

CNAS 2018 Annual Report

Submitted Summer of 2019

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

Mission - The College of Natural and Applied Sciences develops global citizen scholars who are prepared to increase understanding of the natural world and applied sciences within society and to be productive and successful in their careers.

Vision - The College of Natural and Applied Sciences at Missouri State University seeks excellence in teaching, scholarly productivity, and professional and community service.

Shared Values - We value

- ❖ our students and their success;
- ❖ active learning, academic rigor and critical thinking;
- ❖ excellence in teaching, research and service;
- ❖ inclusiveness, fairness and justice;
- ❖ faculty, staff and administrators;
- ❖ personal and academic integrity;
- ❖ safe learning environments;
- ❖ collaborations and partnerships; 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://science.missouristate.edu/College-Policies.htm>. All college annual reports are posted on the college website - <http://science.missouristate.edu/College-Annual-Reports.htm>. All department annual reports which include assessment reports are posted on a password protected website – Go to <http://science.missouristate.edu/restricted/assessment.htm> and click on assessment and reports.

Program Review/Accreditation/Action Plans Update –

Biology – Action Plan accepted March of 2016. The department continues to develop online course opportunities for students. The vivarium space is being fully utilized and the faculty helped to develop a usage policy. The new greenhouse space is finished and experiments have been started. External funding for GA's is increasing (2 funded for AY, 1 funded for SP, and five funded for summer).

Chemistry – Action plan accepted June of 2018. The department helped to develop a new pathway to teacher certification in chemistry with the other sciences. A certificate program is available for all pre-pharmacy students.

Computer Science – Accredited through 2019. ABET decision will be made late in the summer of 2019.

Geography, Geology & Planning – Action Plan accepted Spring of 2017. A space master plan was developed that reallocated space within the department to increase the amount of research space. All undergraduate programs have been revised over the past two years to benefit students. A number of certificate programs have been added over the last two years.

Hospitality Leadership – Accreditation through summer of 2025. Primary action has been to hire outstanding faculty and to get entire BS and BAS programs online.

Cooperative Engineering Program – ABET Accredited through Missouri S&T and the next ABET review will be in the fall of 2020. Mechanical engineering freshman are being admitted for fall 2019. In 2018 we had 27 students go through SOAR who were interested in engineering. In 2019 we have seen 27 students in the first six SOAR sessions. Construction should begin in late 2019 for phase II of renovations. Current project estimates are \$1.8 million.

Mathematics – Action Plan accepted in spring of 2018. Math pathway curricular changes complete and the data below shows we have made progress.

ABC Rates in Mathematics

Course	Fall 2017	Spring 2018	Fall 2018
MTH101	53.45% (507)	42.62% (245)	58.33% (492)
MTH103	55.00% (280)	52.78% (108)	62.26% (265)
MTH130	72.05% (254)	63.40% (194)	72.69% (265)
MTH135	57.80% (899)	47.15% (563)	74.09% (656)
MTH136	*	*	42.51% (167)
MTH138	70.31% (128)	70.97% (62)	74.26% (136)
MTH261	70.63% (126)	59.09% (88)	63.75% (160)
MTH287	74.73% (186)	73.17% (123)	69.35% (186)

A few observations are in order.

- Of the students who passed MTH 101 in Spring 2018 with a C or higher, 44% went on and passed MTH 135 with a C or higher in Summer or Fall 2018. Similarly, of the students who passed MTH 103 in Spring 2018 with a C or higher, 98% went on to pass MTH 135 with a C or higher again in Summer or Fall 2018.
- The percentage of students passing MTH103 increased significantly in the past year. Even more pronounced is the increase in the number of students who passed MTH135 (compare 2017 to 2018).
- Additional resource and support for students in MTH 136 is needed.

Physics, Astronomy & Materials Science – Action plan accepted in summer of 2017. The department has made progress in their collaboration with OTC. A major renovation in Kemper Hall is being done this summer. Labs moved from JVIC back to Kemper will be housed in the renovated space. A VIP event was held at Baker Observatory in May of 2019.

Academic Profile

- ❖ CNAS increased the number of degrees and certificates awarded in 2018-2019.
 - ❖ Table of CNAS majors – Appendix 1, page 11
 - ❖ Table of CNAS graduates – Appendix 2, page 11
 - ❖ Percentage of students graduating – Appendix 3, page 12
- ❖ CNAS added new certificates that support workforce development. Starting in summer of 2019 we will target at least two for significant marketing and recruitment.
 - ❖ Table of certificate programs – enrollments and completions – Appendix 4, pages 13-14
- ❖ Computer Science – Over the last five years computer science went from six tenure track faculty and two instructors to nine tenured/tenure-track faculty to support the growing demands in computer science. The first five MS graduates completed in spring of 2019.

- ❖ CNAS continues to expand online offerings. BS and BAS in Hospitality Leadership are now fully online. In science and mathematics primary goals are to increase the number of general education and graduate level courses. In addition we are looking at mid-level gateway courses that might impact transfer students.
 - ❖ A list of all online course offerings and plans for the future – Appendix 5, pages 15-16
- ❖ Mechanical engineering is admitting students for fall of 2019. Phase II of renovation will start in fall of 2019 and be complete by 2020. Faculty hiring will begin in 2021.
- ❖ Several new interdisciplinary projects (research) are emerging within the college. CSC and CHM; CSC and PAMS; CHM and PAMS; BIO and CSC; MTH and BIO.
- ❖ Barrier Removal – 1) Converted all BSED programs to BS+MAT 2) Continue CNAS Career Expo to help students develop interview skills to find internships and jobs. In addition departments are focusing on career seminars and/or panel discussions. 3) Students who need MTH130 and have a lower ACT than required may now register for a co-requisite course more easily which should increase enrollment in fall of 2019. 4) Students enrolled in MTH135 (totally revised) were more likely to pass in fall of 2018 (50% DFW prior to 2018 vs 75% in fall of 2019).
- ❖ CNAS continues to work closely with OTC. All OTC biology students visit Temple Hall each semester. MSU biology and chemistry TA's work at OTC. Next year we hope to add CSC although that one has been tougher.
- ❖ We hope to hear good news from ABET regarding CSC accreditation late in the summer of 2019.
- ❖ The MNAS degree program has grown over the past three years from eleven students to sixteen (spring of 2017-spring of 2019). The PSM track has grown from two students in the spring of 2017 to eight in the spring of 2019.

Student Experience

- ❖ All student accomplishments are documented in our CNAS News Blog. A listing can be found in appendix 12, pages 23-28.
- ❖ CNAS faculty were trained in proactive advising in 2018 and another cohort will be trained in 2019.
- ❖ CNAS hired two student success specialists who will be advising in SOAR, providing transfer advising help to department heads, providing advising help to growing departments and many other duties.
- ❖ Over 80 posters presented at 2019 CNAS undergraduate research day – this highest number ever! May CNAS presentations at IDF.
 - ❑ Publications and publications/presentation with student co-authors - Appendix 6, pages 16-17
- ❖ MTH is using “free textbooks” in several courses. These are from OpenStax, based at Rice University.
- ❖ Piloted fully online student evaluation of faculty through Blackboard in the spring of 2019. Assuming this is not cost prohibitive we will continue to do online student evaluations into the future.
- ❖ MTH completed successful NSF-REU summer research program in 2018 – the ninth summer!

