy Shade (CHM) - resignation
- Carl Riegel (HRA) – passed away February 2013



CNAS New Staff

- BIO – Laboratory Supervisor – Wendy Evans
- BIO – Administrative Assistant– Linda Coroleuski
- GGP – Administrative Assistant– Susan Blades
- HRA – Academic Advisor/Marketing & Recruitment Specialist – Katie Tucker
- MTH – Administrative Assistant– Lee Amundson
- OEWRI– Assistant Director– Marc Owen
- OEWRI – Research Specialist I – Tyler Smith

CNAS New Leadership

- Stephanie Hein– Interim Head – Hospitality & Restaurant Admin.

CNAS Facts

- [CNAS](#)
- 7 departments and cooperative engineering program
- Nearly 200 full-time faculty and staff
 - 97 tenured or tenure/track faculty
 - An additional 2 faculty are on half-time appointments this year.
 - 23 instructors (non-tenure eligible)
 - Over 100 graduate students on assistantship
 - 30 support staff (administrative/executive assistants, electronic support, etc...)
- Annual Budget – over \$15 million (actual \$15,284,987)



A few budget notes -

- CNAS has allocated \$733,780 for teaching assistants in the college. That is enough to fund 74-90 full-time assistantships in CNAS!!! Many faculty write research assistantship funds in grants so even more graduate students are funded each year!



Points of Pride

- Accredited Programs
 - Planning – Planning Accreditation Board
 - HRA – Accreditation Commission for Programs in Hospitality Administration
 - Computer Science – Computer Accreditation Commission of ABET (Accreditation Board for Engineering and Technology)
- Chemistry has degree programs certified by the American Chemical Society.
- 100% of graduates of Cooperative Engineering program have jobs within six months of graduation (most by graduation)
- [Great News! Faculty and Student!](#)

CNAS Citizen Scholars

8/36 from CNAS

- 2013 – Nominations are due early in the fall semester
- 2012 – three (Bethany Forrester - EGR, Anthony Hendrix - BIO, Lauren Bansbach - BIO)
- 2011 ---
- 2010 – one (Jacob Swett - PAMS)
- 2009 – one (Matt Evans – HRA)
- 2008 – two (Ashley Egan - CHM and Catherine Shoults - BIO)
- 2007 – one (David Vinyard - CHM)



1984 (1870 last year) Undergraduate and
130 (79 last year) Graduate Students

Department	Spring 2010 Majors Undergraduate/ Graduate	Spring 2011 Majors Undergraduate/ Graduate	Spring 2012 Majors Undergraduate/ Graduate	Spring 2013 Majors Undergraduate/ Graduate	Fall 2014 estimates
Biology	520/36	545/52	563/56	605/48	677/36
Chemistry	151/20	173/16	175/24	168/23	232/20
Computer Science	117/3	131/8	150/8	187/4	242
Engineering	95	140	166	155	146
Geography, Geology & Planning	207/31	231/45	219/36	191/36	200/32
Hospitality and Restaurant Administration	254	246	229	240	274
Mathematics	140/21	148/30	145/27	140/30	160/21
Physics, Astronomy & Materials Science	58/8	81/13	78/12	68/18	53/16



of students in majors vs. # of graduates

Department	Spring 2012 Majors Undergraduate/ Graduate	Spring 2013 Majors Undergraduate/ Graduate	3-year rolling averages of BA/BS Graduates/year for past three years	3-year rolling averages of MS Graduates/year from 2010-2012
Biology	563/56	605/48	98	13.33
Chemistry	175/24	168/23	21	7.67
Computer Science	150/8	187/4	18.33	---
Engineering	166	155	15	---
Geography, Geology & Planning	219/36	191/36	36.67 15 8.67	9.0
Hospitality and Restaurant Administration	229	240	73.33	---
Mathematics	145/27	140/30	15.67	7
Physics, Astronomy & Materials Science	78/12	68/18	8.5	4

MNAS 15.67 MS graduates/year (CNAS contributes 7/year, AG contributes the remainder.)

