

**DATE:** July 27, 2006

**SUBJECT:** East Tennessee State University, Ph.D. in Environmental Health Sciences

**ACTION RECOMMENDED:** Approval

**BACKGROUND INFORMATION:** Environmental health is the multidisciplinary science that joins public health and the environmental sciences to address prevention of disease by managing and reducing environmental exposures. As a result, Environmental Health is one of the core competencies required to provide a strong public health workforce. Establishing an accredited college of public health will require a strong environmental and occupational health component. Doctoral trained environmental health scientists that understand the unique and significant needs of rural underserved populations will enhance the environmental quality and public health infrastructure in the rural counties of Tennessee.

In 2004 Tennessee ranked 48<sup>th</sup> in a national assessment of health outcomes (United Health Foundation, 2004). The public health system needs professionals with advanced research training to accurately identify and define health issues, and to develop novel approaches to improve public health in the state. The proposed program is designed to prepare professionals who are capable of identifying, preventing, and managing disease in order to:

- Develop and implement effective strategies and programs for the maintenance of health and the prevention and management of disease and injury
- Design and conduct quality research that contributes to improvements in environmental health
- Collaborate and work with communities for the promotion of health and prevention and control of disease
- Investigate environmental conditions that may affect a community's health status, and provide technical assistance and leadership to address the concerns of communities

**PROPOSED START-UP DATE:** Fall 2006

Commission staff has reviewed program proposals according to the academic standards adopted by the Commission on November 14, 2002. Each standard is referenced below.

**1.1.20A MISSION:** The proposed program is consistent with the mission of the institution to serve the state, region and nation. The Division of Health Care, composed of the Colleges of Medicine, Nursing, and Public and Allied

Health, serves the state, region and nation as a comprehensive academic health services center.

**1.1.20B CURRICULUM:** The course of study leading to the Ph.D. degree in Environmental Health Sciences is specifically designed to prepare professionals in environmental sciences. The core composed of 15 hours is designed to provide an introduction to the field of Environmental Health Science and the needed research and methods skills. A minimum of 72 semester hours beyond the baccalaureate degree is required.

<u>Curriculum Requirements</u>	<u>Credit Hours</u>
Major Core	15
Electives	41
Dissertation	<u>16</u>
Total	72

**1.1.20C ACADEMIC STANDARDS:** Admission to the proposed program has the same general requirements as existing graduate school requirements that include, personal essay, official transcripts, GRE, four letters of recommendation, and the MPH or equivalent preparation in a related field from a regionally-accredited university. Admission will take into consideration the student's prior training and experiences, and the specific background required for demonstration of competence in an area of environmental health science. Students will be admitted on a competitive basis, and those with a demonstrated potential for integrating public health competencies and skills into public health practice will be preferred.

Student Projections	Projected Program Productivity		
	Full-time Enrollment	Part-time	Graduates
Year 1	4	0	0
Year 2	8	0	0
Year 3	12	0	0
Year 4	16	0	0
Year 5	20	0	3

**1.1.20D FACULTY:** There are currently five tenure track faculty members in the Department of Environmental Health, including two new members who joined the department in the fall of 2005. The department also has one clinical instructor. An additional faculty position has been approved for the 2007-08 fiscal year. A post-doctoral fellowship position has been requested to provide additional teaching and research support. The proposed College of Public Health will have three unallocated faculty positions available starting in the 2007-08 fiscal year.

**1.1.20E LIBRARY RESOURCES:** The ETSU Department of Environmental Health has been a leader in Environmental Health education since its inception almost 45 years ago. The available library resources have supported this well established

program. ETSU has a strong library system including the Sherrod Library, the College of Medicine Library, and other libraries to subscribe to electronic databases and journals.

**1.1.20F ADMINISTRATION/ORGANIZATION:** The proposed program will be housed in the College of Public and Allied Health, Department of Environmental Health will be administered by a program coordinator. The program coordinator will be filled by an existing faculty member.

**1.1.20G SUPPORT RESOURCES:** None identified.

**1.1.20H FACILITIES/INSTRUCTIONAL EQUIPMENT:** The instructional space for the proposed program is well-equipped with “smart” classrooms. The existing university, college and departmental resources provide the instructional and scheduling flexibility needed for advanced graduate programming. The research activities required of the faculty and students will be supported by the Environmental Health Sciences Laboratory (EHSL) and associated personnel.

The EHSL occupies an entire floor with approximately 1400 square feet office space and the remaining 4000 square feet are designated for laboratory facilities. The laboratory recently received approximately \$300,000 in new equipment from the College of Public and Allied Health to improve its research capacity and support.

