

Occupational Safety, Health, and Environment (OSH&E) Program Department of Computer Science and Industrial Technology Southeastern Louisiana University SLU 10847 Hammond, LA 70402

November 15, 2011

Dear OSH&E Advisory Committee Member,

On behalf of Southeastern Occupational Safety, Health, and Environment (OSH&E) Program, we would like to give our sincere appreciation for your involvement in the OSH&E Advisory Committee as well as your participation in the meetings and discussion.

Enclosed please find the report of the OSH&E Advisory Committee meeting that was held on October 28, 2011. Please feel free to let us know should you have your questions and comments!

It is great honor and pleasure to invite you to our next semi-annual meeting, which is tentatively scheduled from 9:30 AM to 12:00 PM on **April 27, 2012** at the **Hammond** campus. A formal invitation will be sent to you when the meeting date and venue are confirmed.

Thank you very much for your consistent contribution to the program!

Sincerely,

Mr. Lawrence Mauerman

Coordinator, OSH&E

Ms. Dorinda Folse

OSH&E AC Chairperson

Dr. Lu Yuan

Assistant Professor

Mr. Lance Roux

OSH&E AC Co-Chairperson

OSH&E Advisory Committee October 28, 2011 Meeting Report by Dr. Lu Yuan

The last Occupational Safety, Health, and Environment (OSH&E) Advisory Committee meeting was held from 9:30 AM to 1:00 PM on October 28, 2011 at Southeastern University Center in Hammond. (Please see the attached example photos!) This meeting was part of the CSIT Department Advisory Committee Annual Meeting. The attendees include thirteen of the twenty-three OSH&E Advisory Committee members (**Appendix A** with update-to-date contact information). Mr. Lawrence Mauerman, Drs. Lu Yuan and Ephraim Massawe, the three full-time faculty members of the OSH&E program, were co-hosts of the meeting. Two OSH&E students, Eric Miller and Joshua Sarran, were present. Absent were Steve Pereira, Richard Matherne, Don Jones, Wayne LaCombe, James Kerr, Beth Inbau, Rick Saizan, Michael Gautreaux, Owens O'Quinn, and Paul Higdon.

Appendix B lists the agenda of the overall meeting. Mr. Calvin Fabre, the Department Advisory Committee Chairperson, called the meeting to order. He welcomed the advisory committee members to the annual meeting. He was also impressed by the quality students that the Department, especially the Computer Science program, has provided through the internship projects that he supervised. Dr. Dan McCarthy, Dean of College of Science and Technology, then spoke a few words to the members. He thanked the advisory committee members for taking time to come to the meeting. Instead of sharing all good news, he briefed with the committee members that Mr. Lawrence Mauerman, the founder and coordinator of the OSH&E program, has decided to retire after the end of this academic year in May 2012. He asked the audience to give a round of applause to Mr. Mauerman for what he had done, and encouraged him to stay on the advisory committee after retirement.

Then, Dr. Roy Bonnette, the Interim Department Head, was invited to talk to the members. He welcomed all members to this annual meeting and asked the coordinators of the four programs, CS, OSH&E, ET, and IT, to brief members with the accomplishments that each program has achieved over the last year. In particular, Dr. Yuan thanked the advisory committee members for the invaluable support and help that they have provided for the OSH&E's accreditation through ABET. It is such a collective effort among the advisory committee, University administration, faculty members, students, alumni, as well as employers, which made us achieve a successful ABET accreditation.

At that time the committee broke out into groups by degrees.

The agenda for the OSH&E Advisory Committee meeting is attached in **Appendix C**. Mr. Lawrence Mauerman greeted committee members and self introductions were followed.

OLD BUSINESS

Mr. Mauerman first discussed the final ABET statement (**Appendix D**) of OSH&E accreditation. He is extremely excited that our program received the full six-year accreditation, as it is normally difficult for any program to achieve that for the first time it applies for accreditation. While we celebrate this accomplishment, we are also aware of the continuous improvement that we need to make. The following three concerns are still in place:

- 1. Completion of the "three-year assessment plan" for continuous improvement by the end of academic year 2011-2012.
- 2. Some of the OSH&E faculty members need to hold professional certifications.
- 3. There are limited equipment and instruments that apply to assessment of "safety" hazards, e.g., instruments for assessing electrical safety, slips and falls or fire hazards.

*-According to ABET, a concern indicates that a program currently satisfies a criterion, policy, or procedure; however, the potential exists for the situation to change such that the criterion, policy, or procedure may not be satisfied.

Some members requested that the program provide a list of current equipment as well as a shopping list. Dr. Yuan stated that the list of current equipment has been posted online and would be included in the advisory committee questionnaire (which he would talk about under new business). He was also planning to make a list of additional "safety" equipment and instruments that the program needs to have based on research of other similar academic programs.

As part of the celebration on the ABET accreditation, Mr. Mauerman and Dr. Yuan then shared some other achievements (**Appendix E**) that the OSH&E program has accomplished:

- 1. We have received a "James A. Oppold" grant in the amount of \$3,500 from the ASSE Foundation. This grant was given to Southeastern for the ABET accreditation of the 4-year Bachelor of Science Degree in Occupational Safety, Health and the Environment.
- 2. The database page from ABET indicates that the OSH&E program has become only the third environmental, health, and safety, and similarly named program accredited by ABET.
- 3. Because of our accreditation through ABET, the OSH&E program has also become a Qualified Academic Program (QAP) under BCSP (Board of Certified Safety Professionals). Our students will be granted Graduate Safety Practitioners (GSPs) when they graduate. According to BCSP, benefits of becoming a GSP include:
 - Recognition for being in a path toward the CSP certification
 - Recognition for the level of preparation for professional safety practice
 - A waiver of the application fee
 - A waiver of the Safety Fundamentals examination
 - A certificate awarding the GSP designation
- 4. Our webpage on the ASSE College and University Directory has also been updated to reflect our ABET accreditation.

Next, Dr. Yuan presented an update of the University Unit Academic Assessment Plan (**Appendix F**). With the lessons and experiences from the ABET accreditation as well as the help from University Academic Assessment Subcommittee, the OSH&E program has fulfilled the University requirements successfully. As required by the University to follow the Grad Act of the State, we have made one extra revision on the second measurable outcome of Unit Goal #4 to evaluate "students' continuation of professional growth and improvement by pursuing the widely recognized certifications including, but not limited to: Certified Safety Professional (CSP) and

Certified Industrial Hygienist (CIH); and/or by pursuing master's/doctoral degrees in environmental, health, and safety and similarly named programs."

The next item under old business is OSH&E curriculum update. Dr. Massawe presented the 2011-2012 OSH&E curriculum and course descriptions (**Appendix G**) which are included in the 2011-2012 University General Catalogue. The new OSH&E curriculum contains the following changes:

- 1. Change the title of OSHE 111 from *Introduction to Occupational Safety and Health* to *Introduction to Occupational Safety, Health, and Environment*
- 2. Add a new required course OSHE 452 *Pollution Fundamentals and Control Technologies*
- 3. Add a new professional elective OSHE 491 Special Topics
- 4. OSHE 120-hour mandate
 - 1) Reduce Southeastern 101 to 2 hours
 - 2) Eliminate IT 242 from third year, second semester
 - 3) Move ECON 201 from third year, first semester to third year, second semester
 - 4) Eliminate OSHE 471 from fourth year, first semester and add it as a professional elective instead
 - 5) Add OSHE 452 to fourth year, first semester
 - 6) Change the credit hours of Professional Elective in fourth year, first semester from 3 to 2-4, and add a footnote "Students not required to take Southeastern 101 are required to take 4 credit hours of professional electives."

The last item under old business is OSHA SCEP (Student Career Experience Program). Ms. Dorinda Folse, the OSHA Baton Rouge Area Office Director and OSH&E Advisory Committee Chairperson, told the committee members that OSHA has been working with the OSH&E program to hire two co-op students to participate in the SCEP. This is similarly to the internship program and it is preferred that the students have more interest and/or experience in the industrial hygiene field. We are extremely grateful about the SCEP opportunity for the students and hope this initiates more collaboration with OSHA in the future.

NEW BUSINESS

Mr. Mauerman expressed appreciation of Dorinda's service as the OSH&E Advisory Committee Chairperson for the past three years. As Dorinda was concerned about her time and availability for more dedicated service, she proposed to elect someone else for this position. It was discussed among the members that a co-chairperson could be elected to help lead the group. Mr. Glenn Young recommended Mr. Lance Roux. The members all agreed and we congratulate Lance to become the OSH&E Advisory Committee Co-Chairperson!

As the members have learned from Dr. Dan McCarthy, Dean of College of Science and Technology, that Mr. Mauerman would retire next May, Dr. Yuan explained the justification of hiring a new full-time instructor (**Appendix H**) to fill in Lawrence's position. He asked the audience to give another round of applause to Lawrence, and encouraged them to think about any good candidate that they may know of. Glenn suggested that we contact ASSE for a national search.

The last item under new business is advisory committee questionnaire (**Appendix I**). It has been three years after the last round of questionnaire, and we would like to hear what the members would say about the current status of the program aspects. The questionnaire was developed to cover all the important issues that are identified in the ABET self-study questionnaire for the accreditation. These items include: students, program educational objectives, student outcomes, continuous improvement, curriculum, faculty, facilities, and institutional support. In order to make the questionnaire more accessible, we have utilized SurveyMonkey.com to develop an online version. Dr. Yuan told the audience that an email contains the details about the questionnaire would be sent out to all advisory committee members the following Monday October 31, 2011. He asked the members to kindly complete it in about three weeks.

The meeting adjourned at 12 PM and a group picture was taken before the committee members headed to the Luncheon room.





Appendix A **OSH&E Advisory Committee**

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Appendix B Department of Computer Science and Industrial Technology Advisory Committee Meeting

Friday, October 28, 2011 Southeastern's University Center

Agenda

9:30-10:00 a.m	Registration with Coffee, J	Room 139				
	CSIT Faculty Welcomes Committee Members					
10:00	General Assembly: Call to	Order	Room 139			
	Calvin Fabre, Advisory Com	mittee Chairperson				
10:00-10:05	Welcome & Comments from	m the Dean				
	Dr. Dan McCarthy, Dean, Co	ollege of Science & Te	chnology			
10:05-10:15 a.m.	Advisory Committee Addre	ess				
	Calvin Fabre, Advisory Com	mittee Chairperson				
10:15-10:25 a.m.	Departmental Progress Report					
	Dr. Roy Bonnette, Department Head					
10:30-12:00	Break-out by Degree Computer Science Engineering Technology OSH&E Industrial Technology	Dr. Ghassan Alkadi Dr. Raj Pandian Dr. Lu Yuan Dr. Roy Bonnette	Room 127 Room 122 Room 139 Room 104			
12:00-1:00 p.m.	Luncheon	Room 125				

Appendix C OSH&E Advisory Committee

Semi-Annual Meeting Agenda October 28, 2011

<u>Time</u>	<u>Issues</u>	Actions
10:35 - 10:45 am	Welcome & Introduction (By Mr. Lawrence Mauerman)	
10:45 - 11:15 am	Old Business	
	Celebration of ABET Accreditation (By Mr. Lawrence Mauerman)	
	2. University Unit Academic Assessment (By Dr. Lu Yuan)	
	3. OSHE Curriculum Update (By Dr. Ephraim Massawe)	
	4. OSHA SCEP Program (By Ms. Dorinda Folse)	
11:15 - 12:00 pm	New Business	
	 Election/Re-election of AC Chairperson (By Mr. Lawrence Mauerman) 	
	2. Hiring of a New Full-Time Instructor (By Dr. Lu Yuan)	
	3. Advisory Committee Questionnaire (By Dr. Lu Yuan)	
	4. Others	
12:00 pm	Luncheon	

Appendix D

Southeastern Louisiana University

8/2/2011

ABET, Inc.