Points of Pride

- *Missouri State University Foundation Awards for Research 2013*
 - *Kevin Mickus, Geography, Geology and Planning*
- *Missouri State University Foundation Awards for Service 2013*
 - *Doug Gouzie, Geography, Geology and Planning*
- *Graduate College Awards - 2013*
 - *Outstanding Thesis Advisor Award—Brian Greene, Biology*
 - *Outstanding Graduate Mentor—Day Ligon, Biology*
- *BOG Staff and Faculty Awards for Excellence in Public Affairs 2013*
 - *Bob Pavlowsky – Geography, Geology and Planning*



Points of Pride

48 CNAS students participated in short term study away
Thank you to the faculty willing to lead these programs!

March 2012	Jamaica GRY	Linnea Iantria, Bob Pavlowsky
May/June 2012	British Isles GLG	Tom Plymate
May/June 2012	Jamaica BIO (SU12)	Dan Beckman
August 2012	Ecuador BIO/CHM	Janice Greene, Diann Thomas

Dec 2012/Jan 2013	Greece GRY (SP13)	Dimitri Ioannides, Ed Carawan
March 2013	Caribbean GRY	Linnea Iantria
May 2013	Galapagos Islands BIO	Daniel Beckman
July 2013	India IDS	Saibal Mitra
August 2013	Brazil BIO/CHM	Janice Greene, Diann Thomas

Other faculty who have been involved in short term study away –
Abbe Ehlers, Alexander Wait, Dimitri Ioannides, Judy Meyer,
Jessica Sewald



Points of Pride

- In 2012 CNAS had 78 state-funded teaching assistantships and 23 grant funded research assistantships for graduate students for a total of 101 funded graduate assistantships! (Grants funded – 7 BIO, 1 CHM, 12 GGP, 3 PAMS)
- The CNAS budget committee supported institutionalizing the STEM GA's previously funded with one-time dollars and reallocating funds to support 74-90 teaching assistantships each year.



Outreach – 2013-2014

- PhysBIZ – Many trips out to SPS Elementary Schools!
- September 14, 2013 – Boy Scout “Merit Badge University”
- October 26, 2013 – Expanding Your Horizons
- February 22, 2014 – Regional Science Olympiad (on Missouri State campus)
- March 7, 2014– Regional Missouri Junior Academy of Science
- April 1-3, 2014 - Ozarks Science and Engineering Fair
- April 9, 2014 - Pummill Relays – Mathematics
- July, 2014 – GLADE Academy – Bull Shoals Field Station
- Girl Scout Science Badge Event
- NASA Public Observing Night at Baker Observatory – Watch for dates!
- - And much more!!!!



Points of Pride

- MSU through Bull Shoals Field Station is the state-wide coordinator for Project WET, Project Leopold, and Project Flying Wild!
 - The goal of Project WET is to facilitate and promote awareness, appreciation, knowledge, and stewardship of water resources through the development and dissemination of classroom-ready teaching aids and through the establishment of state and internationally sponsored Project WET programs.
 - The Leopold Education Project (LEP) is an innovative, interdisciplinary conservation and environmental education curriculum.
 - *Flying WILD* offers a whole-school approach to environmental education using birds as the focus.
- We are also active participants in Project WILD and Learning Tree.
 - Project WILD is a wildlife-focused conservation education program for K-12 educators and their students.
 - Project Learning Tree is an award-winning environmental education program designed for teachers and other educators, parents, and community leaders working with youth from preschool through grade 12.



