

NIOSH Training Program Grant (TPG) Final Report
Occupational Safety & Environmental Health Program (OEH)

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LIST OF ABBREVIATIONS

MU –	Millersville University
OSEH –	Occupational Safety & Environmental Health
ABET –	Accreditation Body for Engineering and Technology
TPG –	Training Program Grant
NIOSH –	National Institute of Occupational Safety & Health
OSHA –	Occupational Safety & Health Administration
URM –	Underrepresented Minorities
ASP –	Associate Safety Professional
HAZWOPER –	Hazardous Waste Operations and Emergency Response

ABSTRACT

Millersville University (MU) offers an undergraduate degree program in Occupational Safety & Environmental Health (OSEH). The OSEH program is one of only three schools in the nation that offers a degree that is accredited by the Accreditation Board for Engineering and Technology (ABET) under the Environmental, Health, and Safety Criteria. Historically, the OSEH program at Millersville University has provided a strong educational experience that prepares graduates for entry-level positions in safety and health or to pursue graduate degrees in specialized areas within Safety and Environmental Health.

Goals: The main goals of the Training Program Grant (TPG) were to (1) provide financial assistance to students in the OSEH program. This being a key factor in attracting outstanding academic candidates, (2) Help in retaining those students through completion of the program, (3) attract and retain qualified minority and female students, (4) permit expansion of the undergraduate program course offerings and Continuing Education Courses and Programs, and (5) supplement student and faculty travel to professional conferences identified by NIOSH as essential to program objectives.

Accomplishments: Over the past 5 years the TPG has been used to provide tuition and fees assistance to 101 students working towards a B.S. degree in OSEH. In each and every case, MU students have found employment in the safety & health profession, clearly fulfilling the intent of the Occupational Safety & Health Act, which created NIOSH. Several of the TPG recipients enrolled in graduate school to continue their education in safety and health over the time of this grant. About 40 % of the recipients of tuition and fee assistance have either been female or underrepresented minority (URM) students.

Over the past 5 years the TPG has been used to supplement student and staff travel to professional development conferences and to also support continuing education of full-time OSEH faculty. Continuing education opportunities are an important part of remaining up to date with current trends in safety and health, maintaining and improving current skills, and continuing to develop the professionalism necessary to properly train future safety and health professionals.

The program was able to increase its visibility by providing financial support to students working towards the B.S. degree in OSEH. Over the past 5 years, the OSEH program has experienced an approximate 40% growth in enrollment. Supporting tuition and fees increased the opportunities for students to elect cooperative education experiences, where they gained practical field experience under the supervision of an experienced EHS professional.

In addition to the undergraduate course offerings, a number of Continuing Education Courses and programs have been offered. Examples for these courses and programs are the OSHA 10-hour General Industry Courses, HAZWOPER Training, an Emergency Management Certificate Program, an Accident Investigation Course and a Confined

Space Entry Training Course among others. Offerings in these areas have had a positive influence on safety and health throughout the region.

In summary, The NIOSH TPG has been very instrumental over the past 5 years in making the OSEH program at MU a clear leader in undergraduate safety and health programs in the country.

SUMMARY OF TRAINING PROGRAM

Program Characteristics

Millersville University (MU) offers an undergraduate degree program in Occupational Safety & Environmental Health (OSEH). The OSEH program is one of only three schools in the nation that offers a degree that is accredited by the Accreditation Board for Engineering and Technology (ABET) under the Environmental, Health, and Safety Criteria. Courses within the OSEH program provide students with broad technical preparation in safety engineering, safety management, industrial hygiene, fire prevention, ergonomics and environmental health. In addition to the undergraduate course offerings, a number of Continuing Education Courses and programs are also offered.

Trainees

Most students covered under this program are pursuing a Bachelor of Science degree in Occupational Safety & Environmental Health program. If a student meets the university admission standards they can be admitted directly into the Occupational Safety & Environmental Health program. Admission to Millersville University is granted without regard to race, color, religion, sex, national origin, ancestry, age, handicap, marital status or lifestyle.

Training Facilities

The laboratory facilities dedicated to the OSEH program include separate areas dedicated to Safety Engineering, Fire Prevention & Control, Industrial Hygiene, and Ergonomics.