**1.1.20I STUDENT/EMPLOYER DEMANDS:** In 2004, a mail survey of 274 ETSU MPH and MSEH alumni was conducted to determine student interest and demand for a doctoral program in Public and Environmental Health Sciences. Over 58 percent of the 107 respondents indicated that a doctoral degree would make them more competitive for jobs and promotions. Approximately, 76 percent indicated that they would consider applying if the doctoral program was in place when they graduated.

**1.1.20J NO UNNECESSARY DUPLICATION:** There are no doctoral programs in Environmental Health Science in Tennessee. Two Ph.D. programs in the University of Tennessee system have related concentrations, but neither is specifically based on environmental health:

- Ph.D. in Health Sciences Administration (Health Policy concentration), College of Pharmacy, University of Tennessee Health Sciences Center
- Ph.D. in Human Ecology (Community Health concentration), College of Education, Health, and Human Sciences, University of Tennessee Knoxville

In addition, there is a Ph.D. in Environmental Science program at Tennessee Tech University. The mission of that program is to understand the impact of human endeavors on the environment. The focus of the Environmental Health Sciences is to understand the role of environmental quality and stressors on human health.

**1.1.20K COOPERATIVE INSTITUTIONS:** None indicated.

**1.1.20L DESEGREGATION:** The program will not impede the state’s effort to achieve racial diversity.

**1.1.20M ASSESSMENT/EVALUATION AND ACCREDITATION:** The Council on Education on Public Health (CEPH), the accrediting body for MPH Programs and Colleges / Schools of Public Health, does not accredit doctoral programs. The MPH programs in the College of Public and Allied Health are currently accredited by CEPH. The Ph.D. in Environmental Health Sciences Program will contribute to the proposed College of Public Health that will require CEPH accreditation. The college must have three doctoral programs to receive CEPH accreditation. There are no SACS implications.

In addition to THEC benchmarks for productivity, program evaluation will be based on student surveys and performance competencies; teaching/learning strategies; program faculty; programmatic resources/facilities; and overall satisfaction with the program. A survey of employer perceptions of entry-level graduate will be developed and administered. A survey also will be administered to all alumni. The departmental review committee will periodically review the curriculum.

**1.1.20N ARTICULATION:** N/A

**1.1.20O EXTERNAL JUDGMENT** (Graduate Programs): Dr. McLeroy Professor and Associate Dean for Academic Affairs, School of Rural Public Health, Texas A&M University, College Station, Texas were the external consultants identified to review the proposed program. They noted the broad university and community commitment and the academic fit of this program for ETSU. Suggestions pertained to the need to fill vacant faculty positions with senior faculty to advance a research agenda and enhance extramural funding.

**1.1.20P COST/BENEFIT/SOURCE:** Environmental health seeks to reduce the burden of environmentally associated disease. Total state health care costs are rising and can only be reduced by improving the health status of the population to reduce the consumption of health care services. Extramural funding supporting research and teaching is open only to accredited Schools/Colleges of Public Health. These programs are administered by the Center for Disease Control and Prevention (CDC), Agency for Toxic Substance and Disease Regulation (ATSDR), and Health Resources and Services Administrations (HRSA). The new college will have access to these funding sources once pre-accreditation status is awarded in the 2007-08 academic year.

**THEC Financial Estimate Form**

**East Tennessee State University**

**PhD in Environmental Health Sciences**

	Year 1	Year 2	Year 3	Year 4	Year 5
<b>I. Expenditures</b>					
<b>A. One-time Expenditures</b>					
New/Renovated Space	\$ -	\$ -	\$ -	\$ -	\$ -