External Funding – FY13

- Total funding to date – just over \$2.7 million!
- **FY13 numbers**
- 84 proposal submitted by CNAS and our centers (BSFS, CRPM and OEWRI)
 - BIO – 18 (18 funded to date)
 - CHM – 8 (3 funded to date)
 - CSC – 1
 - Engineering – 2
 - GGP – 8 (4 funded to date)
 - MTH – 4 (4 funded to date)
 - PAMS – 10 (6 funded to date)
 - BSFS – 3 (3 funded to date)
 - CRPM – 7 (7 funded to date)
 - OEWRI – 5 (5 funded to date)
 - CNAS – 2

CNAS Grant Incentive Program

All faculty submitting grants in excess of \$30,000 receive \$400 for travel or research supplies.

	Spring 2010	Fall 2010	Spring 2011	Fall 2011	Spring 2012	Fall 2012	Spring 2013
Biology	\$800	\$2000	\$400	\$1600	\$800	\$800	\$2000
Chemistry	-	\$800	\$400	\$1200	\$400	\$1600	\$400
Computer Science	-	\$400	-	-	-	-	-
Engineering	-	-	-	-	-	\$400	-
Geography, Geology and Planning	\$400	\$2000	\$400	\$2000	\$800	\$1600	\$400
Mathematics	-	\$800	-	\$1200	-	\$800	\$400
Physics, Astronomy and Materials Science	\$400	\$1600	\$400	\$2000	\$400	\$1600	\$400



Scholarship Activity

Includes books, book chapters, journal articles, performances and exhibitions

Year	2009	2010	2011	2012
	#Contributions	#Contributions	#Contributions	#Contributions
College	Value	Value	Value	Value
Agriculture, School of	14	7	8	5
Arts & Letters	74	77	62	43
Business Administration	79	76	77	43
Education	18	20	25	11
Health & Human Services	39	39	44	22
Humanities & Public Affairs	78	70	60	81
Library Science, Department of	0	1	3	2
Natural & Applied Sciences	91	97	107	98



Year		2009	2010	2011	2012
Department	Contribution_Type	#Contributions Value	#Contributions Value	#Contributions Value	#Contributions Value
Biology (15tenure-track/tenured faculty)		34	26	22	21
	Book	3	0	0	2
	Book Chapter	3	3	1	1
	Journal Article	28	23	21	18
Chemistry (16 tenure-track/tenured faculty)		5	17	15	22
	Book Chapter	0	0	1	0
	Journal Article	5	17	14	22
Computer Science (6 tenured faculty)	Journal Article	4	2	0	1
Geography, Geology & Planning (18 tenure-track/tenured faculty)		13	16	18	14
	Book	1	1	0	0
	Book Chapter	1	6	2	4
	Journal Article	11	9	16	10
Hospitality & Restaurant Admin (5 tenure-track/tenured faculty)		0	5	2	3
	Book Chapter	0	4	0	0
	Journal Article	0	1	2	3
Mathematics (22 tenure-track/tenured faculty)		9	12	16	15
	Book	2	0	0	2
	Journal Article	7	12	16	13
Natural & App Sci/Sci & Engrng		1	0	3	0
	Book	0	0	0	0
	Journal Article	1	0	3	0
Physics, Astronomy, & Mat Sci (13 tenure-track/tenured faculty)		25	15	29	22
	Book Chapter	0	1	2	0
	Journal Article	25	14	27	22
Total by COLUMNS		91	93	105	98



Partnerships

- JVIC
 - CBLS – Paul Durham, Director
 - CASE – Kartik Ghosh – Faculty Research Liaison
 - Nanotechnology workgroup meeting
- National Park Service
- James River Basin Partnership
- Watershed Committee of the Ozarks
- Public Schools throughout SW Missouri

Fifth Annual CNAS Undergraduate Research Day – May 6, 2014 Graduate College IDF – May 3, 2014

- The purpose of this event is to give undergraduates the chance to share their research and show their hard work to other students and the community. This is also a great opportunity for them to gain experience in presenting their work. Judges consist of emeritus faculty, invited faculty from other universities and community leaders.
- 2010 – 45 poster presentations
- 2011 – 37 poster presentations
- 2012 – 39 poster presentations
- 2013 – 46 poster presentations

Facilities Update

- **Vivarium – Temple Hall**
 - Construction is scheduled to be complete at the end of September for immediate move-in. (looks like later but...)
- **Engineering**
 - Moved to Plaster Center for Free Enterprise, all classes will be offered downtown this fall.
- **HRA**
 - Architect hired. First meeting with the architect and department on August 12.
- **Science/Math**
 - Planning study will begin in August with the goal of a report by November 1.