Applied Science Accreditation Commission

Summary of Accreditation Actions

for the

2010-2011 Accreditation Cycle

Southeastern Louisiana University Hammond,LA

Occupational Safety, Health, and Environment (B.S.)

Accredit to September 30, 2017. A request to ABET by January 31, 2016 will be required to initiate a reaccreditation evaluation visit. In preparation for the visit, a Self-Study Report must be submitted to ABET by July 01, 2016. The reaccreditation evaluation will be a comprehensive general review.

This is a newly accredited program. Please note that this accreditation action extends retroactively from October 01, 2009.



ABET. Inc.
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www.abet.org accreditation@abet.org Applied Science Accreditation Commission Computing Accreditation Commission Engineering Accreditation Commission Technology Accreditation Commission

August 02,2011

Dan McCarthy
Dean, College of Science & Technology
Southeastern Louisiana University Meade
Hall 113
500 Western Avenue
Hammond, LA 70402

Dear Dr. McCarthy:

Applied Science Accreditation Commission (ASAC) of ABET recently held its 2011 Summer Meeting to act on the program evaluations conducted during 2010-2011. Each evaluation was summarized in a report to the Commission and was considered by the full Commission before a vote was taken on the accreditation action. The results of the evaluation for Southeastern Louisiana University are included in the enclosed Summary of Accreditation Actions. The Final Statement to your institution that discusses the findings on which each action was based is also enclosed.

The policy of ABET is to grant accreditation for a limited number of years, not to exceed six, in all cases. The period of accreditation is not an indication of program quality. Any restriction of the period of accreditation is based upon conditions indicating that compliance with the applicable accreditation criteria must be strengthened. Continuation of accreditation beyond the time specified requires a reevaluation of the program at the request of the institution as noted in the accreditation action. ABET policy prohibits public disclosure of the period for which a program is accredited. For further guidance concerning the public release of accreditation information, please refer to Section II.L. of the 2010- 2011 Accreditation Policy and Procedure Manual (available at www.abet.org).

A list of accredited programs is published annually by ABET. Information about ABET accredited programs at your institution will be listed in the forthcoming ABET Accreditation Yearbook and on the ABET web site (www.abet.org).

It is the obligation of the officer responsible for ABET accredited programs at your institution to notify ABET of any significant changes in program title, personnel, curriculum, or other factors which could affect the accreditation status of a program during the period of accreditation.

Please note that appeals are allowed only in the case of Not to Accredit actions. Also, such appeals may be based only on the conditions stated in Section II.G. of the 2010-2011 Accreditation Policy and Procedure Manual (available at www.abet.org).

Sincerely,

John J. Segna, Chair

Applied Science Accreditation Commission

Enclosure: Summary of Accreditation Action

Final Statement

cc: John Crain, President

Lu Yuan, Assistant Professor of OSH&E

Robert D. Soule, Visit Team Chair

ABET, Inc. APPLIED SCIENCE ACCREDITATION COMMISSION

SOUTHEASTERN LOUISIANA UNIVERSITY Hammond, LA

FINAL STATEMENT

Evaluation under the Applied Science Criteria and Accreditation Policy and Procedures Manual 2010-2011

Visit Dates: October 17-19, 2010

Introduction

The Applied Science Accreditation Commission (ASAC) of ABET, Inc. (ABET) has evaluated the baccalaureate-level Occupational Safety, Health and Environment program at Southeastern Louisiana University (SELU). The statement that follows consists of two parts: the first deals with the overall institution and its applied science operation, and the second deals with the individual applied science program. This final statement reflects any information provided by the Southeastern Louisiana University in its due process response.

ABET's accreditation action will be based upon the findings summarized in this statement. That action will be dependent upon the program's range of compliance or non-compliance with the ASAC/ABET criteria, including both general criteria and any applicable program criteria, and with the provisions of the ABET Policy and Procedure Manual. This range can be construed from the following definitions:

- Deficiency: A deficiency indicates that a criterion, policy or procedure is not satisfied. Therefore, the program is not in compliance with the cited criterion, policy or procedure, and immediate action is required.
- Weakness: A weakness indicates that the program lacks the strength of compliance with a criterion, policy or procedure to ensure that the quality of the program will not be

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compromised. Therefore, remedial action is required to strengthen compliance with the cited criterion, policy or procedure prior to the next evaluation.

- Concern: A concern indicates that, while a criterion, policy or procedure is currently satisfied, the potential exists for this situation to change in the near future, such that the cited criterion, policy or procedure may no longer be satisfied.
- Observation: An observation is a comment or suggestion that does not relate directly to the accreditation action but is offered to assist the institution in its continuing efforts to improve its programs.

Southeastern Louisiana University is a state-funded public university whose main campus IS located in Hammond, Louisiana. Founded in 1925, the institution received university status in 1970 and today offers academic programs in five colleges as well as several other academic units. The university currently enrolls more than 15,000 students.

The program leading to a bachelor of SCIence degree in Occupational Safety, Health and Environment was the focus of this ABET site visit. This program is housed within the Department of Computer Science and Industrial Technology, which is located within the College of Science and Technology. A full-time faculty member serves as Coordinator for the Occupational Safety, Health and Environment program and reports to the Department Head. The Department Head is responsible to the Dean of the College who reports directly to the University Provost.

PROGRAM EVALUATION

Occupational Safety, Health and Environment Program

Evaluation under the ASAC Program Criteria for Environmental, Health, and Safety and Similarly Named Applied Science Programs

Introduction

The Occupational Safety, Health and Environment program at Southeastern Louisiana University is designed to provide an academically comprehensive curriculum that prepares graduates with the ability and competency to become highly qualified safety, industrial hygiene and environmental professionals. The degree is a Bachelor of Science in Occupational Safety, Health and Environment.

Current objectives for the program were established by the faculty with input from all stakeholders, e.g., students, administrators, employers, and, most notably, an Industrial Advisory Committee that has been a profound guiding force from the inception of the program. The program currently has approximately 40 students and graduates approximately eight to ten students each year. The program has three full-time permanent faculty members and one adjunct faculty member, along with several administrative and technical support personnel.

Program Strengths

- 1. The mix of full-time and adjunct faculty provides students with exposure to, and experience with, faculty with outstanding academic qualification and practical, real-world experience.
- 2. The availabilities of internships and/or research projects in the region provide the students opportunities to apply acquired knowledge and skills in real-world, non-academic settings.
- 3. Utilization of a broad spectrum of professionals from different sectors in the region, including manufacturing, healthcare, environmental, enforcement and government, has resulted in an Industrial Advisory Committee that systematically provides the program with

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meaningful guidance. They are very active and involved in the development and improvement of the program, curriculum, course content and prerequisites.

Program Deficiencies

No deficiencies were cited for this program.

Program Weaknesses

1. <u>Criterion 5. Curriculum:</u> "Cuniculum requirements specify subject areas appropriate to applied science programs but do not prescribe specific courses. The program's faculty must assure that the curriculum devotes adequate attention and time to each component, consistent with the objectives of the program and institution.

The curriculum must include:

- (a) A combination of college-level mathematics and basic sciences (some with experimental experience) appropriate to the discipline.
- (b) Applied science topics appropriate to the program.
- (c) A general education component that complements the technical content of the curriculum and is consistent with the program and institution objectives.

Students in baccalaureate degree programs must also be prepared for applied science practice through a curriculum culminating in comprehensive projects or experiences based on the cumulative knowledge and skills acquired in earlier course work."

Southeastern Louisiana University's OSHE program outcome 2B4, as identified in the self study, is specifically mapped to ABET (1) and (m) content areas, and outcomes 2B1 and 2B3 are mapped to ABET content area (0). The courses identified in the 2010 self-study that address these outcomes contain limited content on environmental (air and water) pollution fundamentals, control technologies, sampling and measurement methodologies. While the coverage meets the criteria, additional material will be needed to fully cover ABET specific curricular content areas to assure strength of compliance with the criteria.

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SOUTHEASTERI~ LOUISIANA UNIVERSITY

- <u>7-day Response:</u> None received.
- Due Process Response: This issue has been addressed by two related actions. First, some existing courses have been modified: OSHE 111 has been renamed "Introduction to Occupational Safety, Health and Environment". Revisions have been made to OSHE 251, "Environmental Law and Regulations" to include units pertaining to pollution control technologies for air, water and soil, along with associated change in the course Similarly, topics on "environmental sampling" and "resources" have been added to OSHE 341, "Field Methods of Industrial Hygiene and Toxicology". and more profoundly, a new course has been created: OSHE 452, "Pollution Fundamentals and Control Technologies". This new course has been inserted in the proposed new curriculum sequence, apparently with removal of an Industrial Technology course on "materials and processes" and OSHE 471, "Education and Training Methods for Occupational Safety and Health". These changes have been approved by department and College of Science & Technology Curriculum Committees. The institution has provided documentation of final approval of these curriculum changes and the posting in their online catalog.
- Status after Due Process: The weakness has been resolved.
- Criterion 9, Program Criteria: "Each program must satisfy applicable Program Criteria".
 Program Criteria provide the specificity needed for interpretation of the General Criteria as applicable to a given discipline.

ASAC program-specific criteria for baccalaureate programs for Environmental, Health and Safety and similarly named applied science programs "should be interpreted with respect to the following curricular areas:

- (1) Air pollution fundamentals and control technologies
- (m) Water pollution fundamentals and control technologies
- (0) Environmental sampling and measurement methodologies

UNIVERSITY

The OSHE program outcome 2B4, as identified in the self study, is specifically mapped to ABET (1) and (m) content areas, and outcomes 2B 1 and 2B3 are mapped to ABET content area (0). The courses identified in the 2010 self-study that address these outcomes contain limited content on environmental (air and water) pollution fundamentals. technologies, sampling and measurement methodologies. While the coverage meets the criteria, additional material will be needed to fully cover ABET specific curricular content areas to assure strength of compliance with the criteria.

- 7-day Response: None received.
- <u>Due Process Response:</u> The changes outlined in response to the preceding issues have, in general, addressed those associated with this item as well. In addition, the institution has modified their program outcomes by make explicit inclusion of environmental aspects of the program coverage. The institution has provided documentation of final approval of these changes and publication of them in their online catalog.
- Status after Due Process: This weakness has been resolved.

Program Concerns

1. <u>Criterion 4, Continuous Improvement:</u> Criterion 4, Continuous Improvement, requires that the program "uses a documented process incorporating relevant data to regularly assess its program educational objectives and program outcomes, and to evaluate the extent to which they are being met. The results of the evaluations are used to effect continuous improvement of the program through a documented plan."

The overall continuous improvement process, presented in the self-study report and elaborated upon during meetings with program faculty, is very well defined and completely addresses the elements of the "three-year plan" used as the basis for the process. At the time of the site visit, full assessment of outcomes had been completed for approximately twothirds of the program outcomes, with the remainder to be completed by the end of academic year 2011-2012. Full compliance with the three-year plan requires completion of the assessment plan in progress at the time of the site visit.

