

CNS BUDGET ROLL UP NARRATIVE

APRIL 15, 2017

UPDATE ON FY17 CNS STRATEGIC INVESTMENTS

1. \$1M to Address to Instructional Stress

This \$1M investment has enabled CNS to hire a total of 18 new, non-tenure system faculty members to address instructional stress in the multiple CNS departments: Biochemistry and Molecular Biology; Biology; Chemistry; Mathematics and Statistics; and Psychological and Brain Sciences. Of the 18 total, eight began during AY16-17; CNS anticipates that the remainder will begin during AY17-18.

2. \$182K for Advising

The \$182K FY17 strategic investment has enabled CNS to hire four new staff members: three professional advisors as well as one additional team member for the new CNS Career and Professional Development Center. When Campus Career Services was decentralized at the start of FY17, CNS benefitted from the transfer of an existing UMass employee, Nessim Watson. The FY17 strategic investment is facilitating the hiring of one additional person to join Nessim, which will bring the total number of career-focused team members to two. (Note: CNS' FY18 strategic investment requests additional funding to hire two more people, bringing the total number of team members to four.)

3. \$125K for Gloucester Marine Station

This \$125K investment is supports the hiring a new faculty member as well as operational costs associated with the Gloucester Marine Station. The new faculty member's working title will be Extension Assistant Professor in Sustainable Fisheries and Coastal Resilience.

4. \$60K for Web Sites

Currently conducting an audit of all CNS department Websites to develop a comprehensive overview of existing functionality and content that will inform the creation of a framework for all departmental sites.

FY17 CNS IMPROVEMENTS USING EXISTING RESOURCES

1. Astronomy - Revamp Computational Teaching Laboratory

Using lab funds to partially fund improvements to our computing lab. In the process we worked with staff in IT and provost's office to move our existing classes into experimental computer classroom, and we're developing our own computer lab to be a support facility for our (and Physics') main computing course as well as supporting other undergraduate courses.

2. Biochemistry and Molecular Biology - Course Based Undergraduate Research Experience

Initiated the conversion of a required, advanced level laboratory course to a Course Based Undergraduate Research Experience (CURE)

3. Biochemistry and Molecular Biology - Peer Advising

Re-organized academic and peer advising by creating a peer-mentoring program in which all new to BMB undergrads (incoming 1st yr, transfers, change of majors) are assigned a peer mentor.

4. Biology - Teaching laboratory Renovations

Coordinated review of lab spaces and implementation of lab fee-based upgrades to the Morrill Biology teaching labs as well as investment of lab fees in lab equipment and supplies. Significantly improved student training especially with the purchase of molecular biology equipment for Biology 153, the introductory biology lab course.

5. Biology – Lower Division Life Science

Engaged in conversations and design of the Lower Division Life Science Education unit with members of participating life science departments. Worked to engage life science colleagues in assessing the life science curriculum and committing to working collaboratively in improve the experience of life science majors in CNS.

6. Geosciences, Stocbridge, Environmental Conservation - School of Earth & Sustainability

Launched the new School of Earth & Sustainability, unifying academic programs, research and outreach at UMass Amherst that share a common focus on earth, sustainability and environmental sciences. The School provides a number of overarching services to the degree programs, associated academic units, faculty, and research, including: a unified brand and marketing plan, student recruitment, a comprehensive framework for immersive learning

opportunities, and advising support. It also provides an enduring institutional mechanism to improve inter-unit communication, coordination, and collaboration.

7. Geosciences – Geographic Information Systems

Developed a revenue generating Master of Science Degree Concentration in GIST.

8. Mathematics and Statistics - Chapter of the Association for Women in Mathematics

Instituted a new Chapter of the Association for Women in Mathematics, which includes undergraduate and graduate students. Provided funding from our own gift account for students to meet regularly to socialize and study together and to talk about gender issues in mathematics. We also fund students to travel to visit with other AWM chapters in New England.

9. Physics – TBL Laboratory Sections

Integrated the teaching laboratories for Physics 131 into the TBL sections. The labs for Physics 131, formerly taught in the 2nd floor labs of Hasbrouck, are now taught in the TBL sections in the ILC.

10. Psychological and Brain Science – Professional Development

Expanded departmental workshops for our majors to include more workshops on career options, graduate school admissions, etc.

FY18 CNS PLANNED IMPROVEMENTS USING EXISTING RESOURCES

1. Veterinary and Animal Science- Internship Training

Formalize placement in internship opportunities to improve students' ability to solve real-world problems, and gain valuable working experience. We plan to create a "Training Opportunities Handbook" for our undergraduates detailing best practices on how to prepare a resume, interview etiquette, examples of letters of application to job/internships, and a complete list of places where our students can apply for internships, practica, and laboratory and/or clinical rotations.

2. Psychological and Brain Science – Peer Mentoring

Grow the peer-mentoring program dramatically. We hope to use the SSC database to target incoming freshmen from the following groups (first generation, international, underrepresented groups) to participate as mentees in the program for Fall, 2017. Using the SSC Database,

freshmen who are struggling (1st semester GPA < 2.3) academically will be targeted for the spring, 2018 set of mentees. Mentors will apply/interview for positions. We hope to have 3-4 advising faculty serve as instructors for the seminar portion of the practicum.