- ❖ A student expo is held each fall semester to recruit new members into the various CNAS student organizations and the leaders of student organizations within CNAS meet with Dean's staff on a regular basis.
- ❖ In 2015 we distributed nearly \$150,000 in foundation scholarships. It became clear that the common application for foundation scholarships is not user friendly and that students are not applying for this money so CNAS offered sessions to help students apply. In 2017 CNAS distributed under \$110,000 in foundation scholarships and in 2018 CNAS distributed nearly \$127,000. We will continue to work to increase the distribution. Student Scholarship Winners are recognized throughout the year. Chemistry (April), Mathematics (September), Biology (September) and Hospitality Leadership (September) hold annual picnics/banquets/receptions to recognize scholarship recipients and donors. CNAS will recognize all recipients on a [website](#), in a press release and in newsletter.
 - ❖ Scholarship dollars distributed – Appendix 7, page 18

Diversity and Inclusion

- ❖ Active participation and funding with MoLSAMP program (NSF funded program for URM in STEM). (Tayo Obafemi-Ajayi)
- ❖ Continued NSF STEP up funding and support for STEM students (Matt Pierson)
- ❖ Working with Vanderbilt for NSF Funding for SCI-STEPS. This will impact physics and their collaborations with OTC. OTC and MSU students visited Johnson Space Center earlier this year together.
- ❖ CNAS Diversity Committee continues to meet and address issues. CNAS Diversity Committee held a successful spring picnic.
- ❖ CNAS continues to work on diversity hiring goals for faculty and staff. This year three of seven hires (in astronomy, mathematics and chemistry) were women – an important aspect of diversity in these disciplines.

Globalization

- ❖ CNAS faculty lead study-away programs for students.
- ❖ We are exploring 3+1 programs in biology and physics with Chinese universities.
- ❖ We are exploring options for STEM students in Bolivia.
- ❖ HL is working on articulations with XISU in China and KDU in Malaysia.
- ❖ Several CNAS faculty are going to China this summer to teach for approximately two weeks. All expenses are paid by the Chinese university.

Infrastructure

- ❖ Several issues in Kings Street Annex were resolved but little confidence that we are done. This summer third floor will get new flooring – much needed!
- ❖ Greenhouse addition to Temple Hall is complete and faculty are moving their research into the new space.
- ❖ Kemper Hall – A space trade with COB will be complete in August of 2019.
- ❖ BSFS educational facility construction will be complete by December of 2019.
- ❖ Phase II of mechanical engineering renovations will begin in fall of 2019.
- ❖ CNAS Master Planning study will begin in summer of 2019 to determine renovation and new space needs for the college.

- ❖ The college implemented a college fee starting in fall of 2019. A summary of fees collected from July 1, 2018 through March 1, 2019 along with the allocation of those funds can be found in appendix 8, page 19.

Research

- ❖ The college distributed over \$5000 in incentives to faculty for submitting grants requesting in excess of \$30,000. These dollars are transferred to departments for faculty to use for travel or research expenses.
- ❖ The college currently has allocated over \$1.6 million (one-time dollars) for start-up funds for tenure track faculty over the past five years. In addition, summer fellowships for newly hired tenure-track faculty are funded with one-time funds in the college. The start-up funds are typically spent within the first three years of a faculty member's time on campus. By year four many have external funding.

Funding

- ❖ FY19 Grant Activity as reported by Sponsored Research indicates that as of the end of May CNAS faculty and staff brought in nearly \$3 million in external funding. 38% of all MSU grant proposals were submitted by CNAS faculty and staff (131/346). 47 faculty and staff in CNAS submitted grant proposals – more than any other college. CNAS Faculty and Staff continue to submit the greatest number of proposals to funding agencies.
- ❖ CNAS new faculty starting in 2019. We will have seven new tenure track faculty starting in August of 2019 – three women and four men.
- ❖ CRPM and OEWRI will be totally self-funded in FY19. Both centers have funding to meet current staffing needs and the demands of southwest Missouri.
- ❖ It is clear from the data (grants submitted/received and publications) that CNAS has the strongest culture of research/scholarly activity at Missouri State University.
 - ❖ Faculty and staff numbers, Appendix 9, page 20
 - ❖ Credit hour production by department, Appendix 10, page 21
 - ❖ TA/GA allocations, Appendix 11, page 22

Partners for Progress

- ❖ Continue to work with community colleges
- ❖ Continue collaborations with K-12 schools and science/math competitions
- ❖ Continue collaborations with National Park Service and others
- ❖ MSU remains the host institution in Missouri for Project's WET, WILD and Learning Tree.
- ❖ Continue hosting regional science fair and science Olympiad and Pummill Relays.
- ❖ Continue to support GLADE, a summer camp for science students
- ❖ Continue to partner with Springfield-Greene County Library on projects
- ❖ Continue to partner with Discovery Center, Dickerson Park Zoo, Department of Conservation and others.
- ❖ HL faculty engaged with Missouri ProStart Schools
- ❖ CRPM and OEWRI continue to work with city, county and area communities.

Valuing and Supporting People

2019 Promotions

- Promoted to Distinguished Professor
 - Alicia Mathis – BIO
 - Kartik Ghosh - PAMS
- Promoted to Full Professor
 - Day Ligon - BIO
 - Xiaomin Qiu – GGP
 - Ridwan Sakidja – PAMS
 - Songfeng Zheng - MTH
- Promoted to Associate Professor with tenure
 - Albert Barreda – HL
 - Ron Malega – GGP
 - Gary Michelfelder - GGP

CNAS currently has ten distinguished professors.

University Award Winners - 2019

Bob Pavlowsky

- Study Away Programming – Cultural Competence

Kevin Evans

- Provost Fellow for Public Affairs

Katy Frederick-Hudson

- FCTL Teaching Award in Accessible Learning

Brian Greene

- 2019 Director's Award for Outstanding Faculty Research – Honors College

Kimberly Van Ornum

- Master Online Course Award – Best in Category for Course Technology and Tools

Program Collaboration Award

- Mechanical Engineering Program (CNAS and Missouri S&T)

- ✓ CNAS established a new awards process in 2011 for faculty and staff to recognize outstanding work. First awards given in May of 2012 and listed below are the 2019 award winners based on their 2018 performance.