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- <u>7-day Response:</u> None received.
- <u>Due Process Response:</u> The institution indicated that assessment of program outcomes is continuing, with the first full cycle of their "three-year plan" expected to be completed during the Spring, 2011.
- .Status <u>after Due Process:</u> This concern remains until documentation of the complete cycle of continuous improvement is provided.
- 2. <u>Criterion 6.F'aculty:</u> "The majority of core Environmental, Health, and Safety and other supporting faculty must hold an earned doctorate. ("Core faculty" pertains to those who are teaching Environmental, Health, and Safety courses and does not include faculty members teaching courses such as epidemiology, statistics, etc.). The majority of core faculty should hold certifications issued by nationally accredited credentialing bodies such as Certified Industrial Hygienist or Certified Safety Professional. Faculty must also demonstrate external professional activity, including, but not limited to, participation on national, regional, state, and/or local committees and advisory boards, professional practice, and/or editorial reviews of professional publications. A full-time faculty member must be identified as administratively in charge of the program."

The SELU program has four faculty members (two members are tenure-track, one is a full-time instructor and the other is adjunct instructor). The two tenure-track faculty members have doctorates and the other two faculty members are Certified Safety Professionals (CSPs), but it does not appear from the Self Study Report that there are plans for further professional certifications to be attained. There is concern that, without commitment to a professional development plan for program faculty that addresses achievement of terminal degrees and/or relevant certifications, the necessary credentialing of faculty could be lost.

- <u>7-day Response:</u> None received.
- <u>Due Process Response:</u> The response included a summary of the plans of two tenuretrack faculty members to pursue relevant certifications, i.e., CSP, both during 2011.
- <u>Status after Due Process:</u> This concern remains until documentation of satisfactory completion of the certification exams is provided.
- 3. <u>Criterion 7. Facilities:</u> "Classrooms, laboratories, and associated equipment must be adequate to accomplish the program objectives and provide an atmosphere conducive to learning Programs must provide opportunities for students to learn the use of modem applicable instruments and equipment."

While there exist lab equipment related to industrial hygiene, and a very few ergonomics tools, there seemed to be no safety-related equipment. Furthermore, the short list that was verbally provided during the visit seemed to be equipment owned by one faculty member, as opposed to being available to the school. Although this faculty member has stated that the equipment would remain available, there is concern regarding this arrangement.

- <u>7-day Response:</u> None received.
- <u>Due Process Response:</u> The response included a list of instrumentation and associated equipment that had been ordered. All of the items on that list would be considered industrial hygiene and/or ergonomics-related; nothing on the list would seem to apply to assessment of "safety" hazards, e.g., instruments for assessing electrical safety, slips and falls or fire hazards, the primary focus of the concern as presented in the draft statement.
- Status after Due Process: This concern remains until evidence of securing access to relevant safety-related instrumentation and/or equipment is provided.

Program Observation

1. Review of course materials indicated that students are required to communicate findings, both orally and in writing, in many major courses. However, review of program materials

FINAL STATEMENT

SOUTHEASTERN LOUISIANA UNIVERSITY

and discussion with various constituencies, most notably the several alumni of the program who were interviewed, suggested that students should receive a more substantial preparation writing communication skills, particularly technical skills. Increasingly, the safety/health/environment professional is required to communicate effectively with various constituencies and, to some extent, the preparation of the OSE professional communication skills is as important as the technical skills that make up the program.

• <u>Due Process Response:</u> The response acknowledges the need for improvement of the communication skills beyond that provided in the technical writing and public speaking courses. OSHE students are now required to produce written reports and oral presentations in both individual and group formats, a practice that department faculty strongly encourage for all assignments where appropriate.

Appendix E



Lu Yuan <lu.yuan@selu.edu>

Fwd: Oppold Grant Approved

1 message

Lawrence Mauerman < Imauerman@selu.edu>

Wed, Jul 27, 2011 at 9:06 AM

To: Lu Yuan <Lu.Yuan@selu.edu>, Ephraim Massawe <Ephraim.Massawe@selu.edu>

Lu, Ephraim

Good news!

Laurie

----- Forwarded message ------

From: Mary Goranson < mgoranson@asse.org >

Date: Tue, Jul 26, 2011 at 3:39 PM Subject: Oppold Grant Approved

To: "Imauerman@selu.edu" < Imauerman@selu.edu>

Cc: Dennis Hudson dhudson@asse.org, Adele Gabanski gabaad@asse.org

Hi Lawrence,

Congratulations! The ASSE Foundation Board of Trustees has approved a "James A. Oppold" grant in the amount of \$3,500 to Southeastern Louisiana University. This grant is for the ABET accreditation of the 4-year Bachelor of Science Degree in Occupational Safety, Health and the Environment.

Thank you for including the ABET invoice. I just need confirmation of the site visit dates from the ASAC Program Evaluator. Can you ask the evaluator to send this confirmation to me? (Email is fine). Once received, I will send you the check. The check will be made payable to SELU and I will send it to your attention at 500 Western Ave, Hammond, LA 70402.

Regards,

Mary Goranson

Foundation Manager

ASSE Foundation

1800 E. Oakton St.

Des Plaines, IL 60018

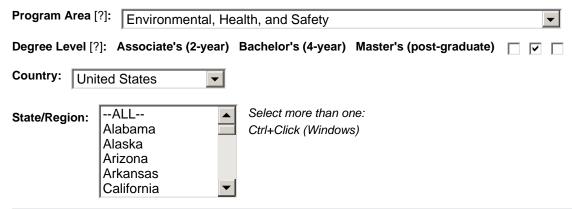
847.768.3412

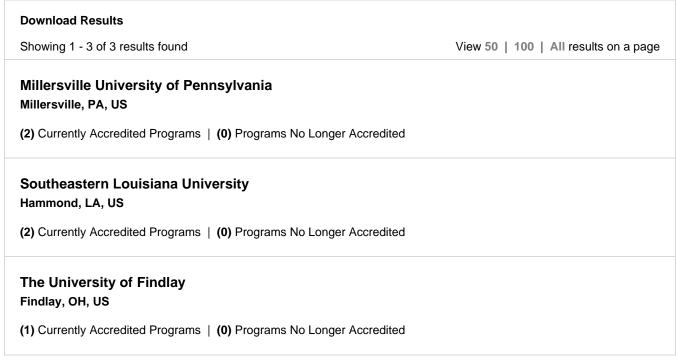
Home >Find Accredited Programs >

Find Accredited Programs

All currently accredited programs met the ABET **Accreditation Criteria** that were in effect at the time of review.

Disclaimer: Information is accurate to the best of ABET's knowledge. Individuals should contact programs for confirmation. Database Last Updated: 10/1/2011





Last Updated: 10/1/2011

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Board of Certified Safety Professionals

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Associate Safety Professional® (ASP) Interim Designation

Graduate Safety Practitioner® (GSP) Interim Designation

Occupational Health and Safety Technologist® (OHST)

Certified Loss Control Specialist (CLCS)

Construction Health and Safety Technician® (CHST)

► Recertification for CSP, OHST/CLCS & CHST

Safety Trained Supervisor (STS)

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An Alternate Path

A Graduate Safety Practitioner (GSP) is a designation available to safety degree graduates from degree programs which meet BCSP Qualified Academic Program (QAP) standards. The GSP program is an alternate path to the Certified Safety Professional (CSP) and does not replace other paths. Those in the GSP path are not eligible for the Associate Safety Professional (ASP) designation since GSP's receive a waiver of and do not sit for the Safety Fundamentals Examination. The ASP denotes someone who has taken a different path to the CSP certification by passing the Safety Fundamentals Examination. Neither the ASP or GSP are certifications.

Benefits of Becoming a GSP

There are numerous benefits for obtaining the GSP designation, including:

• Recognition for being in a path toward the CSP certification.



GSP Page 2 of 4

- Recognition for the level of preparation for professional safety practice.
- A waiver of the application fee.
- A waiver of the Safety Fundamentals examination.
- A certificate awarding the GSP designation.

Qualified Academic Program

A Qualified Academic Program (QAP) is an academic degree program in safety which meets BCSP standards for participation in the GSP program. Currently, BCSP defines a QAP as a bachelor's or master's degree program holding program accreditation as a safety or safety-related program by the Applied Science Accreditation Commission of ABET (ABET-ASAC) or the Aviation Accreditation Board International (AABI).

Applying for the GSP

If you are a just about to graduate, you submit the GSP Application through your program's QAP Coordinator. If you graduated within the program's ABET accredited period, you submit the GSP Retroactivity Application forms and official transcripts directly to BCSP. There is no fee to apply. BCSP will then send you a GSP package indicating you have been awarded the GSP designation. GSP Retroactivity Program

The GSP Retroactivity Program is for individuals who have graduated within the program's ABET accredited period from a current QAP that held ABET accreditation at the time they graduated. Similarly to the GSP path, the GSP Retroactivity path allows applicants a waiver of the application fee and of the Safety Fundamentals exam.

GSP Time Limit

GSPs must sit for and pass the Comprehensive Practice examination within three years of the date on which you become eligible. GSPs may pursue up to two, one-year eligibility extensions.

Recently, the BCSP Board of Directors eliminated the Graduate Safety Practitioner 10-Year Rule which stated GSPs had to take the Comprehensive Practice exam within 10 years of their graduation date.

After you become a GSP

All GSPs pay an annual renewal fee to maintain their designation, just like ASPs and CSPs. If you are eligible to take the Comprehensive Practice exam, good luck! If you are not yet eligible, keep working in the safety field to accumulate experience points toward your eligibility.

Photo by Will Hale

PDF Library - GSP

QAP Information

Application Guide

Retroactivity Application Guide

Reference Manual

SP Application Update Forms

Participating Eligible QAPs
University of Central Missouri
BS Occupational Safety and Health Functional Major
ABET – ASAC 10/01/1991-09/30/1995, since 10/01/1999

Embry-Riddle Aeronautical University - Daytona Beach BS Safety Science AABI – since 2011 GSP Page 3 of 4

Fairmont State University

BS Occupational Safety ABET – ASAC since 10/01/2006

University of Findlay

BS Environmental Safety and Occupational Health Management ABET – ASAC since 10/01/2006

University of Houston – Clear Lake

BS Environmental Science – Safety ABET – ASAC since 10/01/2007

Indiana University of Pennsylvania

BS Safety Science ABET – ASAC since 10/01/1983

Marshall University

BS Safety Technology ABET – ASAC since 1993

Millersville University

BS Occupational Safety and Environmental Health ABET – ASAC since 10/01/1993

Murray State University

BS Occupational Safety and Health MS Occupational Safety and Health ABET – ASAC since 10/01/1988

Oakland University

BS Occupational Safety and Health ABET – ASAC since 10/01/2003

Oklahoma State University

BS Fire Protection and Safety Technology ABET – TAC since 10/01/1977

Pennsylvania State University

BS Industrial Health and Safety ABET – ASAC 2004-2009

Rochester Institute of Technology

BS Safety Technology ABET – ASAC since 10/01/2003

Southeastern Louisiana University

BS Occupational Safety, Health, and Environment ABET – ASAC since 10/01/2009

West Virginia University

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MS Safety Management

ABET - ASAC since 10/01/1993

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- <u>Outstanding Safety Educator</u>
 <u>Award</u>
- Academic Internship Standards

