

CNAS Action Plan for 2024-2025

Long-term goal – CNAS will be the most research active college at Missouri State with the greatest number of students involved in research, the most external funding for research, and highest impact of peer-reviewed research publications and CNAS will also be the college with the most comprehensive use of inclusive teaching practices and active learning strategies to allow all students to succeed in STEM. (There is no need to “weed students out”. There is a great need to change our practices so that every student has the opportunity to succeed.)

Strategic Enrollment Management

- ❖ Continue outreach to recruit students to MSU
- ❖ Continue to focus on DFW rates and provide professional development on inclusive teaching practices
- ❖ Support the work for Complete College America project
- ❖ Continue outreach work with dual enrollment in science and mathematics
- ❖ Continue working on marketing plan with MARCOMM
- ❖ Work to increase the number of students preparing to teach K-12 STEM (MTH – BSED, SCI – MAT)

Infrastructure and Funding

- ❖ Continue work on Blunt, Cheek and Kemper Hall projects
- ❖ Monitor use of Strong 001 – active learning classroom and plan for a second room
- ❖ Seek external grant funding for research, teaching or any of the goals listed.
- ❖ Room naming opportunities to raise more \$\$ to support students
- ❖ Meet with foundation with wants/needs list to prioritize.

Evolving Academic Directions

- ❖ Analyze FTE data and determine a strategic hiring plan
- ❖ Continue to review syllabi in each department for consistency, SLO's, etc.
- ❖ Continue to use AI appropriately inside and outside the classroom
- ❖ BS in Data Science approved and ready to offer and BS in Tourism submitted fall
- ❖ Develop a long-term plan to support STEM secondary education recruitment, retention, faculty, etc.
- ❖ Support departmental seminar programs that not only focus on research but also careers, interdisciplinary research and inclusive excellence
- ❖ Continue to support STEM Career Expo and LMS career site
- ❖ Support all departments with contacts to local industry for internships and careers
- ❖ Focus on overall goal noted above related to research and teaching.
- ❖ Work with admissions on ACT/math placement along with need for remedial classes.

Inclusive Excellence

- ❖ Support the university's public affairs mission and welcome all students, faculty and staff
- ❖ Support positive mental health policies for students, faculty and staff
- ❖ Offer professional development opportunities for faculty and staff to help all of us be more inclusive in our work.
- ❖ Continue grant writing for specific projects.

Global Engagement

- ❖ Continue to work on CNAS/International Services action plan to recruit and retain international students.
- ❖ Where appropriate departments will work with international institutions on a variety of 3+1 and other degree programs

Community Partnerships

- ❖ Continue successful and productive partnerships

Biology Department Action Plan 2024-2025

1. Strategic Enrollment Management and Retention

- Realigning the overlapping courses between Biology and Biomedical Sciences.
- Master advisors to renew their master advisor certification.
- Teaching service courses (BIO 100, 101, 121, and 122) without instructor variation.
- Strong focus on student research and internships (dual credit funds + the Bio Adv. Board).
- Genetics (BIO236)-continue to implement technology-enabled study groups.
- Continue active engagement in CNAS/MSU recruitment events.
- Develop strategies to promote social media marketing (Facebook and Instagram).
- Develop Strategies to increase faculty retention (use CUPA data).
- Continue student recruitment-related projects (More student success videos + social media).
- Decrease DFW rates (priorities: service lab courses-BIO100, 111, 121, 122, 213).
- Develop ideas and find resources for promoting student and faculty wellness.
- Find strategies to reduce barriers to entry for prospective student applicants.

2. Academics

- Collaborate with CNAS office to establish funds to support summer RAs up to 10 students.
- Develop ideas to create more undergraduate and graduate certificates.
- Focus on internet courses in the summer, which has shown to increase summer enrollment.
- New initiative to work with qualified teachers to offer dual credit for BIO 121 (major's course).
- Faculty commit to making efforts to help students in the DFW-range be successful.
- Implement Peer-teaching evaluation rubric.
- Share graduate program assessment results and develop ideas to promote graduate enrollment.
- Prepare justification for a faculty hire.

3. Inclusive Excellence

- Prioritize Departmental Instructional needs (Ad Hoc Committee): new faculty hire based on this.
- Continue to invite diverse speakers for the department seminar (+ interdisciplinary research, career, and inclusive excellence).
- Continue to highlight diversity and cultural competence in courses.
- Share diversity training/seminar opportunities and encourage faculty to attend.
- Proactive advising to identify and help students before they struggle (work with CNAS office).

4. Global Engagement

- Collaborate with the GREAT (Globally Responsive Education and Teaching) program.
- International field research for faculty/students in Belize (Ligon) and Australia (Finn).

