

CNAS 2009 Annual Report

Submitted May 3, 2010 by Tammy Jahnke, Dean

The CNAS Strategic Plan and Goals document is updated each year but is driven by our vision, mission and shared values.

Vision - The College of Natural and Applied Sciences at Missouri State University seeks to be recognized regionally and nationally for our outstanding students/graduates, teaching, scholarly productivity, professional service and community service.

Mission - 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. We are committed to excellence in teaching, research and scholarly activities, and community and professional service. Ethical leadership, cultural competence and community engagement are the cornerstones of our commitment to public affairs.

Shared Values - 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.

The annual report is structured around a set of college goals which are tied to the university long range plan and annual goals. It is posted in full on our website - <http://www.cnas.missouristate.edu/4537.htm>.

Goal #1 – Provide Opportunities for student success while maintaining academic rigor.

Goal #2 – Develop facilities that will support our pursuit of excellence.

Goal #3 – Continue to develop a diverse and strong faculty and staff.

Goal #4 – Continue to build our national and international reputation through innovative scholarly research/creative activities and high quality students.

Goal #5 – Increase the visibility and stature of CNAS as we engage our constituents.

Goal #6 – Model the university's public affairs mission.

Goal #7 – Continue to work with the development staff on friend-raising/fundraising.

2009 GOAL #1 Accomplishments

All strategies under goal #1 have been met except for the student retention plan for those students on probation or warning. We will review this strategy as we look ahead to strategies for 2010-2012. The CNAS Enrollment Management Plan is embedded in goal #1. The department heads did an outstanding job monitoring course enrollments to ensure that we had very, very few low enrollment sections. They combined sections, deleted sections, and worked with students on substitutions to meet this goal. Several new online courses are being developed or will start this year – including MTH 135, GRY135, GLG701. Up to this point only CSC, HRA and AG had online courses. The overall SCH productivity in online courses will be increasing significantly over time. There are other courses that departments are considering for online development and our complete list will be in our 2010 enrollment management plan. Dual credit enrollment has increased significantly in CNAS and we are using these classes for recruiting future MSU students. Study away opportunities are improving in the college and we are planning a full set of opportunities for the coming year.

Table 1 below shows credit hour productivity annual by department. I looked at the changes from 2005 to 2009. The departments with the most significant growth in lower division SCH are chemistry; computer science; geography, geology and planning; mathematics; and physics, astronomy and materials science. All of these programs play a significant role in the general education program which enhances enrollments. The most significant decline was in fashion and interior design. The departments with the most significant growth in upper division SCH are chemistry; geography, geology and planning; and mathematics. All departments showed growth in this area except hospitality and restaurant administration and physics, astronomy and materials science. Curriculum changes, including the addition of academic rigor, to the HRA program has caused some immediate declines but signs are that this will now lead to increases into the future. Graduate SCH in CNAS increased significantly from 2005 to 2009. Student headcount is data is in Table 2. At the undergraduate level biology; chemistry; geography, geology and planning; and the cooperative engineering program have had the most significant increases. Significant declines occurred in FID and HRA. There are already signs that HRA enrollments are beginning to turn around but the immediate decline has been due to curriculum revisions which have strengthened the program. Graduate enrollment in the college has remained steady of the past several years. Indications are that we are going to see some increases in the fall 2010 class as we have increased recruitment efforts and we are ready to launch the professional science masters degree program. In addition we have been working on the MNAS program within the college – website, brochures, infrastructure as this is the one program that could grow significantly over the next 2-5 years.