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Becoming an ABET Program

Evaluator

Contact

Laura Clements

Professional & Government Affairs

Coordinator

(847)768-3451

Lclements@asse.org

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ASSE Region/Chapter:

Region 4

Greater Baton Rouge Chapter

Southeastern Louisiana

University

Program Liaison(s) by De

AAS, Industrial Technology

Lawrence A. Mauerman, MS, PE, CSP, Instructo

Department of Computer Science and Industrial

985-549-3476

Imauerman@selu.edu

www.selu.edu/acad_research/depts/cs_it/underg

Accreditation: ATMAE

BS, Occupational Safety, Health and Enviror

Lawrence Mauerman, Instructor

Department of Computer Science and Industrial

985-549-3476

Imauerman@selu.edu

www.selu.edu/future_students/degree_prog/deg

Degree/Program Accreditation: ABET-ASAC

Information

Associates: Y Bachelors: Y Masters:

PhD/Doctorate:

Certificate:

Other Program Info:

Current Program Enrollment: 80

Program Research Focus: Ergonomics, Indust **Research Collaboration Liaison:** Dr. Lu Yuan,

Contact Phone: 985-549-3925 Contact Email: lu.yuan@selu.edu

Programs Offered:

AAS, Industrial Technology BS, Occupational Safety, Health, and Environment

Online Courses Offered: no

Online Associates: Online Bachelors:

Online Masters:

ACADEMIC ASSESSMENT PLAN/REPORT COVER SHEET

Science and Technology

College:

Department:	Computer Science and Industrial Technology						
Unit:	Occupational Safety, Health, and Environment						
Degree:	Occupational Safety, Health, and Environment						
-/-							
that faculty ha	submitting the Academic Assessment Plan/Report please check indicating ave met, reviewed, and endorsed the Assessment Plans/Reports being this degree program.						
	Date of Endorsement:3/28/2011 Unit Assessment Coordinator Signature:						
74	Date of Signature: 3/29/11						
Department I	Head Signature and Date: Morton 3/29/11						
College Dear	n Signature and Date: 3/30/11						



Unit Academic Assessment Plan/Report 2010-2012								
	Date Submitted: 04/01/2011							
1. College:	Science	e and Tecl	nd Technology 2. Department: Computer Science and Industrial Technology					
3. Unit	Occupa	ntional Safety	ty, Health, and Environment 4. Degree: Bachelor of Science					
5. University Missi	The mission of Southeastern Louisiana University is to lead the educational, economic, and cultural development of southeast Louisiana.							
The Bachelor of Science degree program in Occupational Safety, Health, and Environment (OSH&E) is designed to provide an academically comprehensive curriculum that prepares graduates with the ability and competency to become highly qualified safety, industrial hygiene, and environmental professionals.								
	OSH&E graduates will apply knowledge and principles of mathematics, science, technology, and management in							

(A) Unit Goal #1

OSH&E graduates will apply knowledge and principles of mathematics, science, technology, and management in industry, business, or other related areas of employment as occupational safety, health, and environmental professionals.

Year 1						Year 2	
(B) Measurable Outcomes	(C) Assessment Method	(D) D/Ind	(E) Who Conducts	(F) When Assessed	(G) Findings	(H) Use of Results	
At least 75% of OSH&E majors will score at least 3 (Meet Criteria) in a 4-level scale on assessment of knowing how to apply mathematical and statistical knowledge in the safety, health, and environment field (Referring to Performance Criterion 1.1. in the rubric attached).	Course Portfolio (including assessment of student performance of relevant questions in exams, class exercises, assignments, and final project)	D	OSHE 121 OSHE 421	Spring 2013 Spring 2013			
At least 75% of OSH&E majors will score at least 3 (Meet Criteria) in a 4-level scale on assessment of knowing principles in chemistry, physics, and biology as it pertains to the practice of safety, health, and environment ((Referring to Performance Criterion 1.2. in the rubric attached).	Course Portfolio (including assessment of student performance of relevant questions in exams, homework, and project)	D	OSHE 141 OSHE 381	Spring 2012 Fall 2011			

At least 75% of OSH&E majors	Course Portfolio (including	D	OSHE 121	Spring 2012	
will score at least 3 (Meet Criteria)	assessment of student				
in a 4-level scale on assessment of	performance of relevant				
knowing principles in business	questions in exams, class				
management as it pertains to the	exercises, assignments, and		OSHE 311	Fall 2011	
practice of safety, health, and	final project)				
environment (Referring to					
Performance Criterion 1.3. in the					
rubric attached).					

(A) Unit Goal #2

OSH&E graduates will apply practical-oriented knowledge and skills in safety, health, and environment to anticipate, identify and evaluate hazardous conditions and practices, to develop hazard control designs, methods, procedures and programs, and to implement and manage effective safety, health, and environment programs.

Year 1					Year 2	
(B) Measurable Outcomes	(C) Assessment Method	(D) D/Ind	(E) Who Conducts	(F) When Assessed	(G) Findings	(H) Use of Results
At least 75% of OSH&E majors	Course Portfolio (including	D	OSHE 111	Fall 2012		
will score at least 3 (Meet Criteria)	assessment of student					
in a 4-level scale on assessment of understanding occupational safety,	performance of relevant questions in exams, class					
health, and environmental	exercises, assignments, and		OSHE 251	Fall 2012		
fundamentals (Referring to	final project)			1 411 2012		
Performance Criterion 2.A1. in the	1 3 /					
rubric attached).						
At least 75% of OSH&E majors	Course Portfolio (including	D	OSHE 112	Fall 2011		
will score at least 3 (Meet Criteria)	assessment of student					
in a 4-level scale on assessment of	performance of relevant		007777 404			
knowing legal aspects of safety,	questions in exams,		OSHE 421	Spring 2012		
health, and environmental practices	assignments, and final paper)					
(Referring to Performance Criterion						
2.A2. in the rubric attached). At least 75% of OSH&E majors	Course Portfolio (including	D	OSHE 242	Spring 2012		
will score at least 3 (Meet Criteria)	assessment of student		OSIIL 242	Spring 2012		
in a 4-level scale on assessment of	performance of relevant					
understanding the interactions of	questions in exams, class					
physical, chemical, biological, and	exercises, assignments, and		OSHE 441	Fall 2011		
ergonomic agents, factors, and/or	final project)					
stressors on the human body						

(Defermine to Derfermence Criteries					
(Referring to Performance Criterion					
2.A3. in the rubric attached).		D	OGHE 121	g : 2012	
At least 75% of OSH&E majors	Course Portfolio (including	D	OSHE 121	Spring 2013	
will score at least 3 (Meet Criteria)	assessment of student				
in a 4-level scale on assessment of	performance of relevant				
understanding the application of	questions in exams,				
laws, regulations, standards, and	assignments, and final paper)		OSHE 382	Spring 2013	
codes to safety, health and					
environmental conditions					
(Referring to Performance Criterion					
2.A4. in the rubric attached).					
At least 75% of OSH&E majors	Course Portfolio (including	D	OSHE 261	Spring 2013	
will score at least 3 (Meet Criteria)	assessment of student				
in a 4-level scale on assessment of	performance of relevant				
understanding and using principles	questions in exams,				
of fire prevention and protection in	assignments, and final paper)		OSHE 381	Fall 2012	
the workplace (Referring to					
Performance Criterion 2.A5. in the					
rubric attached).					
At least 75% of OSH&E majors	Course Portfolio (including	D	OSHE 111	Fall 2011	
will score at least 3 (Meet Criteria)	assessment of student				
in a 4-level scale on assessment of	performance of relevant				
knowing industrial and construction	questions in exams,				
safety throughout the work	assignments, and final paper)		OSHE 382	Spring 2012	
processes (Referring to					
Performance Criterion 2.A6. in the					
rubric attached).					
At least 75% of OSH&E majors	Course Portfolio (including	D	OSHE 141	Spring 2012	
will score at least 3 (Meet Criteria)	assessment of student				
in a 4-level scale on assessment of	performance of relevant				
knowing how to utilize basic	questions in exams, class				
laboratory instrumentations	exercises, assignments, and		OSHE 341	Spring 2012	
associated with safety, health, and	final project)				
environment (Referring to					
Performance Criterion 2.B1. in the					
rubric attached).					
At least 75% of OSH&E majors	Course Portfolio (including	D	OSHE 112	Spring 2013	
will score at least 3 (Meet Criteria)	assessment of student			r 8-3-3	
(l .	1	1		

in a 4-level scale on assessment of knowing how to anticipate, identify and evaluate hazardous agents, conditions, and practices (Referring to Performance Criterion 2.B2. in the rubric attached).	performance of relevant questions in exams, assignments, and final paper)		OSHE 424	Fall 2012	
At least 75% of OSH&E majors will score at least 3 (Meet Criteria) in a 4-level scale on assessment of knowing fundamental exposure assessment and environmental sampling techniques (Referring to Performance Criterion 2.B3. in the rubric attached).	Course Portfolio (including assessment of student performance of relevant questions in exams, class exercises, assignments, and final project)	D	OSHE 141 OSHE 441	Spring 2012 Fall 2011	
At least 75% of OSH&E majors will score at least 3 (Meet Criteria) in a 4-level scale on assessment of knowing how to develop control designs, methods, procedures, and programs to eliminate or mitigate safety, health, and environmental hazards (Referring to Performance Criterion 2.B4. in the rubric attached).	Course Portfolio (including assessment of student performance of relevant questions in exams, class exercises, assignments, and final project)	D	OSHE 261 OSHE 381	Spring 2013 Fall 2012	
At least 75% of OSH&E majors will score at least 3 (Meet Criteria) in a 4-level scale on assessment of knowing how to conduct accident/incident investigation and analysis (Referring to Performance Criterion 2.B5. in the rubric attached).	Course Portfolio (including assessment of student performance of relevant questions in exams, assignments, and final paper)	D	OSHE 111 OSHE 421	Fall 2011 Spring 2012	
At least 75% of OSH&E majors will score at least 3 (Meet Criteria) in a 4-level scale on assessment of knowing how to implement and manage effective safety, health, and environmental programs (Referring	Course Portfolio (including assessment of student performance of relevant questions in exams, assignments, and final paper)	D	OSHE 121 OSHE 323	Spring 2013 Fall 2012	

to Performance Criterio the rubric attached).	on 2.B6. in						
(A) Unit Goal #3	OSH&E grad and environm	nduates will become effective comment.	municators ar	nd ethical facili	tators within the	e practice of	safety, health,
		Year 1				Y	ear 2
(B) Measurable O	outcomes	(C) Assessment Method	(D) D/Ind	(E) Who Conducts	(F) When Assessed	(G) Findings	(H) Use of Results
At least 75% of OSH& will score at least 3 (M in a 4-level scale on asseffectively expressing to oral and written common (Referring to Performa 3.1. in the rubric attach	leet Criteria) ssessment of thoughts in nunications ance Criterion	Course Portfolio (including assessment of student performance of relevant questions in final project, assignments, and class exercises)	D	OSHE 242 OSHE 471	Spring 2012 Fall 2011		
5.1. III the rubble attach	leu).	Alumni and employer surveys	Ind	LY	2012-2013		
At least 75% of OSH& will score at least 3 (M in a 4-level scale on ass	leet Criteria) ssessment of	Course Portfolio (including assessment of student performance of relevant	D	OSHE 112	Fall 2011		
knowing the techniques modern behavioral tool for the practice of safet and environment (Refe	ols necessary ety, health,	questions in exams and class exercises)		OSHE 322	Spring 2012		
Performance Criterion rubric attached).		Student roundtable discussion	Ind	OSH&E faculty	Fall 2011		
At least 75% of OSH&E majors will score at least 3 (Meet Criteria) in a 4-level scale on assessment of effectively functioning as a part of multi-disciplinary team (Referring to Performance Criterion 3.3. in the		Course Portfolio (including assessment of student performance of relevant questions in group project and class exercises)	D	OSHE 242 OSHE 451	Spring 2013 Summer 13		
rubric attached).		Surveys, student roundtable discussions	Ind	OSH&E faculty	2012-2013		
(A) Unit Goal #4	OSH&E graduates will continue professional development to address the need of applying principles of safety,						of safety,
Year 1						Yo	ear 2