5. Community Leadership and Partnership

- Continue the collaboration between NPS/MSU (work with Master cooperative agreement).
- Work with the Advisory Board for successful fundraising.
- Faculty work with multiple science competition events (e.g., Science Olympiad, OSEF).
- Faculty maintain Grape Demonstration Garden (Kovacs).
- Faculty/students curate Springfield Butterfly House (Barnhart-emeritus + students).
- Faculty engage with K-12 schools and local ed organizations for educational outreach.

6. Infrastructure and Funding

- Continue work on Blunt (2024-2025) and Kings Street Annex (until November 2024) projects.
- Promote interdisciplinary research collaboration to seek external funding (Ongoing efforts).
- Meet with Foundation with wants/needs list to prioritize.

Chemistry and Biochemistry Department Action Plan 2024-2025

1. Strategic Enrollment Management and Retention

- Continue to work on barriers to success for classes with high DFWs.
- Continue outreach to recruit students locally (Meints) and internationally (Santra).
- Revamp and update the departmental brochures and videos.
- Offer and evaluate a new freshman class (CHM 197) for Chemistry and Biochemistry majors with a view of increasing freshman retention.

2. Evolving Academic Directions for Future Careers

- Continue offering more options (active learning, online, etc.) for course delivery where possible.
- Continue supporting dual credit teachers by offering classes as needed.
- Review syllabi for consistency across multiple class selections.
- Use AI appropriately to enhance teaching and research.
- Explore the need to offer new certificates of degree programs.
- Continue promoting enrollment in the Foundations Pharmaceutical Science Certificate program.

3. Inclusive Excellence

- Support mental health for students, faculty, and staff.
- Continue to invite diverse speakers for seminars.
- Encourage faculty to attend diversity trainings/seminars.

4. Global Engagement

- Continue recruiting international students thus increasing diversity and enriching the learning environment and cultural perspectives.
- Seek and encourage opportunities for faculty in international collaborations.

5. Community Leadership and Partnerships

- Continue partnering with local industry to enhance workforce development/internship opportunities for students and graduates.

6. Infrastructure and Funding

- Continue participating in Blunt Hall addition/renovations.
- Continue supporting faculty efforts to pursue external funding by providing incentives to attend workshops related to external funding sources (ACS, NSF, NIH, etc.).
- Liaise with the Chemistry and Biochemistry Board of Advisors Faculty to raise funds for instrument maintenance and student summer research.
- Continue to seek funds to purchase a new Nuclear Magnetic Resonance Spectrometer, which is required for the certification of some of the department's programs.

CS Action Plan 2024-2025

1. Strategic Enrollment Management

- Continue to work on CS introductory courses to improve student success, which leads to better retention, and tackling DFW rates.
- Revisiting the curriculum and streamlining all undergraduate and graduate courses to align with the current market demand.

2. Evolving Academic Directions for Future Careers

- Submit ABET report and prepare for ABET visit for successful reaccreditation.
- Implementing the new interdisciplinary data science undergraduate degree in collaboration with the mathematics department after approval.
- Explore the possibility of certificates at the graduate and undergraduate level as well as specialized M.S. programs based on Gray DI.
- Continue to recruit and enroll students into certificate/BS/MS programs.

3. Global Engagement

- Work on 3+1+1 degree programs with Chinese universities and Indian universities.

4. Inclusive Excellence Driving University Success

- Continue to invite diverse speakers from industry, and academia for seminar programs.

5. Community Leadership and Partnerships

- Work with local employers and MSU administrators on more internships and full-time positions for students.
- Work on internships and full-time opportunities for primarily international graduate students.
- Explore potential collaborations with community by working on their projects in the capstone class.

6. Infrastructure and Funding

- Strategic space management for teaching and research labs during Cheek Hall renovation.
- Explore collaborations with other departments, and universities to seek federal funding as well as industry funding actively.
- Acquiring \$150 million to have state-of-the-art facilities for Computer Science and Math.

Engineering Action Plan 2024-2025

1. Support Student Success

- Provide cutting-edge laboratory and classroom infrastructure.
- Encourage students to apply to Internships.
- Connect students to opportunities that help build their career.
- Support students in passing their FE exam and preparing for their PE exam.
- Encourage students to demonstrate commitment to community and professional service.
- Expand scholarship opportunities for the students.
- Increase enrollment and retention.
- \$100,000 in scholarship money annually.

2. Support Student Success

- Promote faculty collaboration on research and projects.
- Connect faculty to career enhancing opportunities.
- Provide cutting-edge laboratory and classroom infrastructure.
- Promote and support innovative teaching practices.

3. Enhanced Operation Efficiency

- Conduct continuous improvement to the program.
- Efficient academic advising.
- Build and effective marketing plan and awareness for the program.
- Efficient student billing and financial processes between both universities.
- Build efficient administrative support.

4. Strengthen Collaboration with the Industry

- Tours of facilities, industry-sponsored workshops and presentations.
- Internships and job placements for students.
- Explore opportunities for scholarships and students.
- Collaborative projects between the industry and the program.
- Form an advisory board.

