SIGNATURE COVER PAGE

Initiating college, department, or committee:

Environmental and Occupational Health, Mel and Enid Zuckerman College of Public Health

Title of this proposal: MS and PhD in Environmental Health Sciences

Unit Administrator: (name and title): Jeff Burgess, MD, MS, MPH, Division Director, Associate Professor

Signature: ___________________________ Date: ___________________________

College Dean: ___________________________ Date: ___________________________
(Signature)
**Request for Authorization to Plan a New Degree Program**  
* (Unique or Duplicative)

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<td><strong>Degree Title and Program Name</strong></td>
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<td>The University of Arizona</td>
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<tr>
<td><strong>Level</strong></td>
<td>GRADUATE PROGRAM X UNDERGRADUATE PROGRAM □</td>
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<tr>
<td><strong>CIP Code</strong></td>
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**What is the purpose of this program?**  
Progress and advances in our nation are accompanied by increased exposure of people to a host of natural biological and chemical agents, synthetic chemicals used in agriculture and industry, radiation, and potential warfare agents. Improvements in science, technology, education and discovery has led to the realization that even low level exposures to these environmental agents may impact human development and quality of life, resulting in increased morbidity and mortality. The proposed MS and PhD program will prepare environmental health professionals to evaluate the *impact* of environmental contaminants and conditions on the health of populations. This new program will provide the opportunity for students to gain the technical expertise needed to: 1) research environmental exposures and diseases we currently face and 2) prepare for and avoid future environmental health consequences, at a level of training and understanding beyond the currently offered MPH degree.
### What is the State's need for this program?

Arizona has an urgent need for the kind of knowledge, intellectuals, and leaders that doctoral-level education can provide. Arizona's problems—and its strengths—are multifaceted and complex and require interdisciplinary research and problem-solving. Our current research projects on environmental exposures and their health consequences provide the context in which we can continue to train the next generation of leaders for Arizona and the nation as a whole. The University of Arizona's Environmental and Occupational Health section is committed to the premise that academic and applied research, theory and practice, are inseparable, and our curriculum and our research reflect both Arizona's unique environmental exposures and their subsequent health consequences.

Since the time MEZCOPH formed, state dollars were made available and the unit-faculty doubled to meet College teaching needs for the graduate program. EOH has recently attracted three female faculty, one of whom is Hispanic, who are highly motivated research scientists and require doctoral level students to conduct their research activities. During recruitment, virtually all candidates queried the lack of a PhD program in Environmental Health Sciences. The benefit of a PhD program in EOH is apparent relative to the State, University, and College accreditation needs and the research needs of the individual EOH faculty.

### What is the projected student demand for this program?

This explanation may include numbers of requests from current students, requests from high schools, requests from potential students not currently enrolled, or other sources.

There are currently five full-time and three part-time students in the EOH program and five full time faculty members. A sixth full-time faculty member is joining the faculty in August, 2007. Addition of the environmental health track within EOH will greatly increase student numbers given the preference of most EOH students for environmental over industrial health training. Applications were received from 16 students for the Fall 2007 semester, a 60% increase over Fall 2006 applicants. Twelve of these 16 were offered admission into the college and, to date, eight have committed to the program.

With the addition of an Environmental Health track within the MPH program and increased recruiting for the industrial hygiene track, we anticipate a total of 8 MS students per year enrolling into the program. We anticipate enrolling 5 new PhD students each year after the second year of implementation.
**How does this program meet the University’s strategic goals?** Explain how the proposed program is consistent with the University Mission and Strategic Direction statements of the university and why the university is the most appropriate location within the Arizona University System for the program.

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<th>How does this program meet the University’s strategic goals? Explain how the proposed program is consistent with the University Mission and Strategic Direction statements of the university and why the university is the most appropriate location within the Arizona University System for the program.</th>
<th>The Environmental Health Sciences MS and PhD program will help strengthen the academic standing of MEZCOPH and the University of Arizona. The program is relative to the Focused Excellence Strategic Priority I “Build a world-class and diverse academic community at the forefront of discovery.” It will allow us to strengthen and support current research collaborations and create new collaborations across departments and programs in an interdisciplinary approach to Environmental Health Science. Existing courses in EOH can serve as a “minor” area for many other PhD programs on campus. In addition, the program addresses Focused Excellence Strategic Priority III “Extend the concept of a land grant university to position The University of Arizona, across all colleges, as a model for linking scholarship and creativity to societal and community needs.” The EOH students and faculty of this program will enhance the university’s role in research and training of leaders in the field of Environmental Health Science. In addition, our programs incorporate public health assessment and management, addressing Focused Excellence Strategic Priority V, “Increase recognition as a research extensive university committed to an outstanding educational experience and connected to its community and the world.”</th>
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**What new resources are anticipated for this program?** Describe new resources needed including courses, faculty, equipment and library resources.