(B) Measurable Outcomes	(C) Assessment Method	(D) D/Ind	(E) Who Conducts	(F) When Assessed	(G) Findings	(H) Use of Results
Students are encouraged to become	ASSE meeting and event	Ind	OSH&E	2012-2013		
members of ASSE (American	participation, student		faculty			
Society of Safety Engineers) and	roundtable discussion					
AIHA (American Industrial						
Hygiene Association) Southeastern						
Louisiana University Student						
Sections and be actively involved in						
the events and activities organized						
by the Student Sections. At least						
50% of upper-level students are						
ASSE/AIHA members (Referring						
to Performance Criterion 4.1. in the						
rubric attached).						
Students are encouraged to	Exit interview, alumni survey	Ind	OSH&E	2011-2012		
continue professional growth and			faculty			
improvement by pursuing the						
widely recognized certifications						
including, but not limited to:						
Certified Safety Professional (CSP)						
and Certified Industrial Hygienist						
(CIH); and/or by pursuing						
master's/doctoral degrees in						
environmental, health, and safety						
and similarly named programs. As						
measured on the Southeastern						
Alumni Survey, at least 50% of the						
OSH&E graduates will become						
CSPs and/or CIHs (Referring to						
Performance Criterion 4.2. in the						
rubric attached).						

Rubric for Assessing OSH&E Program Outcomes

Objective 1: Apply knowledge and principles of mathematics, science, technology, and management in industry, business, or other related areas of employment as occupational safety, health, and environment professionals.

<u>Expected Outcomes:</u> Students completing the Baccalaureate degree in OSH&E will demonstrate the ability to apply basic mathematical and scientific knowledge in the safety, health, and environment field.

Performance Criteria	Below Expectations 1	Progressing to Criteria 2	Meets Criteria 3	Exceeds Criteria 4	Score ¹
1. Students know how to apply basic mathematical and statistical knowledge in the safety, health, and environment field.	Student fails to solve typical OSH&E problems using basic mathematical and statistical knowledge.	Student identifies typical OSH&E problems, but struggles to select proper mathematical and statistical tools needed to solve the problems.	Student correctly identifies typical OSH&E problems and applies basic mathematical and statistical knowledge, but makes minor mistakes during problem solving.	Student clearly identifies typical OSH&E problems and correctly applies basic mathematical and statistical knowledge to solve the problems.	
2. Students know basic principles in chemistry, physics, and biology as it pertains to the practice of safety, health, and environment.	Student is unable to understand basic principles in chemistry, physics, and biology that are applied to the OSH&E field.	Student understands basic principles in chemistry, physics, and biology that are applied to the OSH&E field, but struggles to apply those principles properly to solve specific problems.	Student understands and applies basic principles in chemistry, physics, and biology that are applied to the OSH&E field, but makes minor mistakes and/or demonstrates a lack of clarity during problem solving.	Student clearly and correctly understands and applies basic principles in chemistry, physics, and biology that are applied to the OSH&E field to solve specific problems.	

3. Students know basic principles in business management as it pertains to the practice of safety, health, and environment.	Student is unable to understand basic principles in business management that are applied to the OSH&E field.	Student understands basic principles in business management that are applied to the OSH&E field, but struggles to apply those principles properly to solve specific problems.	Student understands and applies basic principles in business management that are applied to the OSH&E field, but demonstrates a lack of clarity during problem solving.	Student clearly and correctly understands and applies basic principles in business management that are applied to the OSH&E field to solve specific problems.	
---	--	---	--	---	--

¹Score is presented as the percentage of samples that meets and/or exceeds criteria. 75% is used as the success rate based on the OSH&E Major Field Assessment plan (Appendix A).

Objective 2: Apply practical-oriented knowledge and skills in safety, health, and environment to anticipate, identify and evaluate hazardous conditions and practices, to develop hazard control designs, methods, procedures and programs, and to implement and manage effective safety and health programs.

<u>Expected Outcomes 2A:</u> Students completing the Baccalaureate degree in OSH&E will demonstrate the understanding of safety, health, and environment knowledge.

Performance Criteria	Below Expectations 1	Progressing to Criteria 2	Meets Criteria 3	Exceeds Criteria 4	Score ¹
2A1. Students understand occupational safety, health, and environment fundamentals.	Student fails to understand occupational safety, health, and environment fundamentals.	Student understands the basics of occupational safety, health, and environment, but struggles to differentiate between concepts.	Student understands the basics of occupational safety, health, and environment and how they are interrelated, but demonstrates a lack of clarity.	Student clearly and correctly understands occupational safety, health, and environment fundamentals.	
2A2. Students know legal aspects of safety, health, and environmental practices.	Student fails to understand the legal framework within the OSH&E field.	Student understands the legal framework within the OSH&E field, but struggles to differentiate between agency/organization responsibilities.	Student understands the legal framework within the OSH&E field and how different agencies/organizations are interrelated, but demonstrates a lack of clarity.	Student clearly and correctly understands the legal framework within the OSH&E field.	
2A3. Students understand the interactions of physical, chemical, biological, and ergonomic agents, factors, and/or stressors on the human body.	Student fails to understand physical, chemical, biological, and ergonomic agents, factors, and/or stressors.	Student understands the impacts of physical, chemical, biological, and ergonomic agents, factors, and/or stressors on the human body, but struggles to differentiate between substances.	Student understands the interactions of physical, chemical, biological, and ergonomic agents, factors, and/or stressors on the human body, but demonstrates a lack of clarity.	Student clearly and correctly understands the impacts and interactions of physical, chemical, biological, and ergonomic agents, factors, and/or stressors on the human body.	

2A4. Students understand the application of laws, regulations, standards, and codes to safety, health and environmental conditions.	Student fails to understand the application of laws, regulations, standards, and codes to safety, health and environmental conditions.	Student understands how to apply laws, regulations, standards, and codes to safety, health and environmental conditions, but struggles to differentiate between substances.	Student understands the application of laws, regulations, standards, and codes to safety, health and environmental conditions, but demonstrates a lack of clarity.	Student clearly understands and correctly applies laws, regulations, standards, and codes to safety, health and environmental conditions.
2A5. Students understand and use basic principles of fire prevention and protection in the workplace.	Student fails to understand basic principles of fire prevention and protection in the workplace.	Student understands basic principles of fire prevention and protection in the workplace, but struggles to use the principles properly.	Student understands and uses basic principles of fire prevention and protection in the workplace, but demonstrates a lack of clarity.	Student clearly understands and correctly uses basic principles of fire prevention and protection in the workplace.
2A6. Students know industrial and construction safety throughout the work processes.	Student fails to understand industrial and construction safety throughout the work processes.	Student understands industrial and construction safety throughout the work processes, but struggles to differentiate between concepts and substances.	Student understands industrial and construction safety throughout the work processes, but demonstrates a lack of clarity.	Student clearly and correctly understands industrial and construction safety throughout the work processes.

Expected Outcomes 2B: Students completing the Baccalaureate degree in OSH&E will demonstrate the ability to obtain the necessary skills to anticipate, identify and evaluate safety, health, and environment hazards, and to develop and implement hazard control methods, programs, and system designs.

Performance Criteria	Below Expectations 1	Progressing to Criteria 2	Meets Criteria 3	Exceeds Criteria 4	Score ¹
2B1. Students know how to utilize basic laboratory instrumentations associated with safety, health, and environment.	Student fails to understand basic laboratory techniques associated with industrial hygiene and basic sciences.	Student understands the application of basic laboratory techniques associated with industrial hygiene and basic sciences, but struggles to differentiate between concepts and methods.	Student understands the application of basic laboratory techniques associated with industrial hygiene and basic sciences, but demonstrates a lack of clarity.	Student clearly understands and correctly applies basic laboratory techniques associated with industrial hygiene and basic sciences.	
2B2. Students know how to anticipate, identify and evaluate hazardous agents, conditions, and practices.	Student fails to understand how to anticipate, identify and evaluate hazardous agents, conditions, and practices.	Student understands how to anticipate, identify and evaluate hazardous agents, conditions, and practices, but struggles to differentiate between methods.	Student understands different methods to anticipate, identify and evaluate hazardous agents, conditions, and practices, but demonstrates a lack of clarity.	Student clearly understands and correctly applies different methods to anticipate, identify and evaluate hazardous agents, conditions.	
2B3. Students know fundamental exposure assessment and environmental sampling techniques.	Student fails to understand fundamental exposure assessment techniques.	Student understands the basics of exposure assessment techniques, but struggles to differentiate between methods.	Student understands different fundamental exposure assessment techniques, but demonstrates a lack of clarity.	Student clearly understands fundamental exposure assessment techniques.	

2B4. Students know how to develop control designs, methods, procedures, and programs to eliminate or mitigate safety, health, and environmental hazards.	Student fails to understand how to develop hazard control designs, methods, procedures, and programs.	Student understands how to develop hazard control designs, methods, procedures, and programs, but struggles to differentiate between concepts and methods.	Student understands different means to develop hazard control designs, methods, procedures, and programs, but demonstrates a lack of clarity.	Student clearly understands and correctly develops hazard control designs, methods, procedures, and programs.	
2B5. Students know how to conduct accident/incident investigation and analysis.	Student fails to understand how to conduct accident/incident investigation and analysis.	Student understands how to conduct accident/incident investigation and analysis, but struggles to differentiate between theories, models and methods.	Student understands different theories, models and methods to conduct accident/incident investigation and analysis, but demonstrates a lack of clarity.	Student clearly understands and correctly conducts accident/incident investigation and analysis.	
2B6. Students know how to implement and manage effective safety, health, and environment programs.	Student fails to understand how to implement and manage effective safety, health, and environment programs.	Student understands how to implement and manage effective safety, health, and environment programs, but struggles to differentiate between elements.	Student understands different elements to implement and manage effective safety, health, and environment programs, but demonstrates a lack of clarity.	Student clearly understands and correctly implements and manages effective safety, health, and environment programs.	

Objective 3: Become effective communicators and ethical facilitators within the practice of safety, health, and environment.

<u>Expected Outcomes:</u> Students completing the Baccalaureate degree in OSH&E will demonstrate the ability to express thoughts effectively in oral and written communications, and to understand ethical behaviors and professional responsibility.