Equipment	-	-	-	-	-
Library	-	-	-	-	-
Consultants	-	-	-	-	-
Travel	-	-	-	-	-
Other	-	-	-	-	-
Sub-Total One-time	\$ -	\$ -	\$ -	\$ -	\$ -
<b>B. Recurring Expenditures</b>					
<b>Personnel</b>					
<b>Administration</b>					
Salary	\$ 12,400	\$ 12,772	\$ 13,155	\$ 13,550	\$ 13,956
Benefits	1,351	1,392	1,433	1,476	1,521
Sub-Total Administration	13,751	14,164	14,588	15,026	15,477
<b>Faculty</b>					
Salary	\$ 30,000	\$ 95,900	\$ 98,777	\$101,740	\$104,793
Benefits	3,269	22,769	23,452	24,156	24,880
Sub-Total Faculty	\$ 33,269	\$118,669	\$122,229	\$125,896	\$129,673
<b>Support Staff</b>					
Salary	\$ -	\$ -	\$ -	\$ -	\$ -
Benefits	-	-	-	-	-
Sub-Total Support Staff	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Operating</b>					
Travel	\$ 6,000	\$ 6,000	\$ 6,000	\$ 6,000	\$ 6,000
Printing	-	-	-	-	-
Equipment	24,000	24,000	24,000	24,000	24,000
Other	75,744	151,488	227,232	302,976	378,720
Sub-Total Operating	\$105,744	\$181,488	\$257,232	\$332,976	\$408,720
Total Recurring	\$152,764	\$314,321	\$394,050	\$473,898	\$553,870
<b>TOTAL EXPENDITURES</b>	<b>\$152,764</b>	<b>\$314,321</b>	<b>\$394,050</b>	<b>\$473,898</b>	<b>\$553,870</b>
<b>(A+B)</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>
<b>II. Revenue</b>					
Tuition and Fees <sup>1</sup>	19,744	39,488	59,232	78,976	98,720
Institutional Reallocations <sup>2</sup>	133,020	266,133	286,768	307,522	328,400
Federal Grants <sup>3</sup>	-	8,700	48,050	87,400	126,750
<b>TOTAL REVENUES</b>	<b>\$152,764</b>	<b>\$314,321</b>	<b>\$394,050</b>	<b>\$473,898</b>	<b>\$553,870</b>

**Notes:**

- In what year is tuition and fee revenue expected to be generated and explain any differential fees. Tuition and fees include maintenance fees, out-of-state tuition, and any applicable earmarked fees for the program.  
Tuition and fee revenue is expected to begin in 2007-08 which equals Year 1.
- Please identify the source(s) of the institutional reallocations, and grant matching requirements if applicable.

Institutional pooled funds resulting from adjusted budget allocations for personnel, operations, and travel for hundreds of accounts in the annual budget cycle.

3. Please provide the source(s) of the Federal Grant including the granting department and CFDA number.
  - Department of Health and Human Services
  - Centers for Disease Control; 93.061, Innovations in Applied Public Health Research;
  - 93.065, Laboratory Leadership...; 93.161, Health Program for Toxic Substances;
  - 93.262, Occupational Safety...;93.283, Investigations...
  - Health Resources and Services Administration
  - 93.192, Burdick Rural Interdisciplinary Training; 93.223, Rural Health Services
  - Agency for Toxic Substances and Disease Registry; 93.064, Laboratory Training
4. N/A
5. N/A

#### Recurring Expenditures:

Administration: Stipend equivalent to .20 FTE salary and benefits for program director.

Faculty: One Post-doctoral Fellow position, at the initiation of the program, to support teaching and research. An additional faculty line is budgeted for the 2007-2008 academic year (year two of the program). The position will be funded at \$65K.

Equipment/Operating Expense: Increase in department operating costs related to instruction and research.

Travel: Support of professional travel for recently hired faculty and administrative and research travel associated with doctoral program.

Doctoral Student Stipends and Tuition Waivers: Five stipend awards at \$14,000. Additional stipends and tuition waivers not covered by formula funding to be funded with extramural contract/grant awards and Environmental Health Sciences Laboratory revenues.

#### 2. Revenues

##### Grants/Contracts and Environmental Health Sciences Laboratory

Extramural funding supporting research and teaching is open only to accredited Schools/Colleges of Public Health. These programs are administered by the Center for Disease Control and Prevention (CDC), Agency for Toxic Substance and Disease Regulation (ATSDR), and Health Resources and Services Administrations (HRSAA). The new college will have access to these funding sources once pre-accreditation status is awarded in AY 2007/08, which aligns with year two of delivery of the PhD program.

Additionally, funding in the Environmental Health Sciences Laboratory (EHSL) is expected to increase with the increased participation of new faculty and doctoral students. Revenue in the EHSL has historically ranged from \$50,000 to \$250,000 annually.

Efforts will be made to obtain additional extramural funding to support the Environmental Health Sciences doctoral program and graduate student education.

**1.1.30 POST APPROVAL MONITORING:** An annual performance review of the proposed program will be conducted for the first five years following approval. The review will be based on goals established in the approved program proposal. At the end of this period, campus, governing board, and Commission staff will perform a summative evaluation. These goals include, but are not limited to enrollment and graduation, program costs, progress toward accreditation, library acquisitions, student performance and other goals set by the institution and agreed upon by governing board and Commission staff. As a result of this evaluation, if the program is found to be deficient, the Commission may recommend that the governing board terminate the program. Copies of such recommendation will be forwarded to the Education Committees of the General Assembly. The Commission may also choose to extend this period if additional time is needed and requested by the governing board.