MTH Action Plan 2024-25

1. Evolving Academic Directions

- New program in Data Science: Collaborate with the Department of CSC to refine and establish the new program.
 - Establish an advisory board for the program with agendas/goals.
 - Create webpage for Data Science.
 - Begin recruitment – marketing.
 - Establish a joint advising program.
 - Redesign department brochure to include the program.

2. Curriculum Initiatives

- Redesign Calculus sequence as a 5-4-4 credit hour sequence.
- Redesign MTH 315 as an Intro to Proof class.
- New courses for data science: Statistical Programming for Data Science. Mathematics versions (cross list) of CSC 330 Intro to Data Science, and CSC 526 Methods of Optimization; other?
- Revise prerequisites for MTH 340, renumber course and introduce into MOTR system as MOTR#110 and GenEd.

3. Rebuild Advising in the Department

- Recent retirements have left the student advising process weak.

4. Community Efforts

- Redesign Pummill Relays. Find a new venue and update the algorithm to fit it.

5. Inclusive Excellence

- Adhere to the principles of diversity, equity, and inclusiveness in all activities of the department: hiring, student organizations, recruitment, student learning, external speakers.
- Meeting students where they are at is an excellent approach to student success.
 - How far back in training should our remedial courses reach?
 - How to build this into the admission process and recruitment process?

6. Infrastructure and Funding

- Work with CNAS office and Design and Construction on the renovation of Cheek Hall.
- Permanent funding for YMTA, \$35,000 a year.
- Acquiring \$150 million to have state-of-the-art facilities for Computer Science and Math.

PAMS Action Plan 2024-2025 (pre-departmental approval)

1. Strategic Enrollment Management

- Continue efforts to ensure student success.
- Continue focus on maintaining low DFW rates.
- Continue to involve students in research in departmental labs.
- Continue marketing and recruitment efforts to attract undergraduate and graduate students.
- Work on increasing the number of high school student groups visits to PAMS department.

2. Infrastructure and Funding

- Continue to upgrade upstairs Kemper classrooms.
- Continue work on group proposals for research and education.
- Support ongoing grant funding efforts in department.
- Continue to seek endowments to help fund projects and infrastructure in PAMS.
- Work on cleaning up lab spaces.
- **Initiate a community effort to attract funding for new planetarium.**

3. Evolving Academic Directions for Future Careers

- Continue to work on student enrollment in department certificates.
- Continue to explore programs revisions and new program options.
- Continue to work on revising outdated courses (e.g., PHY 351)

4. Inclusive Excellence

- Continue work on recruitment of underrepresented minority high school students.
- Continue to sponsor women students on attending CUWiP conferences.
- Promote PAMS faculty to serve on committees on diversity and inclusion.

5. Global Engagement

- Continue to foster international research collaborations in department.
- Support efforts in recruitment of international students and undergraduate and graduate levels.

6. Community Leadership and Partnerships

- Continue to partner with local industries for funding opportunities and student internships.
- Continue to offer outreach programs, such as public viewing nights at Baker Observatory.

SEES ANNUAL GOALS FOR 2024-2025

Strategic Enrollment Management

- o Increase the number of majors, minors, and certificates in GGP. Focus on making the demographics of our majors representative of the broader university student demographics
- o Continue to balance our course offerings with demand, while also devising and implementing strategies to increase general education enrollments.
- o GGP will continue to review every major's progress toward completing their program requirements and proactively intervene to avoid common hurdles toward graduation.

DFW Rate Reduction

- o Devise and implement incentives to get at-risk students to utilize the GGP Success Center
- o Faculty will continue to implement strategies to reduce DFWs and report (annual report) the year-over-year impact of these strategies.

Infrastructure

- o Continue to identify and plan for equipment necessary to fully utilize the new Temple Addition facilities on day 1 of occupancy (labs, rock prep, VR Studio, etc.). This will include inventorying equipment that needs to be obtained or replaced, a plan for funding those purchases, and encouraging faculty to think about opportunities for pursuing grant funds.
- o Coordinate and Plan for the renovation and backfill of existing Temple Hall spaces and the move into the addition.

Evolving Academic Directions for future Careers

- o Complete the development of the new cross-program Tourism program, specifically getting the major approved, and developing a minor and graduate programs.
- o Review our existing certificate enrollments and modify or delete undersubscribed programs.

Inclusive Excellence Driving University Success

- o In addition to hosting at least one seminar focused on issues of diversity and cultural awareness, GGP will increase student participation in the seminar by incentivizing students in our courses to attend.
- o Update the assessment plan for our MS in Geography and Geology.

Global Engagement

- o GGP will offer study away programs or similar off-campus experiences that connect our students, our disciplinary concepts, and hands-on experiences in the context of other cultures.

Community Partnerships

- o Continue to develop partnerships to facilitate awareness, pursuit, and success in obtaining internships and other hands-on experiences that allow students to transition to the workforce via internships, directed research, and similar experience.