- **Atwood Research and Teaching Award**
 - Kartik Ghosh – Physics, Astronomy and Materials Science
- **CNAS Excellence in Teaching Award Winners**
 - Deb Finn – Biology
 - La Toya Kissoon-Charles -Biology
 - Helena Metzker - Chemistry
 - Mike Reed – Physics, Astronomy and Materials Science
- **CNAS Excellence in Service Award Winners**
 - Razib Iqbal – Computer Science
 - Kyoungtae Kim – Biology
 - Helena Metzker - Chemistry
 - Erich Steinle - Chemistry
- **CNAS Excellence in Research Award Winners**

- Chris Barnhart – Biology
- Tayo Obafemi-Ajayi – Electrical Engineering/Computer Science
- Ridwan Sakidja – Physics, Astronomy and Materials Science
- Matt Siebert - Chemistry
- **Faculty/Staff Excellence Awards—Student Nominated, Student Selected**
 - Deb Finn – Biology
 - Kyoungtae Kim – Biology
 - Alan Schick – Chemistry
- **CNAS Excellence Awards – Staff**
 - Katy Frederick-Hudson – Laboratory Supervisor – Biology

NEW CNAS Faculty – tenure-track

2019 Sarah Morrison, PAMS – PhD University of Arizona

2019 Siming Liu, CSC – PhD University of Nevada – Reno

2019 Natasha DeVore, CHM – PhD University of Kansas

2019 Ngoc Do, MTH – PhD Texas A&M University

2019 Jay McEntee, BIO – PhD University of California - Berkeley

2019 Quinton Phelps, BIO – PhD Southern Illinois University

2019 Avery Russell, BIO – PhD University of Arizona

All departmental accomplishments are noted in departmental reports available on CNAS website.

Executive SWOT Summary

CNAS met nearly all of our goals for the year. A new action plan is developed each year. A draft is currently under development and will be finalized in early September.

Goals that we continue to work on -

Retention and completions are still a challenge for many CNAS departments for a variety of reasons. All units are reviewing data and will have an action plan to address the challenge of completing 25% students with BS or MS degrees each year (or maintaining enrollment if their percentage is higher – a recruitment challenge.) In addition each department is reviewing recruitment plans. At the college level new videos are being developed this summer, student success personnel have been hired, and student ambassadors have been recruited to help with high school visits. The specific plan for fall is being developed now.

CNAS Master Plan – The architect has been hired. It is time to go to work. The plan will be complete by the end of the 2019.

Strengths – Faculty/student research; excellence in teaching by many, many faculty; external funding (funding is up); instrumentation and facilities; and outstanding students. Teaching facilities continue to improve.

Weaknesses – Many teaching facilities in science and math remain dated; need for more research space in the sciences – especially if we are to increase the number of STEM graduates. With dated

science labs and facilities – recruitment is more difficult! The Master Plan has been designed to identify renovation needs as well as new space needs for CNAS.

Opportunities – Interest at the federal and state level to increase the number of STEM graduates; external funding opportunities in the sciences; PSM program; strategic uses of online education in all units. Graduate programs in the college could grow significantly with additional assistantships, faculty and space. Appropriate marketing for online HL programs needs to happen immediately in order to capitalize on these newly developed programs! The CNAS College Fee is opening the door to renovate and add space to the college.

Threats – Declining enrollments threaten to decrease the number of tenure-track/tenured faculty in the college, which directly conflicts with the federal/state demands to increase STEM graduates. Lack of space for growth. Lack of recurring funding for service contracts on major instrumentation. Decrease in federal grant funding. Lack of outstanding STEM facilities impedes recruitment of students.

Action Plan for 2019-2020 will be available in September

CNAS list of goals for fundraising as of 2019-

Prioritized CNAS Big Projects – The first two items are part of the master plan. Detailed plans will be ready by December of 2019.

#1 – Science/Public Health Facility on lot 19 - \$100 million

#2 - Renovations and namings (\$5 million)

Cheek Hall, Kings Street Annex, Plaster Center for Free Enterprise, Temple Hall, Kemper Hall, Pummill Hall

#3 - Baker Observatory - \$5 million

#4 - Faculty Awards - \$2 million (program)

#5 - Equipment Fund - \$5 million (program)

Already started with over \$30,000!!!

#6 - Endowed Professorships (10 @ \$1 million each)

#7 - Scholarships, scholarships, scholarships!!!!

Specific Projects by Department –

- Chemistry – Speaker Series - \$5000
- PAMS –Baker Observatory (see above)
- BIO—Advisory Board is committed to raising 20K for undergraduate research scholarships
- CNAS Annual Faculty Awards - \$5000/year
- CNAS Undergraduate Research Day - \$3000/year
- CNAS Scholarship Funds for secondary teacher education students to encourage more teachers. A \$2000 scholarship/year for all science/math teacher education students who make a difference.

CNAS Summary of Assessment Update –

Departmental annual reports from 2018 included some assessment data and analysis. These reports are available upon request.

Biology – The department reviewed the following goal – describe living systems, including their nature, organization and evolution. This year's report looked at the last five years of MFT data and the results of a student perception survey conducted in a senior biology course over the past five years. General observations from the MFT analysis included: students consistently scored in the 30-70 percentile range, most students score much higher in areas of population biology, evolution and ecology but low in plant biology. In the survey of student perceptions only 51% thought they had chosen the right major and the ratings for advising help were low. This is something the department is looking into and will have an action plan item for 2019-2020.

Chemistry – The department reviewed four SLO's through undergraduate research courses CHM399/499. SLO3 indicates that students will demonstrate proficiency in the use of appropriate instrumentation to collect and record data from chemical experiments. The department uses course grades for four lab courses to determine success. The department's target is to have 100% students earn a C grade or higher in these four courses. Overall it appears they are over 90% but have not met their target. The report noted that with all of the curricular changes in recent years the assessment plan needs to be updated this year.

Computer Science – The department has collected data on all SLO's and courses as required for their ABET accreditation. The results of the accreditation will be known later this summer. At that point a specific assessment action plan will be developed for the coming year.

GGP – GGP noted that their current assessment plans were not working so the department met with Keri Franklin to begin the process of re-writing assessment plans for each program. That process is nearly complete and all new assessment plans will be in place by fall of 2019. In terms of course assessment and specifically a general education course assessment the department reported on GLG110, physical geology. A pre-test, post-test assessment is given to all students each semester to measure learning gains. The data for the past two years was presented. In addition course instructors meet regularly. A decision to change the field experience for these students was made recently to improve student learning.

HL – A complete analysis of all learning outcomes was submitted. The department noted the following area of success: performance on National Restaurant Associate ServSafe exam, noting that 97% of students achieved the benchmark. The biggest areas of concern were related SLO7 and LSLO 2 which are assessed primarily in HSP310 and 315. Faculty are reviewing the data in preparation for classes in the fall of 2019. In addition faculty teaching pre-requisite classes are talking about how they might help prepare students better for the

specific topics.

MTH – The math faculty focused on three assessments – MFAT exam results, exit survey responses and graduate comprehensive exams. The MFAT exam results show consistency over the past five years. The exit survey responses were detailed and provide a great list for the department to work on in the coming year. A specific action plan needs to be written in 2019 with measurable goals. Data from graduate comprehensive exams indicates that students are engaged in learning at the MS level. In addition math has done an analysis of their general education pathways and student success -

Math pathway curricular changes complete and the data below shows we have made progress.