Space Planning for CNAS

- HRA – Timeline – Planning study complete by December. Bids approved in January of 2014. Department moves into new space in late December of 2014.
- Science Planning Study – By November 2014 there will be a report that summarizes options and costs for renovations/moves for CNAS.
 - 3 new teaching labs (biology and chemistry)
 - 6 new research labs (unassigned but primarily focused on BIO, GGP, and PAMS)
 - There is still 30,000 sq ft of empty space at Plaster Center for Free Enterprise. Is there a way to make use of that space?
 - Is there a way to bring CRPM to main campus that makes sense?
- Science Action Plan – I would hope that we would have an adopted plan by January 2014.



Development Goals – CNAS Big Projects

#1 - HRA facility - \$5-8 million total (2 million for construction and the rest for students and furnishings and programs)

#2 – STEM renovations/moves/namings - \$5 million total – This includes engineering space along with all of the new spaces that will be proposed by the current planning study.

#3/4 - Baker Observatory - \$2 million (have renderings) and Bull Shoals field station - \$3 million (have renderings)

#5 - Faculty Awards - \$2 million (program). Jahnke will seek annual gifts of \$3000 now.

#6 – Undergraduate Research Day - \$2 million (program). Jahnke will seek annual gifts of \$2500 now.

#7 - Equipment Fund - \$5 million (program). Already started with over \$20,000!!! Need someone else to step up and match dollars. Ultimate goal is to have an endowment.

Always Ask!

Endowed Chairs (15 @ \$1 million each) – Each department should have at least two.

Scholarships, scholarships, scholarships!!!!

- There are also a number of departmental projects which also have action plans to include the work of department heads and advisory boards and development personnel.



Gifts to MSU Foundation by Department

Department	FY10	FY11	FY12	FY13
Biology	30,707	26,712	32,416	39,376
Chemistry	112,885	18,815	14,890	11,560
Computer Science	3,980	28,150	16,341	9,470
Geography, Geology, and Planning	27,268	19,598	44,013	126,058
Hospitality and Restaurant Administration	15,019	30,243	16,557	8,396
Mathematics	15,088	63,595	23,953	14,575
Natural and App Sci/Science and Engineering	3,539	4,448	9,976	4,632
Physics, Astronomy, and Material Sciences	19,058	7968	11,753	12,535
TOTALS	227,544	199,529	169,899	226,602



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Scholarship Awards

Unit	Awards 2009-2010	Awards 2010-2011	Awards 2011-2012	Awards 2012-2013
Biology	\$21,150	\$7,500	\$5,000	\$6,750
Chemistry	\$24,062	\$20,050	\$26,625	\$21,100
CNAS	\$12,748	\$18,550	\$30,050	\$23,675
Computer Science	\$2,350	\$4,250	\$2,550	\$4,280
Engineering	\$2,000	-0-	-0-	-0-
Geography, Geology and Planning	\$4,858	\$5,750	\$4,950	\$5,200
Hospitality and Restaurant Administration	\$8,830	\$6,875	\$4,400	\$6,225
Mathematics	\$17,740	\$14,570	\$18,650	\$21,898
Physics, Astronomy and Materials Science	\$4,120	\$4,200	\$7,950	\$5,800
Total	\$97,858	\$81,745	\$100,175	\$94,928



- **Enrollment**

- Continue working with community colleges in MO in significant ways. Encourage faculty to faculty meetings.
- Offer advanced mathematics courses to West Plains via ITV.
- Adding online/evening/summer courses for graduate students and updating brochure.
- Working with architects to increase space and make better use of current space.

