

Vision, Mission, and Strategic Plan Division of Research and Graduate Studies

I. Vision

Explore, Create, Engage...

Double ECU's research productivity over the next five years.

II. Mission

The Division of Research and Graduate Studies leads research and creative endeavors, education, economic development, and community engagement by promoting scholarship, ethics, and service, in an evolving, dynamic environment.

III. Division of Research and Graduate Studies Strategic Plan

ECU will increase scholarship and creative activity over the next five years by:

1. Enhancing computing, physical and financial resources for research and graduate education
2. Improving administrative infrastructure for research and graduate education
3. Expanding research and education opportunities for faculty and students
4. Encouraging applications of research to benefit society and promote sustainable economic development
5. Stimulating interdisciplinary/collaborative research and community engagement

Ambitious goals for Eastern North Carolina

Research is transforming the world's economy through the generation and application of knowledge. In order to help eastern NC to participate actively in this transformation, ECU will grow its research enterprise to \$80 M by 2012, creating a stimulating environment for research, innovation, and community engagement. This bold and ambitious plan for growth will require significantly more faculty members, graduate students, and undergraduate students engaged in research, creating significant pressure on utilization of research space and financial resources to support research activities.

Creating a Stimulating Environment for Research, Innovation and Entrepreneurship

In today's global knowledge economy, new discoveries drive the development of innovative, new technologies and opportunities for social and economic growth. The knowledge based economy is fueled by high-speed global telecommunications; however, a region cannot fully participate by simply being plugged into the world's telecommunication network. Local competencies and clustering of human capital are required to create a critical mass of highly skilled innovators, entrepreneurs,

investors, and corporations to exploit basic and applied research and development. ECU will stimulate research and knowledge generation in eastern NC by building a critical mass of faculty, staff, and students; by recruiting world-class faculty; by developing nationally and internationally recognized research centers and institutes; by investing financial resources necessary to create physical facilities for research; by maintaining cutting-edge computer and communication networks; by creating a network of angel investors through its entrepreneurial initiative; by licensing and developing its intellectual property for the betterment of humankind; and by engaging community leadership to address regional issues responsibly. We recognize the value of basic and translational research in our efforts.

Outcomes

Our success will be measured by the outcomes of our efforts. Over the next five year period ending in 2012, we expect to double the rate of our scholarship (peer reviewed publications and other measurable forms of creative and scholarly work), double enrollment in PhD programs, double our international population of graduate students, create three new research centers or institutes, develop five spin-off companies and licensed products, and double our research space to accommodate this level of growth. Significant financial resources will be needed to achieve these goals which will come from a combination of internal and external funds.

Areas of research focus

The University will continue its investments in the following established strategic priorities:

- Metabolic disorders, obesity, diabetes, and bioenergetics
- Cardiovascular disease
- Coastal science and policy
- Agromedicine research
- Cancer research

The University has identified the following new strategic opportunities for future investment and development:

- Health disparities and public health
- Sustainable tourism

The University will also retain reserve capacity to invest in emerging research opportunities as they present themselves.

Goal #1 – Enhancing computing, physical, and financial resources for research and graduate education

Compared to our peer institutions, ECU's level of research productivity lags significantly. In order to increase ECU's level of research activity, we will need more space and greater financial resources (both internal and external) to sustain our research enterprise. Universities of comparable size and quality with medical schools have \$80 million to \$120 million in external grants and contracts.

Information technology plays an ever increasing role in research, and in order to continue our development, ECU must stay at the cutting edge of IT services.