ABC Rates in Mathematics

Course	Fall 2017	Spring 2018	Fall 2018
MTH101	53.45% (507)	42.62% (245)	58.33% (492)
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- The percentage of students passing MTH103 increased significantly in the past year. Even more pronounced is the increase in the number of students who passed MTH135 (compare 2017 to 2018).
- Additional resource and support for students in MTH 136 is needed.

PAMS – Based on data from both introductory and advanced physics classes the faculty noted that mathematics appeared to be a barrier to success in the introductory classes. A two day workshop will be piloted in August of 2019 to help students. A study of results as well as course success will be presented in spring of 2020. Data analysis of PHY 386 and 486 indicated that even though there were different expectations in learning outcomes the evaluation forms were exactly the same. A new rubric and evaluation form is to be developed for use in 2019-2020. The faculty have developed a rubric to be used to evaluate learning outcomes at the graduate level from each thesis submitted. This analysis will start in fall of 2019.

Appendix 1 – CNAS Majors

MAJORS - Academic Period (fall first census)

Dept / Student Level	Fall 2015	Fall 2016	Fall 2017	Fall 2018
Biology	691	742	784	798
GR	43	42	47	44
UG	648	700	737	754
Chemistry	228	225	207	198
GR	24	23	19	21
UG	204	202	188	177
Computer Science	304	354	383	446
GR	5	3	10	23
UG	299	351	373	423
Geography, Geology, & Planning	221	206	187	190
GR	32	34	34	33
UG	189	172	153	157
Hospitality Leadership	198	239	234	210
GR	0	3	5	8
UG	198	239	232	210
Mathematics	201	170	178	177
GR	36	25	31	28
UG	165	145	147	149
Natural & App Sci/Engineering - UG	173	173	173	202
Physics, Astronomy, & Materials Science	92	86	72	83
GR	18	21	15	15
UG	74	65	57	68

Appendix 2 – CNAS Graduates for the past five years

Fiscal Year (summer, fall, spring)

Dept / Student Level	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
Biology	134	150	146	135	181
GR	20	24	18	19	17
UG	114	111	128	116	164
Chemistry	41	34	33	37	32
GR	12	13	8	8	8
UG	29	21	25	29	24
Computer Science	37	43	60	55	81
GR	1	2	2	2	5
UG	36	41	58	53	76
Cooperative Engineering	31	38	33	31	36
UG	31	38	33	31	36
Geography, Geology, & Planning	83	80	78	57	59
GR	19	15	26	10	12
UG	64	65	52	47	47
Hospitality Leadership	92	73	62	67	69
GR	0	0	1	0	0
UG	92	73	61	67	69
Mathematics	41	58	42	41	29
GR	13	22	12	11	6
UG	28	36	30	30	23
Physics, Astronomy, & Materials Science	18	31	27	19	15
GR	7	17	11	11	5
UG	11	14	16	8	10

Appendix 3

Percentage of students completing BS or MS degrees (no certificates) compared with total majors in 2017.

Department	Overall % grads	BS % grads	MS % grads
CNAS GOALS	25%	25%	50%
Biology	18.6%	17.4%	38.3%
Chemistry	15.9%	13.3%	42.1%
Computer Science	15.7%	15.5%	
GGP	41.7%	34.0%	76.5%
Hospitality Leadership	26.5%	26.3%	50%
Mathematics	23.6%	20.4%	38.7%
PAMS	37.5%	28.1%	73%

Percentages in 2018

Department	Overall % grads	BS % grads	MS % grads
CNAS GOALS	25%	25%	50%
Biology	22.7%	21.6%	38.6%
Chemistry	16.2%	13.6%	38.1%
Computer Science	18.2%	18.0%	21.7%
Cooperative Engineering	17.8%	17.8%	-
GGP	31.1%	29.9%	36.4%
Hospitality Leadership	32.9%	32.9%	-
Mathematics	16.4%	15.4%	21.4%
PAMS	18.1%	14.7%	33.3%

Appendix 4 – Certificate enrollments and graduation numbers

Enrollments –

Certificate Program	Level	Depts.	Catalog	# Credit Hrs	Sp 2018	Sp 2019
Computational Science (CUSC-UGCT)	UG	PAMS	FA 2014	18	-	-
Geographic Information Sciences (GINS-UGCT/PR)	UG	GGP	FA 2002	18	5	5
Planning and Development (PLDV-UGCT)	UG	GGP	SP 2003	13	16	6
Food and Beverage Operations (FBOP-UGCT)	UG	HL	FA 2017	15	65	81
Web Programming (WEPR-UGCT)	UG	CSC	FA 2018	16	n/a	51
Applied Geospatial Science (APGS-UGCT)	UG	GGP	SP 2019	16-17	n/a	-
Engineering Geology proposal	UG	GGP	soon	13-15	n/a	n/a
Environmental Geoscience (ENVG-UGCT)	UG	GGP	SP 2019	13-14	n/a	-
Geologic Foundations proposal	UG	GGP	soon	13-14	n/a	n/a
Globalization and Sustainability (GLSU-UGCT)	UG	GGP	SP 2019	12	n/a	1
Paleontology proposal	UG	GGP	soon	12 to 14	-	n/a
Petroleum Geology (PETG-UGCT)	UG	GGP	SP 2019	12	n/a	-
Small Town Planning and Development (STPD-UGCT)	UG	GGP	FA 2018	13	-	4
Geospatial Information Sciences (GESP-GRCT)	GR	GGP	FA 2006	12	9	5
Environmental Monitoring and Sampling (EMSA-GRCT)	GR	GGP	SP 2017	12	1	6
Hospitality Administration (HOSP-GRCT-X) (online)	GR	HL	SP 2017	12	3	5
Planning and Development (PLDL-GRCT)	GR	GGP	FA 17	13	-	1
Data Science (DASC-GRCT)	GR	CSC	FA 2018	12	n/a	1
Petroleum Geology proposal	GR	GGP	soon	12	-	n/a
Environmental Education (EVED-UGCT)	UG	BIO / GGP	FA 2016	14-16	5	7
Conservation Law Enforcement (CONS-UGCT)	UG	CRM / BIO	FA 2017	18-19	-	-
Foundations of Pharmaceutical Science (FPSC-UGCT an	UG	CHM / BIO /	SP 2019	16-18	n/a	14
Science Content proposal	GR	BIO / CHM / GGP / PAMS	soon	18	-	n/a