**Background:** Prior to the formation of MEZCOPH (1997), the EOH unit discussed the eventual planning and development of a PhD program in Environmental Health Sciences. Formal advancement of the program was delayed until faculty resources increased.

**Current Status:** The EOH Unit now has 6 full-time faculty committed to the development of a PhD program. As appropriate, some of the coursework is now offered at a 600-level.

Programs in public health are accredited by the Council on Education for Public Health (CEPH). MEZCOPH is one of 38 accredited graduate programs in public health (currently in year 2 of 7 years maximum accreditation). Receipt of this accreditation is an indication of our path toward excellence. During the accreditation, CEPH identified the need for additional, upgraded laboratory space based on a review of the EOH teaching and research laboratories at the Health Related Professions Building (HRP #468) at 1435 North Fremont Avenue.

**New Resources Required:** No additional support is anticipated to initiate this program given that we have recently added an Administrative Assistant in addition to an Administrative Associate for student support. We have recently acquired ample student space in the Health Related Professions building that provides offices, computers, and wireless network access.

The primary need for the PhD program, however, is improved, secure teaching and training space. Ultimately this need must be met to maintain CEPH accreditation for the existing MPH program and poses no additional burden. A staff level position needs to be funded to maintain and maximize the use of teaching equipment and space. Two half-time GTAs with tuition and fee waivers will be needed to help launch a graduate program of excellence. The faculty will apply for research and training grants to help offset these needs.

### DUPLICATIVE PROGRAMS*

#### A. Other Programs Offered in Arizona

List all programs with the same CIP code definition at the same academic level (Bachelors, Masters, Doctoral) currently offered in the Arizona University System.

There are no duplicate PhD programs in environmental health, occupational hygiene, or the like, at any other Arizona public or private university.
**B. Rationale for planning/implementing a duplicative program.**

As appropriate, these considerations should be addressed:

- Proposal is in a basic academic subject;
- There is a long-term student demand that cannot be met satisfactorily by existing program(s);
- Proposal meets the demand of nontraditional, older, or part-time students;
- Proposal utilizes alternative delivery systems;
- Collaborative efforts to minimize duplication;
- Impact on existing programs;
- Resources already available and costs of implementing the program are negligible;

Not applicable.
# Executive Summary

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### Purpose of this Program

Progress and advances in our nation are accompanied by increased exposure of people to a host of natural biological and chemical agents, synthetic chemicals used in agriculture and industry, radiation, and potential warfare agents. Improvements in science, technology, education and discovery has led to the realization that even low level exposures to these environmental agents may impact human development and quality of life, resulting in increased morbidity and mortality. The proposed MS and PhD program will prepare environmental health professionals to evaluate the impact of environmental contaminants and conditions on the health of populations. This new program will provide the opportunity for students to gain the technical expertise needed to: 1) research environmental exposures and diseases we currently face and 2) prepare for and avoid future environmental health consequences, at a level of training and understanding beyond the currently offered MPH degree.

### Projected Student Demand

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### Duplicative Program

Justification

Not applicable

### Job Prospects

Academic institutions, occupational safety and health inspectors; risk managers; enforcement officers; food safety inspector; water quality inspector; regulatory compliance monitoring; National Exposure Research Laboratory; National Health and Environmental Effects Research Laboratory; National Risk Management Research Laboratory (EPA); Center for Disease Control (CDC), Department of Defense, Public and Private Research Laboratories, Industry

### Sources of Funding

NIOSH, NIH, NSF, EPA, USDA, USGS, NCI, NIEHS, ATSDR, DoD, local health and environmental quality departments, private donors (individuals and industry)