Objectives for Goal #1

1. Increase external funding (research, contracts, and endowments) to \$80+ million by 2012 (about 15% increase per year)
 - a. Increase faculty training workshops
 - b. Increase the number and quality of faculty research mentoring activities
 - c. Embrace the concept of differential teaching loads to provide increased released time for research productive faculty
 - d. Establish a faculty research leave program
 - e. Increase unit focus and participation in endowment activities
2. Provide more physical space for ECU's research enterprise
 - a. By 2008, complete the design and up-fitting of empty research space in the Science and Technology Building. $8000 \text{ ft}^2 \times \$280 / \text{ft}^2 = \$2.2 \text{ million}$
 - b. By 2008, complete plans for the renovation of research space in the Brody School of Medicine (labs are 30 years old)
 - c. In 2007-2008, begin advanced planning for the construction of two new research buildings ($45,000 \text{ ft}^2$) with an emphasis on promoting interdisciplinary research
 - d. Develop plans for an adjacent research incubator / research park
3. Provide strategic institutional investments for scholarship and creative activities to leverage external resources
 - a. Earmark internal funding for research and creative activities in the arts and humanities (estimated cost: \$150,000)
 - b. Create university graduate fellowships, including an assistantship, tuition remission and health care coverage to recruit the very best students into our graduate programs. (5 masters' students, \$125,000/yr, and 10 PhD students, \$300,000/yr initially, increasing to a total of \$1.0 million by 2012)
4. Increase financial and physical resources for graduate educational experiences and graduate professional development opportunities
 - a. Create a Graduate Center which will house the Graduate School, provide accommodations for the Graduate Student Council, provide a common area for graduate students to congregate for social and other purposes, and fulfill other graduate student needs
 - b. Provide a Graduate School administrative structure that exploits appropriate technology to track student progress, provides electronic access to appropriately authorized persons, and reminds students of important deadlines
5. Increase financial support for graduate assistantships, in-state and out-of-state tuition remissions

- a. Using a combination of internal and external funds, double the average amount of a graduate assistant stipend by 2012 (estimated cost: \$9M / yr)
- b. Double the number of in-state and out-of-state tuition remissions by 2012 (estimated cost: \$0.4m / yr and \$1.9 M / yr)

Goal #2 – Improving administrative infrastructure for research and graduate education

Limitations in ECU's research infrastructure make it difficult to manage and spend research funds, ensure compliance with state and federal guidelines, hire research personnel, and purchase research equipment and supplies. As our research productivity grows, these services will be improved so faculty, staff and students can more effectively devote their time and effort towards research and scholarly activity.

Objectives for Goal #2

1. Improve the quality of pre-award, post-award, and clinical trial services
 - a. Implement an electronic research administration system during FY 2007-08
 - b. Add a database support person in OSP during FY 2007-08
 - c. Add a grants and contracts specialist for clinical trial negotiations by the end of FY 2006-07
 - d. Add an administrative support position to support the Division of Health Sciences grant and contract specialist by the end of FY 2006-07
 - e. Add an additional grants and contracts specialist for the Division of Health Sciences during FY 2007-08
 - f. Convert the effort reporting period for grants and contracts from monthly to quarterly

2. Build research administration capabilities at the college level
 - a. Recruit at least one grants and contracts officer for each college with significant engagement in externally funded research
 - b. Develop grants and contracts training materials and activities for college and unit level administrators

3. Develop "best-practice" procedures and processes to ensure compliance with applicable guidelines, laws and regulations
 - a. Develop a University Research Compliance program (estimated costs \$200,000 /yr)
 - b. Develop a University code of conduct setting forth legal and ethical principles upon which research should be conducted
 - c. Develop, facilitate and oversee the implementation of timely educational training programs for all engaged in or supporting research (estimated costs: \$10,000/yr)
 - d. Increase the capacity for managing international research activities, including recruitment of faculty, staff, and students, as well as proper handling of research materials and data

- e. Develop a compliance program for Export Compliance Regulations (EAR) and International Traffic in Arms Regulations (ITAR) requirements
4. Improve institutional business practices [supporting the research enterprise and graduate education]

Goal #3 – Expanding research and education opportunities for faculty and students

The prestige of a university is built upon the quality of its graduates, its outstanding scholarship, creative activity and research productivity, as well as the outreach services and economic development that it generates. If East Carolina University is to continue to enhance its prestige, strong and vibrant high-quality research opportunities for its students will be essential. In order to develop a highly-skilled workforce to meet developing regional needs, more students with research training are needed. High quality undergraduate research and graduate programs require dedicated, passionate faculty members and competitive support for graduate students, including assistantships, fellowships, tuition remissions and health benefits.