Completion of Certificates

Certificate Program	Level	Department	FY 2017	FY 2018	FY 2019
Computational Science (CUSC-UGCT)	UG	PAMS	-	-	-
Geographic Information Sciences (GINS-UGCT/PR)	UG	GGP	2	5	1
Planning and Development (PLDV-UGCT)	UG	GGP	1	4	9
Food and Beverage Operations (FBOP-UGCT)	UG	HL	9	37	26
Web Programming (WEPR-UGCT)	UG	CSC	n/a	n/a	30
Applied Geospatial Science	UG	GGP	n/a	n/a	n/a
Engineering Geology proposal	UG	GGP	n/a	n/a	n/a
Environmental Geoscience	UG	GGP	n/a	n/a	n/a
Geologic Foundations proposal	UG	GGP	n/a	n/a	n/a
Globalization and Sustainability	UG	GGP	n/a	n/a	n/a
Paleontology proposal	UG	GGP	-	-	-
Petroleum Geology	UG	GGP	n/a	n/a	n/a
Small Town Planning and Development (STPD-UGCT)	UG	GGP	-	-	2
Geospatial Information Sciences (GESP-GRCT)	GR	GGP	3	10	6
Environmental Monitoring and Sampling (EMSA-GRCT)	GR	GGP	2	2	3
Hospitality Administration (HOSP-GRCT-X) (online)	GR	HL	-	-	3
Planning and Development (PLDL-GRCT)	GR	GGP	-	-	-
Data Science (DASC-GRCT)	GR	CSC	n/a	n/a	1
Petroleum Geology proposal	GR	GGP	-	-	-
Environmental Education (EVED-UGCT)	UG	BIO and GGP	4	5	10
Conservation Law Enforcement (CONS-UGCT)	UG	CRM and BIO	-	-	-
Foundations of Pharmaceutical Science (FPSC-UGCT and PR)	UG	CHM / BIO / BMS	n/a	n/a	5
Science Content proposal	GR	BIO / CHM / GGP / PAMS	-	-	-

Appendix 5 – CNAS Online course offerings and plans for the future

CNAS Online Courses

Hospitality Leadership – All courses are available online.

Biology	BIO101 (fa,sp, su)	Biology in Your World
	BIO210 (sp)	Elements of Microbiology
	BIO485/685 (sp,su)	Marine Conservation
	BIO515/616 (su)	Evolution
	BIO520/620 (su)	Pathogenic Microbiology
	BIO547/647 (sp)	Water Resources (dual listed with GLG547/647)
	BIO597/697 (su)	Sustainable Science in Practice

Chemistry	CHM107 (fa,sp,su)	Chemistry for the Citizen
	CHM116 (fa,sp,su)	Fundamentals of Chemistry

GGP	GRY100 (fa,sp)	World Regional Geography
	GRY135 (fa,sp)	Principles of Weather and Climate
	GLG171 (fa,sp,su)	Environmental Geology
	GLG547/647 (sp)	Water Resources (dual listed with BIO547/647)
	GEO200 (fa,su)	Exploring our Digital Earth
	GEO561/661 (sp)	Applied Geographic Information Science
	GEO562/662 (sp)	Internet Geospatial Science
	PLN100 (su)	Understanding Cities

MTH	MTH103 (fa,sp,su)	Intermediate Algebra
	MTH130 (fa,sp,su)	Contemporary Mathematics
	MTH135 (fa,sp,su)	College Algebra
	MTH136 (sp,su)	Precalculus I
	MTH137 (sp,su)	Precalculus II
	MTH138 (su)	Pre-calculus Mathematics

PHY	PHY100 (fa,sp)	Survey of Physics with Laboratory
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Plans for online course development (timelines to be determined later)

BIO

BIO210, Microbiology, Chris Lupfer – done

BIO367 (Ecology) has been developed by never offered – Brian Greene. Hopefully it will be offered online in summer of 2020.

CHM

Helena working on online lab for CHM108 to begin in fall of 2019.

GGP

GRY320 – cultural geography (Ron Malega – delayed due to family issues)

GLG115 – Life of the Past (Damon Bassett)

First Priority – all of these fit into the GIS Graduate Certificate

GEO568/668 Thematic Cartography – Xiaomin Qiu

GEO573/673 GIS Programming – Jun Luo

GEO599/699 Landscape Analysis – Toby Dogwiler

Future Priority – these would provide a fully online certificate program in future.

GEO360 – Interpretation of Aerial Photography (Xin Miao)

GEO363 – Introduction to GIS (Xiaomin Qiu)

MTH

Next step is Calculus online but no specific timeline yet.

CSC - (several attended bootcamp in spring of 2019)

CSC567/667 – Mobile Computing Applications Ajay Katangur Timeline – offer in spring 2020

CSC 335 Database System Concepts – Jamil Saquer – offer in spring 2020

PAMS

Mike Reed is developing AST 113 and will be offered FA19. (submitted)

Appendix 6 – Peer-reviewed publications and publications/presentations with student co-authors

Department	2014	2015	2016	2017	2018
BIO	33	24	29	31	27
CHM	10	15	9	13	17
CSC	1	1	2	3	16
EGR	0	1	0	1	5
GGP	22	20	15	17	22
HL	2	4	5	4	6
MTH	5	8	8	12	17
PAMS	24	20	26	28	28
Total by Columns	107	93	94	109	138

2018

Department	Undergraduate Publications	Graduate Publications	Undergraduate Presentations	Graduate Presentations
Biology	1	25	49	110
Chemistry	3	22	11	15
Computer Science	0	6	9	2
Geography, Geology, & Planning	1	2	26	45
Hospitality Leadership	0	1	11	2
Mathematics	2	3	2	0
Physics, Astronomy, & Materials Science	7	3	1	0
Cooperative Engineering Program	2	0	2	0

The table below indicates the number of students listed as co-authors of publications and presentations. 2017 data.

Department	Undergraduate Publications	Graduate Publications	Undergraduate Presentations	Graduate Presentations
Biology	14	33	56	50
Chemistry	4	10	14	18
Computer Science	2	1	8	0
Geography, Geology, & Planning	2	8	117	76
Hospitality Leadership	0	0	0	0
Mathematics	9	2	0	0
Physics, Astronomy, & Materials Science	13	12	4	17
Cooperative Engineering Program	3	3	0	0

Appendix 7 - Scholarship Dollars Distributed

2017-2018 CNAS Scholarship Totals

Committee/ Department	Scholarships Awarded	Total Award Amount
Biology	12	\$ 6,000.00
Chemistry	17	\$ 17,500.00
CNAS- Bio/ Chem Joint	1	\$ 1,000.00
College of Natural and Applied Science	17	\$ 1,700.00
Computer Science	11	\$ 8,235.00
Geography and Planning	3	\$ 1,750.00
Geography, Geology, and Planning	8	\$ 6,300.00
Geology	3	\$ 1,750.00
Mathematics	30	\$ 29,585.00
Hospitality Leadership	16	\$ 22,400.00
Physics, Astronomy, and Materials Science	17	\$ 12,650.00
TOTALS:	135	\$ 108,870.00

2018-2019 scholarship numbers (these are endowed scholarships with the foundation)