Goals and Objectives

The OSEH program is designed for people interested in professions in the safety and health fields. The general education courses are used to develop basic science knowledge, while the major courses focus on the application of science and mathematics in the technical and managerial aspects of safety and health. Objectives of the program include:

- Prepare students to enter the occupational safety and environmental health profession as a generalist with skills necessary to begin a successful career.
- Encourage interest in continued professional development through formal graduate study and through other professional development courses and programs.
- Provide fundamental education necessary for success on the Board of Safety Professionals' Safety Fundamentals Exam (ASP).
- Provide a solid educational foundation on which the graduate can build a career in an OSEH area, as well as develop a multitude of scientific, social, and culturally based pursuits.
- Prepare students to function within multidisciplinary teams.
- Provide information, knowledge, and training that can lead to safer and healthier work environments throughout the region.

PROGRAM HIGHLIGHTS AND ACCOMPLISHMENTS

The five main goals and accomplishments of the training program grant are as follows:

Goal 1: Tuition, Fees and Scholarships

The ability to provide financial assistance to students in the OSEH program has been a key factor in attracting outstanding academic candidates. Scholarships were used to increase opportunities for students to complete industry-based cooperative education and internship experiences (for academic credit).

Goal 2: Student Retention

The goal of financial assistance was not only to attract qualified students, but to also retain those candidates through completion of the program

Accomplishments/Highlights for Goals 1 & 2:

In the past five years the OSEH program has been able to provide financial assistance to 101 students working towards a B.S. degree in OSEH. All the graduates have found employed in the EHS field within the first six months of graduation. In addition to providing tuition and fees assistance, the TPG has provided scholarships to students to complete industry-based co-operative education. The internship requirement is a primary strength of the OSEH program. The industry supervisor must be a degreed safety and health professional or equivalent. The table below summarizes accomplishments of goals 1 and 2 over the past five years.

Academic Training Report						
Since Beginning of Project Period						
Degree Awarded	# Full-Time Trainees Enrolled	# Full-Time NIOSH-Supported Trainees	# Part-Time Trainees Enrolled	# Part-Time NIOSH-Supported Trainees	# Trainees Graduated	Employed in OS&H Field or Enrolled in OS&H Academic Program
Baccalaureate						
2009/2010	82	20	10	0	30	100%
2010/2011	79	11	6	0	22	100%
2011/2012	71	26	12	1	21	100%
2012/2013	80	23	12	0	26	100%
2013/2014	113	21	12	2	26	100%

Overall, the OSEH program has been able to produce outstanding graduates over the past five years. The awards and successes of our graduates is evidence of the quality of the training program. In the past year alone the NIOSH-Supported trainees have accomplished the following:

- NIOSH ERC grants awarded to two of our top students to attend graduate school at Auburn University in 2013.
- 2014 ASSE Foundation/UPS Scholarship winner.
- 2014 ASSE Diversity Committee Scholarship winner.
- 2014 ASSE Foundation Military Service Scholarship Recipient.
- 2014 AIHA Scholarship winner.

A sampling of job titles held by OSEH graduates include the following:

- Health & Safety Specialist
- EHS Associate
- Safety Representative
- Safety Manager
- Safety Engineer
- Industrial Hygienist
- Safety & Health Consultant
- Compliance Safety & Health Officer

Goal 3: Underrepresented Minority (URM) Students

Funding for tuition and fees was to assist in attracting and retaining qualified minority and female candidates.

Accomplishments/Highlights for Goal 3:

Over the past five years, the program has experienced an increase in enrollment of female and underrepresented minority students. Although it is difficult to attribute TPG funding alone as the sole reason for the increase, the funding has been instrumental in retaining those student groups. Scholarships have been provided to some of the female and URM students to complete the co-operative education requirement.

Since Beginning of Project Period			
Degree Awarded	# Full-Time NIOSH-Supported Trainees	# Part-Time NIOSH-Supported Trainees	# Under Represented Minority (URM) NIOSH-Supported Trainees
Baccalaureate			
2009/2010	20	0	3
2010/2011	11	0	1
2011/2012	26	1	3
2012/2013	23	0	1
2013/2014	21	2	2

Goal 4: Continuing Education

Continuing education opportunities are an important part of remaining up to date with current trends in safety and health, maintaining and improving current skills and continuing to develop the professionalism necessary to properly train future safety and health leaders. Millersville University's OSEH program will seek opportunities to provide continuing education courses to safety professionals from the local region.