Performance Criteria	Below Expectations 1	Progressing to Criteria 2	Meets Criteria 3	Exceeds Criteria 4	Score ¹
1. Students are able to effectively express thoughts in oral and written communications.	Student fails to effectively express thoughts in oral and written communications.	Student expresses thoughts in oral and written communications, but struggles to demonstrate the effectiveness.	Student generally effectively expresses thoughts in oral and written communications, but demonstrates a lack of consistency.	Student consistently and effectively expresses thoughts in oral and written communications.	
2. Students know the techniques, skills, and modern behavioral tools necessary for the practice of safety, health, and environment.	Student fails to understand the techniques, skills, and modern behavioral tools necessary for the practice of safety, health, and environment.	Student understands the techniques, skills, and modern behavioral tools necessary for the practice of safety, health, and environment, but struggles to differentiate between concepts and methods.	Student understands different techniques, skills, and modern behavioral tools necessary for the practice of safety, health, and environment, but demonstrates a lack of clarity.	Student clearly understands the techniques, skills, and modern behavioral tools necessary for the practice of safety, health, and environment.	
3. Students are able to effectively function as a part of multi-disciplinary team.	Student fails to effectively function as a part of multidisciplinary team.	Student functions as a part of multi-disciplinary team, but struggles to demonstrate the effectiveness.	Student generally effectively functions as a part of multidisciplinary team, but demonstrates a lack of consistency.	Student consistently and effectively functions as a part of multi-disciplinary team.	

Objective 4: Continue professional development to address the need of applying principles of safety, health, and environment within a constantly changing and increasingly diverse environment.

<u>Expected Outcomes:</u> Students completing the Baccalaureate degree in OSH&E will demonstrate the ability to broaden education and life-long learning necessary to understand safety, health, and environment issues within a global and social context.

Performance Criteria	Below Expectations 1	Progressing to Criteria 2	Meets Criteria	Exceeds Criteria	Score ¹
1. Students are encouraged to become members of ASSE (American Society of Safety Engineers) and AIHA (American Industrial Hygiene Association) Southeastern Louisiana University Student Sections and be actively involved in the events and activities organized by the Student Sections. At least 50% of upper-level students are ASSE/AIHA members.	Student shows no interest in becoming a member of ASSE Southeastern Louisiana University Student Section and is not involved in the events and activities organized by the Student Section. Lower than 50% of upper-level students are ASSE members.	Student is interested in becoming a member of ASSE Southeastern Louisiana University Student Section and is involved in the events and activities organized by the Student Section, but does not become a member eventually. Close to 50% of upper-level students are ASSE members.	Student becomes a member of ASSE Southeastern Louisiana University Student Section and is generally actively involved in the events and activities organized by the Student Section. At least 50% of upperlevel students are ASSE members.	Student becomes a member of ASSE Southeastern Louisiana University Student Section and is consistently actively involved in the events and activities organized by the Student Section. 75% of upper-level students are ASSE members.	
2. Students are encouraged to continue professional growth and improvement by pursuing the widely recognized certifications including, but not limited to: Certified Safety Professional (CSP) and Certified Industrial Hygienist (CIH); and/or by pursuing master's/doctoral degrees in environmental, health, and safety and similarly named programs. As measured on the Southeastern Alumni Survey, at least 50% of the OSH&E graduates will become CSPs and/or CIHs.	Student shows no interest in continuing personal growth and improvement by pursuing the widely recognized certifications including CSP and CIH. As measured on the Southeastern Alumni Survey, lower than 50% of the OSH&E graduates will become CSPs.	Student is interested in continuing personal growth and improvement by pursuing the widely recognized certifications including CSP and CIH. As measured on the Southeastern Alumni Survey, close to 50% of the OSH&E graduates will become CSPs.	Student takes early steps to continue personal growth and improvement by pursuing the widely recognized certifications including CSP and CIH. As measured on the Southeastern Alumni Survey, 50% of the OSH&E graduates will become CSPs.	Student consistently continues personal growth and improvement by pursuing the widely recognized certifications including CSP and CIH. As measured on the Southeastern Alumni Survey, 75% of the OSH&E graduates will become CSPs.	

Appendix A Major Field Assessment Plan Occupational Safety, Health, and Environment (OSH&E)

The Bachelor of Science degree program in Occupational Safety, Health, and Environment (OSH&E) is designed to provide an academically comprehensive curriculum that prepares graduates with the ability and competency to become highly qualified safety, industrial hygiene, and environmental professionals.

The educational objectives of the OSH&E program are to prepare students who:

1. Apply knowledge and principles of mathematics, science, technology, and management in industry, business, or other related areas of employment as occupational safety, health, and environmental professionals.

Expected Outcomes

Students completing the Baccalaureate degree in OSH&E will demonstrate the ability to apply mathematical and scientific knowledge in the safety, health, and environment field.

<u>Assessment</u>

In the selected relevant courses (OSHE 111, 112, 121, 141, 231, 242, 261, 311, 381, 382, 421, 424, 441, 452, and 471), the exams and assignments should be designed to reflect the course objectives. Students are able to score at least 75% on math, statistics, and science related problems in the exams and assignments.

2. Apply practical-oriented knowledge and skills in safety, health, and environment to anticipate, identify and evaluate hazardous conditions and practices, to develop hazard control designs, methods, procedures and programs, and to implement and manage effective safety, health, and environment programs.

Expected Outcomes

Students completing the Baccalaureate degree in OSH&E will demonstrate the ability to understand safety, health, and environment knowledge, to anticipate, identify and evaluate safety, health, and environmental hazards, and to develop and implement hazard control methods, programs, and system designs.

Assessment

- ➤ In the majority of courses, students are able to score at least 75% on technical problems regarding safety, health, and environment in the exams. Approximately 70% of the grade for each of those courses is based on the exam performance.
- ➤ In the selected relevant courses (OSHE 111, 112, 121, 141, 242, 341, 381, 282, 424, 441, and 452), students are able to anticipate, identify, evaluate, and control hazards by scoring at least 75% on a research project in a simulated industrial work environment.

Approximately 30% of the grade for each of those courses is based on the quality of the research project.

3. Become effective communicators and ethical facilitators within the practice of safety, health, and environment.

Expected Outcomes

Students completing the Baccalaureate degree in OSH&E will demonstrate the ability to express thoughts effectively in oral and written communications, and to understand ethical behaviors and professional responsibility.

Assessment

- ➤ In the majority of courses, students are required to either write a technical research paper, or make an oral presentation of project, or both. Students are able to scoring at least 75% on those requirements. Approximately 30% of the grade for each of those courses is based on the quality of the research paper and/or presentation.
- The exams in selected courses (OSHE 111, 112, 121, 322, 382, 421, and 424) include questions regarding codes of professional ethics. Students are expected to score at least 75% on those questions. For those who have opposite opinions on the ethical codes, individual counseling or discussion will be issued.
- 4. Continue professional development to address the need of applying principles of safety, health, and environment within a constantly changing and increasingly diverse environment.

Expected Outcomes

Students completing the Baccalaureate degree in OSH&E will demonstrate the ability to broaden education and life-long learning necessary to understand safety, health, and environment issues within a global and social context.

Assessment

- > Students are encouraged to become members of ASSE (American Society of Safety Engineers) and AIHA (American Industrial Hygiene Association) Southeastern Louisiana University Student Section and be actively involved in the events and activities organized by the Student Section. At least 50% of upper-level students are ASSE/AIHA members.
- ➤ Students are encouraged to continue personal growth and improvement by pursuing the widely recognized certifications including Certified Safety Professional (CSP) and Certified Industrial Hygienist (CIH). As measured on the Southeastern Alumni Survey, at least 50% of the OSH&E graduates will become CSPs and/or CIHs.

OSHE Courses (in Red Color) that Satisfy Competencies for OSH&E BS Program

Mathematics, Science and Statistics	OSHE Courses
	111 , 112, 121 , 141 ,
Graduates know how to apply methomatical and statistical	231, 242 , 251, 261 ,
Graduates know how to apply mathematical and statistical	311, 322, 323, 341,
knowledge in the safety, health, and environment field.	381 , 382, 421 , 424 ,
	441 , 451, 452, 471
	111 , 112 , 121, 141 ,
	231, 242 , 251, 261 ,
Graduates know principles in chemistry, physics, and biology as	311, 322, 323, 341,
it pertains to the practice of safety, health, and environment.	381 , 382 , 421, 424 ,
	441 , 451, 452 , 471
	111 , 112 , 121 , 141,
	231 , 242, 251, 261,
Graduates know principles in business management as it pertains	311 , 322, 323, 341,
to the practice of safety, health, and environment.	381, 382, 421 , 424,
	441, 451, 452 , 471
Communications and Social Sciences	, ,
	111, 112, 121, 141,
	231 , 242 , 251 , 261,
Graduates are able to effectively express thoughts in oral and	311, 322 , 323, 341,
written communications.	381, 382, 421, 424,
	441, 451, 452, 471
	111 , 112 , 121 , 141,
	231, 242, 251, 261,
Graduates know the techniques, skills, and modern behavioral	311, 322 , 323, 341,
tools necessary for the practice of safety, health, and environment.	381, 382 , 421 , 424 ,
	441, 451, 452, 471
	111 , 112 , 121, 141,
Graduates are able to effectively function as a part of multi-	231, 242, 251, 261,
disciplinary team.	311, 322, 323, 341,
	381, 382, 421, 424,
C-f-4- H-44 1 F	441, 451 , 452, 471
Safety, Health, and Environment Knowledge	111 112 121 141
	111, 112, 121, 141,
Graduates understand occupational safety, health, and	231, 242, 251, 261,
environment fundamentals.	311, 322, 323, 341,
	381, 382, 421, 424,
	441, 451, 452, 471
	111, 112, 121, 141,
Graduates know legal aspects of safety, health, and environmental	231, 242, 251, 261,
practices.	311, 322, 323, 341,
praetices	381, 382, 421, 424,
	441, 451, 452, 471
Graduates understand the interactions of physical, chemical,	111, 112, 121, 141 ,
biological, and ergonomic agents, factors, and/or stressors on the	231, 242 , 251, 261,
human body.	311, 322, 323, 341 ,

	1 201 202 121 121
	381, 382, 421, 424,
	441 , 451, 452, 471
	111 , 112, 121 , 141,
Graduates understand the application of laws, regulations,	231 , 242, 251 , 261,
standards, and codes to safety, health and environmental	311, 322, 323, 341,
conditions.	381 , 382 , 421, 424,
	441, 451 , 452, 471
	111 , 112, 121, 141,
	231, 242, 251, 261 ,
Graduates understand and use principles of fire prevention and	311, 322, 323, 341,
protection in the workplace.	381 , 382, 421, 424,
	441, 451, 452, 471
	111 , 112, 121, 141,
Graduates know industrial and construction safety throughout the	231, 242, 251, 261,
work processes.	311, 322, 323, 341,
r	381, 382 , 421, 424 ,
	441, 451, 452, 471
Safety, Health, and Environment Practical Skills	
	111, 112, 121, 141 ,
Students Image have to utilize basis laboratory instrumentations	231, 242, 251, 261,
Students know how to utilize basic laboratory instrumentations	311, 322, 323, 341 ,
associated with safety, health, and environment.	381, 382, 421, 424,
	441 , 451, 452, 471
	111, 112, 121, 141,
	231, 242 , 251, 261,
Graduates know how to anticipate, identify and evaluate	311, 322, 323, 341 ,
hazardous agents, conditions, and practices.	381 , 382 , 421, 424 ,
	441 , 451, 452, 471
	111 , 112 , 121, 141 ,
Students know fundamental exposure assessment and	231, 242 , 251, 261,
environmental sampling techniques.	311, 322, 323, 341 ,
	381 , 382 , 421, 424 ,
	441 , 451 , 452 , 471
	111, 112 , 121, 141 ,
Students know how to develop control designs, methods,	231, 242 , 251, 261 ,
procedures, and programs to eliminate or mitigate safety, health,	311, 322, 323, 341 ,
and environmental hazards.	381 , 382, 421, 424 ,
	441, 451 , 452 , 471
	111 , 112, 121 , 141,
	231, 242, 251, 261,
Graduates know how to conduct accident/incident investigation	311, 322, 323, 341,
and analysis.	381, 382, 421 , 424,
	441, 451, 452, 471
	111 , 112, 121 , 141,
Graduates know how to implement and manage effective safety,	231, 242, 251, 261,
health, and environment programs.	311 , 322 , 323 , 341,
	381, 382, 421 , 424 ,
	441, 451, 452, 471