- **Funding**

- Projects are prioritized and funding raising action plans are developed.
- Continue to seek external funding for equipment, research and course/program transformation.

- **Accreditation**

- Continue our work on assessment with the goal of continuous improvement.
- Write and work on action plans for continued program accreditation (HRA, CSC, Planning)



- **Diversity and Inclusion**
 - CNAS will continue to make every effort to hire outstanding, diverse faculty.
 - CNAS will continue to make every effort to recruit and retain diverse students.
 - CNAS Diversity Committee will continue to plan events that include everyone!
- **Student Success**
 - A math placement exam for all students will be adopted.
 - Course transformation projects with the goal of student success will continue.
 - All departments will continue to recruit and retain students as appropriate to the requirements in their discipline.



- **Facilities and Sustainability**
 - Primary effort in CNAS for fall of 2013 is to work on space studies with architect firms. One is hired for HRA to develop the Pummill space with the goal to start construction by January of 2014. One is hired to work with the rest of CNAS (and CHHS) to develop a space plan that addresses a number of issues related to space. Meetings could be weekly during the fall semester!
 - HRA – Timeline – Planning study complete by December. Bids approved in January of 2014. Department moves into new space in late December of 2014.
 - Science Planning Study – By November 2014 there will be a report that summarizes options and costs for renovations/moves for CNAS.
 - 3 new teaching labs (biology and chemistry)
 - 6 new research labs (unassigned but primarily focused on BIO, GGP, and PAMS)
 - There is still 30,000 sq ft of empty space at Plaster Center for Free Enterprise. Is there a way to make use of that space?
 - Is there a way to bring CRPM to main campus that makes sense?

- **Raising the Profile**

- Faculty/department head hiring – There are nine faculty searches that will be started this fall. There is certainly the chance that we will not be able to fill all searches but this is a unique opportunity for the college and we need to do this well. That means a big time commitment for faculty and department heads!
- OEWRI will celebrate its 10th Anniversary in January of 2014.
- Departments/programs/faculty are organizing and hosting regional to international conferences.
 - HRA – International CHRIE Conference – July 2013 in St. Louis
 - CHM – Regional ACS Meeting – October 2013 in Springfield
 - MTH – Regional Undergraduate Research Conference – November 2013
 - HRA – Regional Undergraduate Research Conference – April 2014
 - Dr. Hu (MTH) – International Mathematics Conference



Points of Pride

- Students who are admitted to Missouri State University must have residency in one of the following **sixteen** counties in Missouri: **Barry, Barton, Cedar, Christian, Dade, Dallas, Greene, Jasper, Lawrence, McDonald, Newton, Polk, Stone, Taney, Vernon or Webster.** Students who do not have residency in the sixteen county area are not eligible for the Cooperative Engineering Program. Missouri State University will continue to offer the Pre-engineering Program to all students, which allows students to complete the first two years of courses on the Missouri State campus and then transfer to the Missouri University of Science and Technology to complete their Engineering Degree.

- “Ethical Dilemmas of Global Disease Eradication Programs” Speaker: **Deborah Corcoran**, Senior Instructor, Department of Geography, Geology and Planning
 - September 10, Tuesday, 7:30-8:30 PM, Temple Hall 002
- “Geophysical Adventures in Antarctica” Speaker: **Dr. Kevin Mickus**, Professor, Department of Geography, Geology and Planning
 - October 8, Tuesday, 7:30-8:30 PM, Temple Hall 002
- “People, Plagues and Pests: The Challenges of Containing and Controlling Exotic Species” Speaker: **Dr. John Havel**, Professor, Department of Biology
 - November 5, Tuesday, 7:30-8:30 PM, Temple Hall 002

PARKING WILL BE AVAILABLE IN LOT 4, SOUTH OF TEMPLE HALL



Have a wonderful semester!

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