Department Scholarship #'s	Scholarships Awarded	Total Award Amount
Biology	22	\$ 11,950.00
Chemistry	11	\$ 11,400.00
CNAS- Biology/Chemistry Joint	1	\$ 1,000.00
College of Natural and Applied Science	35	\$ 35,250.00
Computer Science	11	\$ 6,133.12
Geography, Geology & Planning	11	\$ 11,200.00
Hospitality Leadership	12	\$ 7,325.00
Mathematics	28	\$ 29,000.00
Physics, Astronomy & Materials Science	15	\$ 15,500.00
TOTALS:	150	\$ 126,758.12

Appendix 8 – College Student fee

Collected from July 1, 2018 – February 2019	\$1,592,652.50
Distributed to departments October 2018	\$350,000.00
President's allocation	\$621,326.25
CNAS allocation	\$621,326.25
Expenses	
Student success staff	\$50,000
Study Away Scholarships for students	\$ 4,250
Facility projects	
BSFS	\$200,000
Greenhouse	\$160,000
Kemper project	\$11,000
CNAS master plan study	\$181,000
CNAS allocation balance	\$20,076.25
2019-2020 plan	
Income	\$1,600,000
Department allocation (Oct, 2019)	\$350,000
President's allocation (Feb, 2020)	\$625,000
CNAS Allocation	\$625,000
Expenses	
Student Success Personnel	\$90,000
Projects based on master plan	\$535,000

Appendix 9– CNAS Faculty/Staff

2019 (SP)	Tenured/tenure-track Faculty in CNAS	Instructors/Lab supervisors
BIO	19.0 FTE 18.5 FT + Head	1/5 ** Soon 6/1 (as of 8/2019)
CHM	16 FTE 15.5 FT + Head	2/1
CSC	9 FTE 8.5 FT + Head	0/0
GGP	18 FTE 17.5 FT + Head	4/0
HL	6 FTE 5.5 FT + Head	2/0
MTH	22 FTE 21.5 FT + Head	13/0
PAMS	11 FTE 12.5 FT + Head	1/1
EGR	7 FTE (2 FTE MSU, 5 MO S&T) Director (S&T)	0/2 (MSU)

Appendix 10 – Credit Hour Production

Although number of majors and number of graduates are important, it is also important to note credit hour production.

Calendar Year (SP/SU/FA)	2013	2014	2015	2016	2017	2018
Agriculture	11,712	12,991	14,156	16,245	16,892	16,357
Arts & Letters	95,427	94,977	97,399	102,112	103,230	104,554
Business	100,350	100,030	106,171	108,149	110,736	113,386
Education	34,350	35,250	37,001	39,031	40,799	40,511
Health & Human Services	84,133	86,817	87,506	90,905	93,661	93,251
Humanities & Public Affairs	78,205	79,473	82,330	84,578	86,056	83,522
Library Science, Dept of	253	237	118	104	79	55
Natural & Applied Sciences	87,441	87,435	89,271	95,135	93,825	90,697
Undergraduate College/Provost	7,800	8,046	9,175	9,697	9,544	9,047

Credit hour production (total)	CY2016	CY2017	CY2018
Biology	17484	18150	18868
Chemistry	18335	18429	18152
Computer Science	4322	4332	5025
GGP	15613	15417	14104
Hospitality Leadership	4216	4240	4051
Mathematics	24870	23607	21918
PAMS	8888	8337	8325

Appendix 11 – TA/GA Allocations

Department	FY19 TA Allocations	
BIO	\$267,589	Funds 25-30 TA's
CHM	\$156,921	Funds 14.5-17.5 TA's
CSC	\$60,000	Funds 6-7 TA's
GGP	\$162,810	Funds 15-18.5 TA's
HL	\$18,000	Funds 2 TA's
MTH	\$128,027	Funds 12-14.5 TA's
PAMS	\$137,418	Funds 12-15.5 TA's
MNAS	\$48,000	Funds 4.5-5.5 TA's

2018-2019	TOTAL GAs with Assistant- ships	State Funded	Grant & Contract Funded	MNAS	Startup Funds	Summer (2mth) (Not Included in Total)	Summer Grant (2mth) (Not Included in Total)
Biology	32	30.5		1.5		8	5
Bull Shoals Field Station	0	0					
Chemistry	15.5	14.5		1		5	1
Computer Science	10	8		0.5	1.5	0	0
Engineering	0	0	0	0	0	0	0
Geography, Geology & Planning	17.5	17		0.5		0	0
Hospitality Leadership	3	3				0	0
Mathematics	11	11				2	2
OEWRl*	9.5		9.5			2	7
Physics, Astronomy & Materials Science	13.5	13			0.5	0	0

Appendix 12 - Student Accomplishments in CNAS

STUDENT ACCOMPLISHMENTS – 2018

January 10, 2018 https://blogs.missouristate.edu/cnas-newswatch/2018/01/10/finding-teaching-in-his-genes/?utm_source=feed&utm_medium=feed&utm_campaign=feed

Colton Lynn, TA in biology, received the Distinguished TA award.

January 17, 2018 https://blogs.missouristate.edu/cnas-newswatch/2018/01/17/pams-and-bio-for-common-interest/?utm_source=feed&utm_medium=feed&utm_campaign=feed

PAMS and BIO students attended the InBre conference to present their work. Cullen Horstman received an Honorable Mention.

January 29, 2018 https://blogs.missouristate.edu/cnas-newswatch/2018/01/29/learn-stars-without-leaving-earth/?utm_source=feed&utm_medium=feed&utm_campaign=feed

Grad student Josh Kern studies the inside of stars and publishes article. Advisor is Mike Reed.

February 16, 2018 https://blogs.missouristate.edu/cnas-newswatch/2018/02/16/women-inspiring-women/?utm_source=feed&utm_medium=feed&utm_campaign=feed

Students Aubrey Hormel and Emily Justus attended the Nebraska Conference for Undergraduate Women in Mathematics (NCUWM) in January 2018.

March 12, 2018 https://blogs.missouristate.edu/cnas-newswatch/2018/03/12/biology-student-wins-award/?utm_source=feed&utm_medium=feed&utm_campaign=feed

Biology students presented and Jeff Williams won poster award at Missouri Natural Resources Conference (MNRC). Advisor is Deb Finn.

March 21, 2018 https://blogs.missouristate.edu/cnas-newswatch/2018/03/21/new-faces-at-the-national-society-of-minorities-in-hospitality/?utm_source=feed&utm_medium=feed&utm_campaign=feed

Five hospitality leadership students attend 29th annual National Society of Minorities in Hospitality (NSMH) conference and career fair in Chicago. Organized by Jokima Hiller and Dan Crafts.

March 28, 2018 https://blogs.missouristate.edu/cnas-newswatch/2018/03/28/recruitment-and-retention-starts-with-student/?utm_source=feed&utm_medium=feed&utm_campaign=feed

Chelsea Martin, grad student of biology, was awarded the Excellence in Advising – Graduate Student Contribution Award.

April 17, 2018 https://blogs.missouristate.edu/cnas-newswatch/2018/04/17/sharing-research-and-gaining-experience/?utm_source=feed&utm_medium=feed&utm_campaign=feed

Eight MSU students shared research and gained experience at the Annual Joint Meeting of the Missouri and Missouri Valley Branches of the American Society of Microbiology in Kansas City this past March. Three students placed in oral and poster presentations.