Objectives for Goal #3

1. Create critical mass of scholars, programs, centers and institutes
 - a. Recruit 12-15 senior scholars per year (estimated cost \$850,000 to \$1,000,000 increase/year salary, \$2 million/yr start-up)
2. Communicate grant and corporate funding opportunities to faculty and staff
3. Optimize teaching loads to enhance research productivity
4. Identify and engage strategic institutional and corporate partners to enhance research and educational opportunities for staff and students
5. Create a university faculty research leave program (estimated cost \$1 million initially for 20 to 25 one-semester faculty leaves)

Goal #4. Encouraging application of research to benefit society and promote sustainable economic development

As outlined in a recent report by the Yardley Group, ECU's future lies in developing concentrated research excellence in areas that have immediate regional impact. While this development should relate to existing economic clusters, actual economic activities are shifting away from an agricultural and manufacturing environment to one that is less defined. To strengthen viable economic clusters, ECU must create a climate of innovation and entrepreneurship that is pervasive within the institution to

serve as a catalyst for change throughout the region. To accomplish this, ECU will allocate necessary financial and human resources in a timely manner.

Objectives for Goal #4

1. Nurture a culture of discovery and innovation that inspires academic, social, civic, artistic and technological entrepreneurship (\$100,000/yr)
 - a. Offer an academic module to college freshmen to demonstrate how entrepreneurial thinking will benefit themselves, their families and their communities
 - b. Offer an interdisciplinary academic minor in entrepreneurship to all ECU students
 - c. Offer an on-line certificate program in entrepreneurship to both students and non-students
2. Create and expand institutional programs that demonstrate the path toward commercialization and entrepreneurship (\$300,000/yr)
 - a. Establish a faculty innovation fund to seed future entrepreneurial activities and develop/implement creative program elements in entrepreneurship education and application
 - b. Establish a business plan competition of interdisciplinary teams consisting of students, faculty and other interested individuals to develop viable business plans and compete for valuable prizes and services to be provided by supporters of innovation and economic development
 - c. Establish a commercialization and entrepreneurship speaker series
3. Engage and develop partnerships, public and private, to advance and fund university research/intellectual capital
 - a. Establish the Innov8r Series, an eight session, monthly program designed to provide entrepreneurs with the skills and resources needed to take initial steps in developing a concept into a commercialization plan (self-funded through sponsorships and registration fees)
 - b. Facilitate continuing activities of the local investor network
4. Develop collaborative relationships with regional communities to identify and address issues, problems, assets, opportunities, and best practices that can result in sustainable social and economic development
 - a. Generate reports for planning, funding, and impact of community and economic programs
 - b. Facilitate programs on strategic planning and leadership development in the region

Goal #5 – Stimulating interdisciplinary/collaborative research and community engagement

Interdisciplinary and multi-institutional research is now the focus of many research universities and granting agencies, and these collaborative endeavors are essential for addressing human interventions with the natural environment and community development. The analysis of very complex problems in the region and world and the development of solutions for solving them are frequently only possible through application of research using modern technology and collaborative contributions from a diverse set of disciplines from the natural, social and economic sciences and the humanities.

Objectives for Goal #5

1. Provide infrastructure, program support, and a recognition reward system for faculty and student engagement with regional communities
 - a. Provide release time and other incentives to 50 faculty for developing multi-institutional and interdisciplinary research grant projects with their collaborators (estimated cost: \$250,000)
2. Identify external strategic funding sources to support community based research engagement.
 - a. Develop workshops (2 per year initially, expanding to 4 per year in 2012) to help faculty identify and apply for community based research and development grants (estimated cost: \$10,000 initially, increasing in later years). Metrics: Measurable increase in service grant submissions and awards
 - b. Develop mentoring activities (2 per year initially, expanding to 3 per year) to help train faculty to successfully compete for and execute externally funded community research and engagement activities (estimated cost: \$10,000 initially, increasing in later years).
3. Identify and publicize best practices to internal and external constituencies.
 - a. Translate the outcomes of community-based research with participation from stakeholders, to disseminate and apply best practice outcomes to develop outreach programs in 15 communities in the region (estimated \$2 million dollars)
 - b. Broaden the scope of ECU's community engagement infrastructure to involve more faculty members in outreach activities
4. Create teams of social and natural scientists to address community socioeconomic and environmental issues
 - a. Establish and support 3 new research centers and/or institutes which address research questions and issues that require the collaboration of researchers from the social and natural sciences and the humanities (estimated cost: \$2 million/yr).