Goal 5: Student and Faculty Travel

Develop faculty and student professionalism by supporting travel to professional development conferences. NIOSH has identified travel to professional development conferences and seminars as essential to program objectives.

Accomplishments/Highlights for Goals 4 & 5:

Faculty members in the OSEH program recognize the value of attending professional conferences. Over the past five years, at least one faculty member has attended the national ASSE Professional Development Conference (PDC). Over the past five years the NIOSH grant has supplemented travel budgets for approximately 30 students to attend various conferences and participate in professional development activities. In the last two years alone, the grant supplemented travel expenses for two faculty members and ten students to attend the ASSE PDC in Las Vegas, Nevada (July, 2013) and Orlando, Florida (July, 2014). Faculty and Students have been able to attend professional seminars at these events and interact with other professionals in the EHS field. Faculty participation at the ASSE PDC Academic Forum has also been very active. The Academic Forum session has been very instrumental in professional development of the teaching faculty. Last year we funded two students to take part in the "NIOSH A day Conference" in Pittsburgh and West Virginia.

A number of Continuing Education Courses and programs have been offered. Examples of these courses and programs are the OSHA 10-hour General Industry Courses, HAZWOPER Training, an Emergency Management Certificate Program, an Accident Investigation Course and a Confined Space Entry Training Course among others. In 2010, one of the faculty members offered a Dust Explosion Seminar for EHS professionals from the local region. Offerings in these areas have had a positive influence on safety and health throughout the region

OTHER ACCOMPLISHMENTS & HIGHLIGHTS

ABET Accreditation

The OSEH program has hosted 2 ABET site evaluation teams as part of the accreditation renewal process. In August 2009, ABET accredited the OSEH program until September 30, 2015. During their evaluation of the program, the team found no deficiencies with the program.

ABET accreditation allows the OSEH program to participate in the Graduate Safety Practitioner (GSP) designation program offered by the Board of Certified Safety Professionals (BCSP) to ABET-accredited safety programs. All graduates of the OSEH program received the GSP designation. This designation is equivalent to the Associate Safety Professional (ASP) that is received upon successfully passing the Safety Fundamental Exam (ASP) portion of the BCSP certification process.

Although it is hard to attribute reaccreditation solely to the NIOSH TPG, the TPG has increased the visibility of the program by providing financial support to students working toward a B.S. degree in OSEH. During their evaluation of the program, the ABET evaluators had the following to say on the strength on the program:

“ The program has demonstrated capabilities in producing graduates who meet unique demands of the local and regional economy. The success of the program is evident from the fact that the enrollment has substantially increased during the past few years.”

Undergraduate Student Research.

Last year, one of our NIOSH grantees conducted research, and the results were presented at the ASSE National Conference in Orlando, Florida and also at the **12th Annual Regional National Occupational Research Agenda (NORA) Young/New Investigators Symposium**, held at the University of Utah in Salt Lake City. This was the student's first research presentation at a conference. The student's travel to the ASSE conference was partially funded by the NIOSH grant.

RELEVANCE/IMPACT

In the past 5 years the NIOSH Training Program Grant has funded over 100 students with tuition support and travel to national Occupational Safety and Health Conferences. In each and every case, MU students have found employment in the safety and health profession, clearly fulfilling the intent of the Occupational Safety & Health Act, which created NIOSH.

As part of the NIOSH TPG scholarship support, MU has in the last 3 years funded students to intern at the Lebanon VA Medical Centre. All three found employment in the safety and health field upon completion of their internship and coursework. This collaboration is in line with NIOSH's mission and objective.

Additionally, the American Society of Safety Engineers and the American Industrial Hygiene Association have recognized MU and its students for their exceptional achievements in the field of OSEH. This has been a testament to the quality of safety and health professionals MU is sending to the OSEH field. Overall, this grant has been helpful in preparing students for entry into the safety and health profession.

SUMMARY

The Occupational Safety & Environmental Health Program at Millersville University is a high quality, ABET accredited undergraduate program with solid reputation and a very bright future. Current students, program graduates, industry associates, and other safety professionals all recognize the value of an education from the OSEH program. The emphasis on laboratory activities for reinforcement of theoretical principles has made the OSEH program unique among its peers. The NIOSH TPG program has been very instrumental over the last 5 years in making the OSEH program at MU a clear leader in undergraduate safety and health programs in the country.