April 19, 2018 https://blogs.missouristate.edu/cnas-newswatch/2018/04/19/dont-hide-under-a-rock/?utm_source=feed&utm_medium=feed&utm_campaign=feed

Geology students traveled to the San Andreas Fault over spring break.

April 19, 2018 https://blogs.missouristate.edu/cnas-newswatch/2018/04/19/looking-underneath-the-surface/?utm_source=feed&utm_medium=feed&utm_campaign=feed

Nathan Dorff, graduate student biology, won the Carl Morrow Graduate Scholarship for his work in natural resource management. Advisor: Deb Finn

April 24, 2018 https://blogs.missouristate.edu/cnas-newswatch/2018/04/24/hospitality-student-named-citizen-of-the-week/?utm_source=feed&utm_medium=feed&utm_campaign=feed

Hospitality major Jordan Moyer was named Citizen of the Week in her hometown of Eureka Springs, AR.

May 2, 2018 https://blogs.missouristate.edu/cnas-newswatch/2018/05/02/biology-student-employee-of-the-year/?utm_source=feed&utm_medium=feed&utm_campaign=feed

Biology major Kevin Martin named Student Employee of the Year. Hannah Whaley won runner up.

May 7, 2018 <https://blogs.missouristate.edu/cnas-newswatch/2018/05/07/new-and-exciting-ideas-from-chemistry/> Several students presented at American Chemical Society's annual meeting in NOLA.

May 9, 2018 <https://blogs.missouristate.edu/cnas-newswatch/2018/05/09/using-math-in-the-real-world/> MTH 121 students led by instructor Patti Ann Blanton raise awareness and funding for K9s for Camo.

May 17, 2018 <https://blogs.missouristate.edu/cnas-newswatch/2018/05/17/geography-bowl-papers-presentations-and-networking-the-makings-of-a-great-conference/> (not the same as the Geological Society of America GSA) Many GGP students attended the Geography Bowl at American Assn of Geographers (AAG) annual conference.

May 20, 2018 <https://blogs.missouristate.edu/cnas-newswatch/2018/05/20/cottonmouths-and-turtles-oh-my/> Several biology students shared research on reptiles at SW Assn of Naturalists.

May 25, 2018 <https://blogs.missouristate.edu/cnas-newswatch/2018/05/25/biology-student-featured-on-stem-spots/> Hannah Whaley, wildlife biology major, was interviewed for STEM spots.

May 27, 2018 <https://blogs.missouristate.edu/cnas-newswatch/2018/05/27/inorganic-chemistry-day-an-opportunity-to-learn/> Chemistry students attended and presented at Inorganic Chemistry Day in April 2018 at MO S&T.

June 8, 2018 <https://blogs.missouristate.edu/cnas-newswatch/2018/06/08/first-class-of-umkc-school-of-pharmacy-springfield-campus-graduates/> CNAS students joined other MSU students to graduate from the first cohort of the UMKC School of Pharmacy Springfield.

June 20, 2018 https://blogs.missouristate.edu/cnas-newswatch/2018/06/20/biology-students-studies-the-outlier/?utm_source=feed&utm_medium=feed&utm_campaign=feed Kristen Sardina and Ethan Hollender, bio majors, presented and won at Florida Herpetology Conference. Advisor: Day Ligon

June 26, 2018 https://blogs.missouristate.edu/cnas-newswatch/2018/06/26/stress-its-not-just-in-your-head/?utm_source=feed&utm_medium=feed&utm_campaign=feed Orion Peterson, graduate student in biology, was awarded outstanding research presentation on stress at Academy of Orofacial Pain conference.

Advisor: Paul Durham

June 30, 2018 https://blogs.missouristate.edu/cnas-newswatch/2018/06/30/biology-student-primed-for-success-with-volunteer-work/?utm_source=feed&utm_medium=feed&utm_campaign=feed

Luke Ellickson, biology major, was named recipient of the Kevin D Wallace Award for his volunteerism with the Tooth Truck.

July 5, 2018 https://blogs.missouristate.edu/cnas-newswatch/2018/07/05/working-for-women-in-stem/?utm_source=feed&utm_medium=feed&utm_campaign=feed

Carmen Creswell, computer science major, received an honorable mention at the Womxn of Distinction awards.

July 10, 2018 https://blogs.missouristate.edu/cnas-newswatch/2018/07/10/sustainable-street-lights/?utm_source=feed&utm_medium=feed&utm_campaign=feed

Patrick Toplikar, engineering student, received grant money to research sustainable streetlights.

July 26, 2018 https://blogs.missouristate.edu/cnas-newswatch/2018/07/26/opportunity-knocks-undergraduate-research/?utm_source=feed&utm_medium=feed&utm_campaign=feed

Jordan Heiman, senior biology major, presented at Symposium on Biogeochemistry of Wetlands. Advisor: La Toy Kissoon-Charles

August 3, 2018 https://blogs.missouristate.edu/cnas-newswatch/2018/08/03/current-and-former-biology-students-attend-conference/?utm_source=feed&utm_medium=feed&utm_campaign=feed

Biology graduate students (current and recently graduated) attended and presented at the 98th Annual Meeting of the American Society of Mammalogists (ASM) in June 2018 at Kansas State University.

August 9, 2018 https://blogs.missouristate.edu/cnas-newswatch/2018/08/08/setting-up-camp-for-success/?utm_source=feed&utm_medium=feed&utm_campaign=feed

Brooke Benz, geology major, attended field camp in Wyoming and South Dakota. Advisor: Gary Michelfelder

August 13, 2018 https://blogs.missouristate.edu/cnas-newswatch/2018/08/13/students-reminded-importance-of-planning/?utm_source=feed&utm_medium=feed&utm_campaign=feed

GGP's planning students (MAPS) presented at Annual Planning Conference in April 2018 in NOLA.

August 17, 2018 https://blogs.missouristate.edu/cnas-newswatch/2018/08/17/pre-med-to-crime-lab/?utm_source=feed&utm_medium=feed&utm_campaign=feed

Greg Illy is one of the first graduates of the recently revived PSM program.

August 29, 2018 https://blogs.missouristate.edu/cnas-newswatch/2018/08/29/finding-her-place-in-research/?utm_source=feed&utm_medium=feed&utm_campaign=feed

Harlee Kelley, biology major, spent her summer in the Stowers Summer Scholars program in KC. Advisor: Paul Durham

September 12, 2018 <https://blogs.missouristate.edu/cnas-newswatch/2018/09/12/from-excited-undergrad-to-capable-grad-student/>

Meagan Rippee-Brooks, graduate biology, won two poster awards and a \$1000 grant from Sigma Xi for thesis research. Advisor: Chris Lupfer

September 15, 2018 <https://blogs.missouristate.edu/cnas-newswatch/2018/09/15/animal-behavior-research/> Biology UGs and GRs presented at the national annual meeting of Animal Behavior Society.
Advisors: Alicia Mathis, Brian Greene

September 21, 2018 <https://blogs.missouristate.edu/cnas-newswatch/2018/09/21/using-cottonmouths-to-track-down-disease/> Ciera McCoy, graduate biology, presented part of master's thesis at Joint Meeting of Ichthyologists and Herpetologists.