Assessment of OSH&E Program Outcomes (Performance Criteria) for 2011-2012

Performance Criteria	Courses	Sources of Assessment	Assessment Method(s)	Assessment Coordinator ¹	Time of Data Collection	
			Three Exams		Spring 2012	
		444	Class Exercise			
1. 2. Students know basic principles in chemistry,	111, 112, 141,	141	Homework	EM		
physics, and biology as it pertains to the practice of	242, 261, 381, 382, 424, 441,		Project			
safety, health, and environment.	452		Three Exams			
		381	Assignment	LM	Fall 2011	
			Final Project			
			Three Exams			
		121	Assignment	LM	Spring 2012	
Students know basic principles in business	111, 112, 121, 231, 311, 421, 452, 471		Final Paper			
management as it pertains		311	Three Exams	- EM	Fall 2011	
to the practice of safety, health, and environment.			Class Exercise			
			Homework			
			Project			
		112	Three Exams		Fall 2011	
			Ten Assignments	LY		
2. A2. Students know legal aspects of safety, health,	111, 112, 121, 141, 231, 242,		Final Paper			
and environmental practices.	251, 261, 381, 382, 421, 424		Three Exams			
		421	Assignment	LM	Spring 2012	
			Final Project			
			Two Exams			
2. A3. Students understand the interactions of physical,		242	Three Homework	LY	Spring 2012	
chemical, biological, and ergonomic agents, factors,	141, 242, 341, 441	242	Assignment	Lĭ	Spring 2012	
and/or stressors on the human body.			Group Project			
		441	Three Exams	LM	Fall 2011	

			Homework			
			Project			
			Three Exams			
		111	Assignment	LM	Fall 2011	
2. A6. Students know industrial and construction	444 000 404		Final Paper			
safety throughout the work processes.	111, 382, 424		Three Exams			
		382	Assignment	LY	Spring 2012	
			Final Paper			
			Three Exams			
		141	Class Exercise		Consists of 2042	
2. B1. Students know how		141	Homework	- EM	Spring 2012	
to utilize basic laboratory instrumentations associated	141, 341, 441		Project			
with safety, health, and		341	Three Exams			
environment.			Class Exercise	EM	Spring 2012	
			Homework		Opinig 2012	
			Project			
	111, 112, 141,	141	Three Exams	- EM		
			Class Exercise		Spring 2012	
2. B3. Students know			Homework		Spirity 2012	
fundamental exposure	242, 341, 381,		Project			
environmental sampling	382, 424, 441, 451, 452		Three Exams			
techniques.		441	Class Exercise	- LM	Fall 2011	
		441	Homework	LIVI	Fall 2011	
			Project			
			Three Exams			
2. B5. Students know how		111	Assignment	LM	Fall 2011	
to conduct accident/incident	111, 121, 421		Final Paper			
investigation and analysis.		404	Three Exams	- LM	Spring 2012	
		421		LIVI	Spring 2012	

			Project		
			Two Exams		
		242	Three Homework	LV	
3. 1. Students are able to	111, 112, 121,	242	Assignment	LY	Spring 2012
effectively express thoughts in oral and written	141, 231, 242, 251, 322, 381,		Group Project		
communications.	382, 421, 424, 441		Three Exams		
		471	Assignment	LM	Fall 2011
			Project		
	111, 112, 121, 322, 382, 421, 424	112	Three Exams		Fall 2011
3. 2. Students know the			Ten Assignments	LY	
techniques, skills, and modern behavioral tools			Final Paper		
necessary for the practice of safety, health, and		322	Three Exams		
environment.			Assignment	LM	Spring 2012
			Final Project		
4. 2. Students are encouraged to continue professional growth and improvement by pursuing the widely recognized certifications including, but not limited to: Certified Safety Professional (CSP) and Certified Industrial Hygienist (CIH); and/or by pursuing master's/doctoral degrees in environmental, health, and safety and similarly named programs. As measured on the Southeastern Alumni Survey, at least 50% of the OSH&E graduates will become CSPs and/or CIHs.			Exit Interview	All Faculty	Spring 2012
		All Graduates	Alumni Survey	LY	Fall 2012*

¹Presented here are faculty's initials.

OSH&E Program Outcomes - Indirect Assessment Schedule, 2008-2009 to 2012-2013

	Fall 2008	Spring 2009	Fall 2009	Spring 2010	Fall 2010	Spring 2011	Fall 2011	Spring 2012	Fall 2012	Spring 2013
Industrial Advisory Committee meeting	X	X	X	X	X	X	X	X	X	X
Industrial Advisory Committee Questionnaire	X						X			
Exit Interview	X	X	X	X	X	X	X	X	X	X
Exit Survey	X	X	X	X	X	X	X	X	X	X
Alumni Survey			X						X	
Employer Survey				X						X
Current Student Discussion					X		X		X	

Appendix G

Safety, Health & Environment 111	3	Accounting 200 or Management 351	3
†Industrial Technology 351	3	†Technical Elective ³	
English 322		History 101, 102, 201 or 202	
Economics 201	3	•	
	15		15
	Fourt	H YEAR	
†Industrial Technology 331	3	†Industrial Technology 406	3
†Industrial Technology 405	3	†Industrial Technology 308	3
†Industrial Technology 407			
Arts ²		†Technical Elective	
	12		12
Total semester hours required			120

Southeastern 101 is not required of transfer or readmitted Southeastern students with 30 hours or more. Those students will replace Southeastern 101 with 2 hours of electives.

OCCUPATIONAL SAFETY, HEALTH AND ENVIRONMENT

The Bachelor of Science in Occupational Safety, Health, and Environment (OSH&E) program is designed to provide an academically comprehensive curriculum that prepares graduates with the ability and competency to become highly qualified safety, industrial hygiene, and environmental professionals.

MISSION STATEMENT

The educational objectives of the OSH&E program are to prepare students who:

- Apply knowledge and principles of mathematics, science, technology, and management in industry, business, or other related areas of employment as occupational safety, health, and environment professionals;
- Apply practical-oriented knowledge and skills in safety, health, and environment to anticipate, identify and evaluate hazardous conditions and practices, to develop hazard control designs, methods, procedures and programs, and to implement and manage effective safety, health, and environment programs;
- 3. Become effective communicators and ethical facilitators within the practice of safety, health, and environment;
- Continue professional development to address the need of applying principles of safety, health, and environment within a constantly changing and increasingly diverse environment.

TYPICAL ELEMENTS

The OSH&E program prepares students to succeed as occupational safety, health, and environment professionals with a broad technical and managerial background. Typically included in this background are a functional knowledge and understanding of safety, health, and environment fundamentals; legal aspects of safety, health, and environmental practices; interactions of physical, chemical, biological, and ergonomic agents, factors, and/or stressors on the human body; basic principles of fire prevention and protection in the workplace; industrial and construction safety throughout work processes; industrial management and human relations; communication skills, mathematics, sciences, and statistics; and practical skills of basic laboratory techniques associated with industrial hygiene and basic sciences; fundamental exposure assessment sampling techniques; pollution fundamentals and control techniques; accident/incident investigation and analysis; measurement of safety performance; safety, health, and environment program management; performance of education and training for safety.

¹Select Chemistry 102/104 or Physics 192/194.

²Select one course in Art. Dance, Music or Theater

³Technical electives should be selected by students in consultation with their advisors. Three hours must be selected from Industrial Technology and an additional 3 hours from Computer Science, Engineering Technology, Industrial Technology, Management, Mathematics, or Physical Science. No 100-level course will be accepted without approval of the Department Head.

[†]A "C" must be earned in all major courses.

CURRICULUM IN OCCUPATIONAL SAFETY, HEALTH AND ENVIRONMENT LEADING TO THE DEGREE OF BACHELOR OF SCIENCE

	FIRST	YEAR	
FIRST SEMESTER	S.H.	SECOND SEMESTER	S.H.
English 101	3	English 102	3
Mathematics 161	3	Mathematics 162	3
†OSHE 111	3	Computer Science 173	
†OSHE 112		†OSHE 121	3
General Biology 151	3	†OSHE 141	3
Biology Lab 152			
Southeastern 101	2		
	18		15
	SECON	D YEAR	
Chemistry 101	3	Physics 191	3
Chemistry Lab 103	1	Physics Lab 193	
Mathematics 241	3	Communication 211	3
Psychology 101	3	†OSHE 231	3
†OSHE 251	3	†OSHE 242	3
		†OSHE 261	3
	13		16
	THIRD	YEAR	
Chemistry 102	3	Chemistry 261	3
Chemistry Lab104	1	History 101 or 102 or 201 or 202	3
English 230 or 231 or 232		Economics 201 or 202	
Zoology 241	4	English 322	3
†OSHE 381	3	†OSHE 341	3
	14		15
	Fourt	H YEAR	
†OSHE 424		†OSHE 382	3
†OSHE 452		†OSHE 421	
Management 351		†Industrial Technology 391 or 492	
Arts Elective ¹	3	†Professional Elective ²	
†Professional Elective ^{2xx}	3	†Professional Elective ²	
	14	,	15
Total semester hours required			120

Southeastern 101 is not required of transfer or readmitted Southeastern students with 30 hours or more. Those students will replace Southeastern 101 with 2 hours of professional electives.

ASSOCIATE DEGREE PROGRAM IN INDUSTRIAL TECHNOLOGY

The Associate of Applied Science Degree program in the Department of Computer Science and Industrial Technology is designed to enable graduates to enter various fields of industry after completing two years of study. Graduates may also elect to continue their education in the four-year degree Manufacturing Technology Concentrations. Graduates of the two-year curriculum will be awarded the degree of Associate of Applied Science.

 $^{^1}Select$ one course in Art, Dance, Music or Theater. 2Professional electives should be selected in consultation with advisors. $\dagger A$ "C" must be earned in all major courses and professional electives.