Year		2005	2006	2007	2008	2009	change
Level	Department	Credit Hours	Credit Hours	Credit Hours	Credit Hours	Credit Hours	from 2005-
		Value	Value	Value	Value	Value	2009
Lower Division		63555.0	65170.0	66508.0	66497.0	65585.0	2030.0
	AG	2603.0	2551.0	2518.0	2607.0	2587.0	-16.0
	BIO	8301.0	8146.0	8139.0	8563.0	8157.0	-144.0
	CHM	10926.0	11696.0	11735.0	11762.0	11515.0	589.0
	CSC	2842.0	3231.0	3161.0	3191.0	3397.0	555.0
	FID	3384.0	3713.0	3647.0	2460.0	1976.0	-1408.0
	GGP	9298.0	9220.0	9800.0	9822.0	9710.0	412.0
	HRA	1500.0	1636.0	1329.0	1923.0	1350.0	-150.0
	MTH	16918.0	17293.0	18061.0	17524.0	18023.0	1105.0
	CNAS/eng.	.0	.0	26.0	68.0	244.0	244.0
PAMS	7783.0	7684.0	8092.0	8577.0	8626.0	843.0	
Upper Division		27205.0	27622.0	29232.0	28998.0	29562.0	2357.0
	AG	4897.0	4533.0	4871.0	4846.0	5125.0	228.0
	BIO	4240.0	3916.0	4381.0	4318.0	4387.0	147.0
	CHM	2574.0	2642.0	2684.0	3186.0	3665.0	1091.0
	CSC	736.0	703.0	808.0	753.0	855.0	119.0
	FID	3383.0	3781.0	3833.0	3819.0	3384.0	1.0
	GGP	2821.0	2882.0	3079.0	3314.0	3470.0	649.0
	HRA	3710.0	4447.0	4647.0	3861.0	3536.0	-174.0
	MTH	3830.0	3806.0	4078.0	4030.0	4250.0	420.0
	CNAS/eng./sci	213.0	339.0	330.0	303.0	310.0	97.0
PAMS	801.0	573.0	521.0	568.0	580.0	-221.0	
Grad		1394.0	1435.0	1406.0	1843.0	2132.0	738.0
	AG	152.0	165.0	168.0	174.0	202.0	50.0
	BIO	387.0	444.0	501.0	617.0	609.0	222.0
	CHM	210.0	137.0	175.0	231.0	226.0	16.0
	CSC	43.0	59.0	53.0	24.0	53.0	10.0
	FID	12.0	14.0	.0	.0	.0	-12.0
	GGP	237.0	252.0	211.0	347.0	445.0	208.0
	MTH	172.0	144.0	161.0	199.0	424.0	252.0
	CNAS	.0	.0	.0	3.0	.0	.0
	PAMS	181.0	220.0	137.0	248.0	173.0	-8.0

Table 1. CNAS SCH Summary

Academic Period		Fall 2005	Fall 2006	Fall 2007	Fall 2008	Fall 2009
Department	Student Level	Headcount	Headcount	Headcount	Headcount	Headcount
		Value	Value	Value	Value	Value
		2404.0	2424.0	2425.0	2497.0	2554.0
AG		416.0	391.0	415.0	405.0	404.0
	GR	24.0	26.0	23.0	23.0	26.0
	UG	392.0	365.0	392.0	382.0	378.0
BIO		493.0	500.0	526.0	614.0	671.0
	GR	40.0	45.0	55.0	45.0	47.0
	UG	453.0	455.0	471.0	569.0	624.0
CHM		132.0	147.0	175.0	155.0	180.0
	GR	15.0	15.0	18.0	17.0	16.0
	UG	117.0	132.0	157.0	138.0	164.0
CSC		165.0	157.0	153.0	158.0	150.0
	GR	3.0	4.0	1.0	2.0	4.0
	UG	162.0	153.0	152.0	156.0	146.0
FID		457.0	488.0	447.0	424.0	368.0
	GR	1.0	3.0	.0	1.0	3.0
	UG	456.0	485.0	447.0	423.0	365.0
GGP		154.0	160.0	178.0	190.0	207.0
	GR	21.0	29.0	28.0	35.0	31.0
	UG	133.0	131.0	150.0	155.0	176.0
HRA	UG	284.0	318.0	273.0	249.0	214.0
MTH		186.0	181.0	173.0	176.0	175.0
	GR	23.0	22.0	21.0	21.0	24.0
	UG	163.0	159.0	152.0	155.0	151.0
CNAS/eng		2.0	1.0	1.0	34.0	99.0
	GR	2.0	1.0	1.0	.0	.0
	UG	.0	.0	.0	34.0	99.0
PAMS		115.0	81.0	84.0	92.0	86.0
	GR	17.0	14.0	15.0	15.0	13.0
	UG	98.0	67.0	69.0	77.0	73.0

Table 2. CNAS Summary Headcount

- MTH and CHM have actively supported the BearClaw with tutors.
- HRA and GGP have teamed up to implement a geotourism program which begins in fall 2010.
- CNAS faculty are involved with learning communities and supplemental instruction to aid in student retention.