3. Psychological and Brain Science - Restructuring of the Psychology Major

The Psychology Undergraduate Curriculum Task Force has been meeting regularly since Fall 2015 to create specific recommendations for restructuring the Psychology Major. This process has included reviewing other Psychology Majors in departments of similar size, interviewing instructors, gathering information from current undergraduate students, and considering the undergraduate experience as a whole. We will begin the processes of seeking approval for these fundamental changes to the major.

4. Geosciences – Introductory Geology

Revamping of the entire Introductory Geology Laboratory curriculum into 6 modules (2 weeks each) to make the course more exciting and relevant to new majors and perspective majors. Will be data/evidence driven and more quantitative field/lab/data analysis to real world problems. Using lab fee funds for some of this.

5. Environmental Conservation – Green Building and Energy Systems

Revise and launch our 1-year professional MS degree program in Green Building & Energy Systems.

6. Chemistry – TA Training

Chemistry graduate student TA training workshop. We plan to offer 1-week workshop to better prepare TAs to teach our service teaching labs.

CNS TEACHING STRESS RELIEF INVESTMENTS

1. Evening Laboratory Support (\$95,212 in base funds)

Investments to improve undergraduate student experience and address undergraduate time to graduation by increasing the number of course sections for required lab course in the lower divisions of the life sciences.

1. Undergraduate Teaching laboratory Technicians (\$152,896 in base funds)

Investments to hire three 43-week professional staff members to support lower division life science laboratory courses, Chemistry laboratory courses and Psychological and Brain Science laboratory courses.

2. Full Time Lecturers (\$245,232 in base funds)

Investments to facilitate creation of a common curriculum in first two years of life science and meet increased teaching demands in the life sciences and in Psychological and Brain Science.

3. Visiting Assistant Professors (\$112,398 in base funds)

Investments to meet increasing teaching demand in Mathematics and Statistics.

FY18 CNS STRATEGIC INVESTMENT REQUESTS

1. Advising Cluster (\$550,601 in base funds; \$20,000 in non-base funds for one-time costs)

This proposal is multi-pronged and includes priority investments at both the Department and College levels. At the Department level, the following five high-volume Departments would each receive a new professional advisor: BMB, Biology, Chemistry, Math, and PBS. These new advisors would augment academic and career advising, work with underperforming students, direct the peer advising program, and train new peer advisors. At the College level, the proposal includes the hiring of two additional general advisors as well as further development of Career Services. In this first year post the decentralization of Campus Career Services, it has become clear that CNS must further develop a viable career center for students. This investment request includes the cost of a Director of Career Services as well as another professional career advisor.

2. Research Bridge Revolving Fund (\$300,000 in non-base funds for two years)

The program is designed to bridge gaps in extramural funding. It will function as a bridge between grants and not as seed funds for new areas of investigation. This program will enable research to continue and avoid counterproductive discontinuities in otherwise successful research programs. The PI will return all unexpended bridge funds to CNS and negotiate a schedule for repayment of expended funds, so that the revolving fund can sustain itself.

3. Astronomy Computing (\$45,000 in base funds)

To address a need that is critical to both research and teaching within the Department of Astronomy, CNS has requested \$45,000 in base funds to support the hiring of a professional staff member.

4. Undergraduate Summer Research Support (\$45,000 in base funds)

To enhance the undergraduate student experience through summer research opportunities, CNS has requested \$45,000 in base funds to support stipends for ten students per summer.

5. Enhanced Laboratory Instructional Support (\$500,000 in base funds)

The College now has funding from lab fees for supplies and equipment, but not personnel. Teaching assistants and professional laboratory staff are needed to balance increases in teaching laboratory demand.

6. Research Matching Revolving Fund (\$200,000 in non-base funds for two years)

Non-federal match is increasingly an important component of federal grant applications. This revolving fund would focus on graduate and undergraduate support and would be replenished from RTF.

7. Human Subjects Coordinator (\$80,000 in base funding)

With the growth of translational research at UMA, growth in community-engaged research in Springfield and other communities, and greater research ties with UMMS and Baystate Hospital, CNS recognizes a need for dedicated expertise in coordination and oversight of human subjects recruitment and database maintenance. CNS proposes a professional staff position to coordinate UMA recruitment for (non-student) human subjects from communities, schools, and, when specified, patient populations.

8. UMass Medical Shuttle (\$65,000 in non-base funding for three years)

To advance stronger research collaborations between UMA and UMMS and between UMA and Springfield communities and Baystate Hospital, CNS requests a strategic investment of \$65,000 per year for the next three years. This amount would cover van transportation twice a day to and from UMMS and UMA (three days a week) and twice a day to and from Springfield (two days a week).

9. Research Proposal Development Office (\$90,000 in base funding)

To assist faculty in the identification of research opportunities, CNS has requested \$90,000 in base funding to support one full-time staff position and one part-time staff position.