September 29, 2018 <https://blogs.missouristate.edu/cnas-newswatch/2018/09/29/research-opportunity-and-industry-experience-in-one-project/> Biology students got to research and learn about plant physiology at EJ Gallo Winery.

October 23, 2018 https://blogs.missouristate.edu/cnas-newswatch/2018/10/23/annual-conference-new-experiences/?utm_source=feed&utm_medium=feed&utm_campaign=feed La Toya Kissoon-Charles and two students presented at the Society of Wetland Scientists conference.

October 29, 2018 <https://blogs.missouristate.edu/physics/2018/10/29/internship-space-launch-this-spring/> William Brockmeier, PAMS major, completed three-month internship over the summer in a REU at Northrop Grumman in Dulles, VA.

August 31, 2018 <https://blogs.missouristate.edu/cnas-newswatch/2018/08/31/computer-science-students-gain-internship-experience/> Ten computer science students gain internship experience at O'Reilly Auto Parts creating a new program

October 25, 2018 https://blogs.missouristate.edu/cnas-newswatch/2018/10/25/undergraduate-student-flies-to-texas/?utm_source=feed&utm_medium=feed&utm_campaign=feed Tyler Rook, computer science major, worked with Unmanned Aerial Systems with a REU at Texas A&M Corpus Christi.

November 6, 2018 https://blogs.missouristate.edu/cnas-newswatch/2018/11/06/biology-students-present-research-at-bull-shoals-field-station/?utm_source=feed&utm_medium=feed&utm_campaign=feed Biology UGs and GRs presented research at the Missouri Herpetological Association (MHA) Bull Shoals Field Station.

November 8, 2018 https://blogs.missouristate.edu/cnas-newswatch/2018/11/08/student-networks-with-hotel-executives-across-the-country/?utm_source=feed&utm_medium=feed&utm_campaign=feed HL senior Elisa Kelley received prestigious scholarship and was selected to attend high-profile conference.

November 8, 2018 <https://blogs.missouristate.edu/cnas-newswatch/2018/11/08/student-networks-with-hotel-executives-across-the-country/> Elisa Kelly, HL Major, received a scholarship from American Hotel and Lodging Educational Foundation and attended their conference in Phoenix, Arizona on Sept. 24-27.

November 22, 2018 https://blogs.missouristate.edu/cnas-newswatch/2018/11/22/computer-science-students-save-lives/?utm_source=feed&utm_medium=feed&utm_campaign=feed Computer Science students participated in hackathons in October 2018.

November 28, 2018 <https://blogs.missouristate.edu/cnas-newswatch/2018/11/28/two-geology-students-win-awards/> Emma Gibson and Conor O'Dowd, GGP Majors, each won an award from the Association of Missouri Geologists

December 22, 2018 <https://blogs.missouristate.edu/cnas-newswatch/2018/12/22/graduate-undergraduate-research-presented-in-iowa/> Michael Bakker (Dr. Matthew Seibert), Ben Boyd (Dr. Gary Meints), Allison Freese (Dr. Adam Wanekaya), Oluwasegun "Michael" Abolade (Dr. Cyren Rico), Megan Prado (Dr. Wanekaya); CHM Majors; Graduate/Undergraduate research presented at the Midwest American Chemical Society

December 30, 2019 <https://blogs.missouristate.edu/cnas-newswatch/page/3/> Femila Manoj (Dr. Mirza and Dr. Durham); BIO Major; received a grant from Beta Beta Beta Research foundation to fund research

January 28, 2019 <https://blogs.missouristate.edu/cnas-newswatch/2019/01/28/undergraduate-research-showcased-at-conference/> Cullen Horstmann and Onika Olsen (Dr. Kim); BIO Majors; presented research at The Arkansas IDeA Network of Biomedical Research and Excellence

February 6, 2019 <https://blogs.missouristate.edu/cnas-newswatch/2019/02/06/biology-student-wins-thesis-competition-works-on-phd/> Angeline Rodriguez (Dr. Lupfer); BIO major; won the 2019 Distinguished Thesis Competition

February 25, 2019 <https://blogs.missouristate.edu/cnas-newswatch/2019/02/25/students-study-yeast-to-cure-diseases/> Cullen Horstmann, Deborah Ehie, Jared Smothers, Vy Nguyen, and Mya Ly (Dr. Kim); BIO; presented at the Midwest Yeast Meeting in November at Northwestern University in Evanston, Illinois.

March 8, 2019 <https://blogs.missouristate.edu/cnas-newswatch/2019/03/08/women-in-stem-mathematics-edition/> Sabrina Klement; MTH; attended the Nebraska Conference for Undergraduate Women

March 16, 2019 <https://blogs.missouristate.edu/cnas-newswatch/2019/03/16/biology-student-awarded-for-student-achievement-and-presentation/> Jeff Williams (Deb Finn); BIO; was awarded the Student Achievement Award and Best Student Platform Presentation from the Missouri Chapter of the American Fisheries Society (MOAFS)

April 26, 2019 <https://blogs.missouristate.edu/cnas-newswatch/2019/04/26/biology-bears-find-a-new-home/> A dozen biology students go on to start graduate schools.

May 8, 2019 <https://blogs.missouristate.edu/cnas-newswatch/2019/05/08/keeping-minorities-in-stem-fields/> Several undergraduate and graduate students created a chapter of the Louis Stokes Alliance for Minority Participation (LSAMP) and attended the Emerging Researchers National (ERN) conference in February. Anthony Grate (Dr. Day Ligon) a Wildlife Biology major won best poster presentation.

May 11, 2019 <https://blogs.missouristate.edu/cnas-newswatch/2019/05/11/save-the-streams-one-student-at-a-time/> GGP students won top prize at stream conference.

May 14, 2019 <https://blogs.missouristate.edu/cnas-newswatch/2019/05/14/chemistry-students-are-causing-a-reaction/> Several chemistry students presented at a conference in Orlando, Florida; one student went home with an award.

May 15, 2019 <https://blogs.missouristate.edu/cnas-newswatch/2019/05/15/connecting-through-geography/> Students attended geography conference, obtaining awards. Miranda Jordan was recognized at the conference and won the graduate student paper award. Daniel Pearce ('15) also attended the conference.

May 19, 2019 <https://blogs.missouristate.edu/cnas-newswatch/2019/05/19/ggp-students-present-at-conference/> Several GGP Students and staff presented research at the Geological Society of America meeting in Manhattan, KS.

May 24, 2019 <https://blogs.missouristate.edu/cnas-newswatch/2019/05/24/always-learning-science-edition/> Missouri Academy of Sciences Annual Meeting. Several CNAS students who attended presented their research.