- FID reviewed the fashion curriculum and made major revisions which will be in effect for fall 2010.
- Study Away trips in 2009 included trips to Belize (biology) and Italy (interior design). In addition trips to New York (FID and HRA) as well as the western US (GGP for storm chasing) were also led by faculty. Trips planned for 2010 include Italy, Ecuador, Canada and Jamaica.
- GEP101 – AG, HRA, and FID have special sections of GEP101 developed for their majors. Engineering has a special engineering course that is equivalent to the careers in engineering course offered at Missouri S&T. In addition a CNAS section of GEP101 will focus on public affairs topics in science and mathematics.
- Biology and GGP submitted significant curriculum changes which will be implemented in Fall 2010. These curriculum changes were proposed based on surveys of graduates, MFAT scores, preparation of self-studies and recommendations by external reviewers.

2009 GOAL #2 Accomplishments

- 2009 major equipment purchases were all made. The college submitted three NSF-MRI proposals in 2009 and one of the three was funded – biology.
- An equipment fundraising effort was started in 2009 with a challenge from the dean (Jahnke gives \$1 up to \$5000 total for every \$5 donated). There is now nearly \$15,000 in this account. The first \$10,000 will be put into an endowed account and the remainder will be spent on major equipment to meet the deficit in the future due to budget cuts. Space renovations – Temple Hall 449 was converted from a student computer lab to a research in lab in 2009. Karls Hall 225 was renovated into a state-of-the-art conference room. Initial Kemper Hall renovations for the cooperative engineering program were complete in 2009.
- An NSF grant proposal was submitted for research lab renovations but this was not funded.
- The dollars are in place to build the animal lab facility.
- Darr Center Phase III construction started in spring of 2010.
- All preliminary work for Mountain Grove campus bottling facility, Faurot Hall roof and duplex was complete in 2009. Bids were obtained in early 2010 and construction begins in summer 2010.
- William H. Darr School of Agriculture received a gift of the Journagen Ranch which will lead to many, many new opportunities for the school and the college.
- Although we have made some progress in this area it is imperative that we do a complete space analysis and have a plan for the science quad. All departments and centers must be involved with this study.

2009 Goal #3 Accomplishments

- We hired three new tenure track assistant professors in 2009. Dr. Cathy Starr (FID), Dr. Day Ligon (BIO), and Dr. Melissa Hudson (AG). The first two started in fall 2009 and the third starts in fall 2010.

- Associate Dean Inno Onwueme retired from Missouri State and accepted an associate provost position in Pennsylvania. Dr. Pawan Kahol was hired as the new associate dean of CNAS.
- A new department head was hired for chemistry in 2009. Dr. Alan Schick joined the college during the summer of 2009.
- Acting heads were appointed for FID (Dr. Paula Kemp) and PAMS (Dr. Bob Patterson).
- CNAS awarded seven sabbaticals in 2008 which were taken during the 2009-2010 academic year. Only four sabbaticals were awarded in 2009 for the 2010-2011 academic year.
- CNAS distributed \$14,000 in grant writing incentive funds in 2009.

2009 Goal #4 Accomplishments

- CNAS sponsored first annual Undergraduate Research Symposium in early 2010 with 44 student posters. The date for the second annual symposium has already been set for March of 2011.
- HRA sponsored its Inaugural Hospitality Undergraduate Research Symposium on sustainability in 2009, and its second symposium in spring 2010.
- Sponsored Research logs activity by fiscal year rather than calendar year. In FY09 CNAS received 104 awards valued at \$5,541,468. Through February of 2010 CNAS submitted 150 proposals with 84 awards valued at \$3,559,483.
- According to Digital Measures faculty published four books in 2009, five book chapters, and 58 peer reviewed publications.
- According to departmental annual reports (see table below) the number of publications, etc do not match Digital Measures data. We are still working on consistency in how data is put into Digital Measures. We will review all inconsistencies and update Digital Measures.

