

## **EXPERIMENTAL PROGRAM TO STIMULATE COMPETITIVE RESEARCH (EPSCoR)**

### **Mission**

The EPSCoR Program identifies, develops, and stimulates competitive research programs in Oklahoma in order to improve the quantity and quality of research, creative activities, and scholarship conducted within Oklahoma universities that ultimately will provide a more productive and fulfilling way of life for the citizens of Oklahoma and the nation.

### **Vision**

The EPSCoR Program will allow the state of Oklahoma to be recognized as one of the top federally funded states in the nation.

### **Core Values**

**Excellence** – We seek excellence in all our endeavors, and we are committed to continuous improvement.

**Intellectual Freedom** – We believe in ethical and scholarly questioning in an environment that respects the rights of all to freely pursue knowledge.

**Integrity** – We are committed to the principles of truth, ethics, and honesty and we will be equitable, ethical and professional.

**Service** – We believe that serving others is a noble and worthy endeavor.

**Diversity** – We respect others and value diversity of opinion, freedom of expression, and other ethnic and cultural backgrounds.

**Stewardship of Resources** – We are dedicated to the efficient and effective use of resources. We accept the responsibility of the public trust and are accountable for our actions.

## **Goals, Critical Success Factors, Objectives, and Strategies**

**Goal 1. EPSCoR will assist in building the science and technology infrastructure within Oklahoma.**

### **Critical Success Factors:**

- Submit a new EPSCoR Research Infrastructure Improvement grant along theme areas of interest to Oklahoma universities
- Submit one Materials Research Sciences & Engineering Centers (MRSEC) proposal
- Submit one Nanotechnology Science & Engineering Center (NSEC) proposal

### **Objectives:**

**Objective 1.1:** The program will increase the number of Focus Research Group and Center-based proposals submitted and funded.

#### Strategies:

- The program will promote meetings and workshops to initiate focus research group and center based proposals.
- The program will continue to give seminars along seed funding areas of interest.
- The program will pursue interdisciplinary research projects in theme areas.

**Objective 1.2:** The program will assist in obtaining funds for the construction of a university Interdisciplinary Research Center.

#### Strategies:

- The program will work with university Vice Presidents for Research to promote joint proposals between different programs at OSU as well as with other universities.
- The program will encourage joint efforts through email solicitations, web page request for proposal update and seminars.
- The program will sponsor workshops on interdisciplinary multi-university joint proposals programs.

**Objective 1.3:** The program will increase and promote user facilities.

#### Strategies:

- The program will increase the number of state user facilities obtained through NSF Research Infrastructure Improvement funding.
- The program will promote user facility availability and capabilities through seminars, EPSCoR website, and newsletters.

**Goal 2. Increase the number of federal proposals submitted and federally funded awards won by Oklahoma researchers.**

**Critical Success Factors:**

- Create one more proposal development workshop each year for faculty
- Increased the number of non-EPSCoR grant proposals by 25%

**Objectives:**

**Objective 2.1:** The program will plan additional workshops inviting program officers from federal agencies.

Strategies:

- The program will use EPSCoR funds to invite representatives from NSF, DOE, and NIH to give proposal preparation seminars.
- The program will have faculty involved with successfully funded programs critique proposals of young faculty researchers.

**Objective 2.2:** The program will promote both EPSCoR and non-EPSCoR research opportunities.

Strategies:

- The program will provide seed funding for faculty in research theme areas of Infrastructure Improvement grant proposal.
- The program will promote grant proposal opportunities through email, newsletter, and webpage announcements.

**Goal 3. Develop academic research areas identified as important to the state of Oklahoma's Research and Development Enterprise.**

**Critical Success Factors:**

- Increase the number of EPSCoR Research Infrastructure Improvement theme proposals among faculty corresponding to research areas of interest to OSU and the economic needs of the state
- Determine two new research theme areas of interest to Oklahoma Universities and Companies

**Objectives:**

**Objective 3.1:** The program will work with OSU and other Oklahoma universities in determining the research theme areas for new collaborative research proposals.

Strategies:

- The program will give presentations in order to prepare faculty for the upcoming research theme competition.
- The program will provide new competitions among faculty from Oklahoma Universities in order to define research theme areas.
- The program will assist faculty in developing single and multiple investigator proposals along research them areas.

**Objective 3.2:** The program will assist faculty in developing collaborations with companies within the OTRP as well as with other Oklahoma companies.

Strategies:

- The program will provide commercialization vouchers to faculty researchers at Oklahoma research institutions to obtain services from i2E (“innovation to Enterprise”), a nonprofit corporation that manages the Oklahoma Technology Commercialization Center.

**Goal 4. Promote the participation of graduate, undergraduate and K-12 students through the implementation of Outreach programs.**

**Critical Success Factors:**

- Assist in the increasing the number of science and mathematics programs in colleges with predominantly minority enrollment
- Continue summer programs allowing several K-12 teachers to become involved with research programs along research theme areas
- Create two internships for undergraduate students in Oklahoma Companies

**Objectives:**

**Objective 4.1:** The program will improve mathematics and science skills among students in colleges with predominantly minority enrollment.

Strategies:

- The program will provide funding for the Supplemental Instruction (SI) program, at Langston University to implement new teaching techniques to improve students' grades in STEM courses.
- The program will continue support for the OSU Upward Bound Mathematics and Science Center (UBMSC).
- The program will work with Oklahoma's only tribal college, Comanche Nation College, and Southwestern Oklahoma State University to promote STEM disciplines to Oklahoma's Native American students.

**Objective 4.2:** The program will improve K-12 educational outreach.

Strategies:

- The program will provide opportunities for students in K-12 schools throughout Oklahoma to participate in a science fair utilizing the technology of videoconferencing and Internet2.
- The program will use summer research programs to train teachers in order to enhance their ability to teach K-12 students these theme areas.
- The program will fund and promote Telescience Project for K-12 students and teachers.
- EPSCoR will build on the current partnership with Omniplex in providing field trips for K-12 schools and extend this initiative to include all five museums in the Oklahoma Children's Discovery Network (Omniplex in

Oklahoma City, Museum of the Great Plains in Lawton, Leonardo's Discovery Warehouse in Enid, and Tulsa Air and Space Museum in Tulsa).

- EPSCoR will work with Omniplex to provide OneNet virtual museums to schools in Oklahoma.
- EPSCoR will facilitate and sponsor the development and implementation of an exhibit at the Kirkpatrick Science and Air Space Museum Omniplex.

**Objective 4.3:** The program will provide internships for undergraduate students.

Strategies:

- EPSCoR will work with OCAST to improve and increase the experience of student interns in Oklahoma companies.
- EPSCoR will Work with Business College to promote entrepreneurship courses for students.
- EPSCoR will partner with i2E (“innovation to entrepreneurship”) providing students with information regarding aspects of business development ranging from business plans to venture capital financing in an interactive setting.
- Successful Oklahoma entrepreneurs will be invited to share insights and experiences with students.

**Objective 4.4:** EPSCoR will promote and improve the number of scholarships and fellowships for graduate students.

Strategies:

- EPSCoR will sponsor seminars on federal and state programs providing information on fellowships and scholarships for students during research week.
- EPSCoR will provide scholarships in order to recruit graduate students into EPSCoR research theme areas.

**Objective 4.5:** EPSCoR will promote Undergraduate Research.

Strategies:

- EPSCoR will promote and fund Research Day at the Capitol to highlight undergraduate research in Oklahoma colleges and universities.
- EPSCoR will provide supplemental funds to NSF Research Experience for Undergraduate Programs at Oklahoma Universities.