Dept	2009 presentations	2009 peer reviewed publications	2009 book chapters	2009 books
AG	22	20	0	0
BIO	76	25	2	1
CHM	23	7	0	0
CSC	2	10	0	0
ENG	4	0	0	0
FID	1	0	0	2
GGP	39	12	1	2
HRA	0	1	0	0
MTH	17	14	0	1
PAMS	43	12	0	0
CNAS TOTAL	227	101	3	6

- Center for Resource Planning and Management – Diane May serves as director and the center is involved in many funded projects. A number of personnel changes occurred this past year but we should be fully staffed by summer 2010.
- Bull Shoals Field Station – Janice Greene is a great director and continues to advocate for the station.
- Ozarks Environmental and Water Resources Institute – Bob Pavlowsky is the director. The institute will be seeking federal funding in 2010 in order to keep everyone on staff.
- Baker Observatory – Bob Patterson is the director. New equipment will be installed during the summer of 2010.
- Darr Agriculture Center – Phase III has started and a director will be hired during the summer of 2010.
- Fruit Experiment Station – Several projects will start over the summer. The director's home has a make-over design from a group of interior design students.
- Center for Grapevine Biotechnology – Wenping Qiu is the director and they have on-going federal funding.
- Missouri Viticulture and Enology Center – This center currently housing the VESTA administrative unit for the Missouri State University campus.
- Missouri Innovation Academy – This academy is run by Dana Frederick and the third conference will be held in June.
- Elizabeth Black was hired to coordinate science/math education grant funding for summer programs, teacher professional development and other grant funding programs that crossover between science/math and education. Elizabeth starts on May 17.

2009 Goal #5 Accomplishments

- The CNAS Public Lecture series continues to be a success. In 2009 we had six speakers and so far in 2010 we have had three speakers and look forward to the fall series. Attendance has averaged 40 and it has been growing steadily.
- HRA welcomed two major CEOs at their annual HRA Board of Advisors Speaker Series.
- The CNAS website has been maintained and updated.
- The CNAS newsletter was delivered. A review is underway to determine if this should be continued. Several departmental newsletters were distributed in 2009.

2009 Goal #6 Accomplishments

- Departments are ready to follow through with curricular proposals for implementing public affairs in the major.
- CNAS Dean co-chairs the Sustainability Advisory Committee at Missouri State with Ken McClure. We planned a successful sustainability fair in 2009 and have set the date for the fair in 2010. In addition dean is the faculty advisor for the first funded project from the student's sustainability fund - an inventory of sustainability on our campus through the AAHSE scorecard called STARS. This project will be complete by spring of 2011.
- The college and departments support a number of competitions for K-12 students and many of them are held on the Missouri State University campus. These include FFA

contests, regional science fair, regional science Olympiad, math competitions, JETS competitions and so much more.

2009 Goal #7 Accomplishments

- All organized departmental advisory boards met this past year. I was able to attend all but a couple of meetings.
- An equipment fundraising effort was started in 2009 with a challenge from the dean (Jahnke gives \$1 up to \$5000 total for every \$5 donated). There is now nearly \$15,000 in this account. The first \$10,000 will be put into an endowed account and the remainder will be spent on major equipment to meet the deficit in the future due to budget cuts. The long-range goal is a \$5 million endowed equipment fund.

Executive SWOT Summary

The CNAS strategic plan and enrollment management plan will be updated over the summer, posted for faculty comment in August and early September, and then adopted by 9/15/2010.

Strengths – Faculty/student research; faculty committed to student success while maintaining academic rigor; external funding; instrumentation and facilities; very good college leadership team; outstanding students; strategic planning

Weaknesses – Most of science teaching facilities are dated (70's); too many centers which are not self-funded; not everyone understands that future budget realities will mean that we may have to do things differently; inadequate current space for HRA

Opportunities – External funding opportunities are greatest in the sciences; cooperation with JVIC; MNAS graduate program with professional science masters option; Kemper space and Science Quad; number of centers; changes in leadership team; continued focus on sustainability – across campus; Journagen ranch; new leadership team model for School of Agriculture; continued implementation of cooperative engineering program with Missouri S&T; prioritize activities in departments/colleges to meet the future budget realities

Threats – Declining state funding for higher education; lack of space for growth; increasing enrollment