OCCUPATIONAL SAFETY, HEALTH, AND ENVIRONMENT (OSHE)

- 111. Introduction to Occupational Safety and Health, and Environment. Credit 3 hours. This course introduces general safety and health concepts. Major topics include occupational safety, health and environmental terms, historical developments, program concepts and terms, legislative overview, including worker's compensation law, problem identification, hazard recognition, evaluation and control concepts, and an introduction to measurement and evaluation.
- 112. Design of Hazard Controls. Credit 3 hours. Prerequisites: Current enrollment or prior credit for OSHE 111. This course studies the application of scientific and engineering principles and methods to achieve optimum safety and health conditions through the analysis and design of process, equipment, products, facilities, operations, and environments. Major topics include product design, plant layout, construction, maintenance, pressure vessels and piping, mechanical systems, materials handling and storage, ventilation, power tools, electrical equipment, and transportation vehicles and systems.
- **121. Safety and Health Program Management and Administration.** Credit 3 hours. Prerequisite: Enrollment in or prior credit for OSHE 111. This course studies the application of proven management principles and techniques to the management of safety and health and loss control programs. Major topics will include; planning, organizing, budgeting, resourcing, operating, implementing, and evaluating safety functions.
- 141. [241]. Principles of Industrial Hygiene & Toxicology. Credit 3 hours. This course introduces the basic industrial hygiene principles of anticipation, recognition, evaluation, and control of workplace conditions as they relate to occupational health. Major topics include: a variety of occupational hazards including air contaminants, chemical hazards, biological hazards, and physical hazards.
- **231. Safety Laws, Regulations, and Standards.** Credit 3 hours. This course studies the development processes, sources, and applications for minimum safety requirements established by laws, regulations, standards, and codes. Major topics will include OSHA General Industry and Construction Standards, the enforcement of safety standards, and the role of NIOSH and ACGIH in the safety movement.
- **242. Ergonomics.** Credit 3 hours. Prerequisite: Enrollment in or prior credit for Mathematics 241 and OSHE 141[OSHE 241]. This course explores ergonomic design principles which involve the planning and adapting of equipment and tasks to promote the comfort and efficiency of workers. Major topics include: human characteristics, physiology, and anthropometry and the application of these principles to workstations, tool design, and material handling procedures.
- **251. Environmental Laws and Regulations.** Credit 3 hours. This course is an introduction to federal and state environmental regulations which impact industry. Major topics include hazardous waste management, disposal and cleanup, prevention of air, water, and soil contamination and environmental program management.
- **261. Fire Protection and Prevention.** Credit 3 hours. This course introduces the basic principles of fire and fire prevention in the work place. Major topics include: evaluating existing and planned facilities from a fire and explosion standpoint, and applying the basic principles of hazard recognition, evaluation, and control when developing fire prevention and emergency response activities.
- 311. Safety & Health Program Development. Credit 3 hours. This course presents the key elements necessary to develop or to assess occupational safety and health programs. Major topics include management commitment and employee involvement; worksite analysis, hazard correction and control; training, and evaluation
- **322. Behavioral Aspects of Safety.** Credit 3 hours. Prerequisite: Psychology 101. This course will introduce students to the application of scientific research based principles and methods to bring about change in the work culture through attitude, behavior, and environmental conditions. Specific topics will include traditional approaches and philosophies for improving safety, environmental effects, incentives, developing and building cultural change, identifying critical behavior, developing checklists, giving and receiving recognition and measuring performance.
- **323. Product Safety and Liability.** Credit 3 hours. This course examines the importance of considering the safety of a product in its ultimate use. Major topics include: aspects of product design, intended and improper use, and potential injury mechanisms. It uses classic product liability case studies to provide practical application of the principles learned. It also studies manufacturer liabilities through injury tort actions.
- **341. Field Methods of Industrial Hygiene and Toxicology.** Credit 3 hours. Prerequisites: Mathematics 241 and OSHE 141[OSHE 241]. This course presents an examination of the methods used by the industrial hygienist for the identification and assessment of health hazards in the workplace. Major topics include: establishment and use of methodologies to sample and evaluate exposures to air contaminants (gases, vapors, aerosols, and particulates), microorganisms and allergens, noise, heat, and cold stress, electrical and magnetic radiation, and ionizing and ultraviolet radiation. The course also includes equipment use, maintenance, and calibration.
- **381.** [281]. Safety in Chemical and Process Industries. Credit 3 hours. Prerequisites: Enrollment in or prior credit for Chemistry 101 and Physics 191. The course introduces the fundamentals of chemical and process industry safety. Major topics include: toxic, fire, and pressure hazards inherent in chemical plants and petroleum refineries, and the methods used to identify, assess, and eliminate those hazards. It also introduces students to federal safety regulations for proves safety management.

- **382.** [282]. Construction Safety. Credit 3 hours. Prerequisites: Enrollment in or prior credit for OSHE 111 and OSHE 121. The course studies the application of management principles, communication and human relations factors, safety/health rules, industry and federal standards, accident investigation, and the job planning phases in the construction environment.
- 421. [321]. Measurement of Safety Performance and Accident Investigation and Analysis. Credit 3 hours. Prerequisite: Enrollment in or prior credit for Mathematics 241. This course presents methods to objectively evaluate a company's safety progress. The course covers two distinct topics: (1) measuring safety performance, and (2) incident investigation and analysis. The first segment of the course addresses ways of measuring safety performance objectively and subjectively using safety audits, inspections, observations, performance appraisal systems, and injury/illness statistics. The second segment of the course addresses the causes of accidents, systematic ways of conducting investigations, documenting the findings, causes and other significant data, and drafting recommendations.
- **424.** [324]. System Safety Methodologies. Credit 3 hours. Prerequisites: Mathematics 241, OSHE 111, and OSHE 121. The course presents the concepts of Risk Management and Loss Control through the use of systematic approaches to hazard anticipation, identification, evaluation and control. Major topics include: an introduction to qualitative methods of evaluating the hazards and risks associated with systems, processes, equipment, and other entities. It also includes a review of techniques for mitigating or managing identified risks.
- **441. Industrial Toxicology.** Credit 3 hours. Prerequisites: General Biology 151, Zoology 241, and OSHE 141[OSHE 241]. This course examines the effects of industrial toxicants on the human body. Major topics include: the discipline of toxicology, acute and chronic exposures and effects, routes and characteristics of exposures, target organs and systems, dose and response, and carcinogenesis. It also discusses the toxic characteristics of various classes of toxic materials.
- **451. Hazardous Materials Management.** Credit 3 hours. Prerequisite: OSHE 251. This course examines acceptable policies, procedures, and methods for the use of hazardous materials, and the disposal of oil and hazardous wastes produced by industry. Major topics include characteristics of hazardous materials, including methods for their transportation and storage. It also includes advanced aspects of risk assessment; applicable environmental legislation; waste characterizations, minimization and recovery; chemical, physical, and biological waste treatment methods; thermal, injection well and landfill disposal methods; and a section on the transportation of hazardous wastes.
- **452. Pollution Fundamentals and Control Technologies.** Credit 3 hours. Prerequisite: OSHE 251. This course explores the mechanisms of air, water and soil pollution and the steps to eliminate or minimize impacts on the ecology and human health and safety. The course is also designed to explore the existing pollution prevention and control technologies and the evaluation of their performance.
- **471.** [371]. Education and Training Methods for Occupational Safety and Health. Credit 3 hours. This course introduces the concepts of adult training and education with emphasis on occupational safety and health. Major topics include: instructional system design, including performing a training needs assessment tasks analysis, program design goals and objectives, performance evaluation, delivery methods and media; computer-based training methods; systems to manage costs; and record keeping.
- **491. Special Topics.** Credit 1-4 hours. Prerequisite: Permission of the Department Head. Special topics in occupational safety, health, and environment that are appropriate for a professional elective in Occupational, Safety, Health, and Environment major. May be taken repeatedly when topics vary for a maximum of six credit

Appendix H

Justification for Full-time Instructor Search in Occupational Safety, Health, and Environment (OSH&E)

The Bachelor of Science degree program in Occupational Safety, Health, and Environment (OSH&E) program at Southeastern originated as a two-year Associate of Applied Science degree program in Industrial Technology with a concentration in OSH&E in 1996. The Board of Regents approved the new program in the Fall of 2004. The OSH&E BS program is designed to provide an academically comprehensive curriculum that prepares graduates with the ability and competency to become highly qualified safety, industrial hygiene, and environmental professionals.

The OSH&E program has gained a prestigious reputation among students, employers, and the local industrial communities, for its uniqueness, contribution to economic development of the State, and more importantly, the quality assurance of program instruction and administration. Information on OSH&E academic programs maintained by the American Society of Safety Engineers list Southeastern's OSH&E degree program as the only program of its type in the southeastern United States (east of Texas and south of Tennessee).

The program was developed with considerable input from managers at area industries that employ safety and health professionals, who reported a significant need for safety and health professionals in the regional and statewide workforce. The program has seen a steady growth in both enrollment and graduation since its installation. The majority of OSH&E graduates have high-salary jobs. Of the most recent alumni survey on the OSH&E graduates of the last two years, 6 (of 16) graduates earn greater than \$70,000 annual salary (with one of them greater than \$90,000), 6 graduates have their annual salary ranging between \$50,000 and \$70,000, and the other 4 in the range \$30,000 - \$50,000.

We have undergone review by the accreditation team from the Accreditation Board for Engineering and Technology (ABET) in the Fall of 2010, and have recently become only the third environmental, health and safety and similarly named programs in the nation accredited under the Applied Science Accreditation Commission.

The OSH&E degree programs currently have a total of 81 students, with 69 in BS and 12 in AAS. There are four faculty members for the program, including one full-time instructor, two tenure-track faculty, and one adjunct instructor. The two tenure-track faculty members are also involved in help with teaching Engineering Technology (ET) upper-level classes. All three full-time faculty currently have full loads, and all of them have volunteered no-comp overloads in the past three years. Given that the majority of OSH&E students are non-traditional and usually work while in the program, scheduling of classes becomes an extremely challenging task, especially under the current 4.5-day schedule. This unduly affects students' progress toward a timely graduation. With the upcoming retirement of the full-time instructor after this academic year, it would be impossible to continue the functional operation of the program without a new full-time instructor.

On the other hand, the OSH&E program is a multi-disciplinary field which requires diverse expertise and great industrial experience of the faculty members. The loss of the full-time

instructor with superior expertise and tremendous experience, particularly in occupational safety and health management, needs to be made up immediately by hiring another instructor in order to maintain the program operation continuously and successfully.

In summary, the quality of the OSH&E program which has been certified by ABET, could be jeopardized significantly without the necessary faculty. As Southeastern is aimed at maintaining both the quality instruction and the sustainable student progression, it is imperative to ensure that superior and sufficient faculty members are on board.

Appendix I

Southeastern OSH&E Program Advisory Committee Questionnaire_ October 2011

Exit	this	survey	
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I. How do vou fe	eel about the cor	npetencies of Sou	theastern's OS	H&E Bachelor of
•	Program gradua	•		
Excellent				
○ Good				
Average				
C Below Average				
O Not Applicable				
		r of Science Degre I rank them using	•	•
Mathematical and				
statistical				
knowledge				
Communication skills				
Multi-disciplinary eamwork ability				
Practical-oriented knowledge and skills				
Other (Please specify)				
objectives. Pleas	se tell us accord	atement of the OS ing to your experi provide us your su	ence whether o	ur program meets
	Agree	Don't know	Disagree	Not Applicable
 Apply knowledge and principles of mathematics, 	O	O	С	O

	Agree	Don't know	Disagree	Not Applicable
science, technology, and management in industry, business, or other related areas of employment as occupational safety, health, and environment professionals				
2. Apply practice- oriented knowledge and skills in safety, health, and environment to anticipate, identify and evaluate hazardous conditions and practices, to				
develop hazard control designs, methods, procedures and programs, and to implement and manage effective safety, health, and environment programs	0	•	•	•
3. Become effective communicators and ethical facilitators within the practice of safety, health, and environment	O	O	O	O
4. Continue professional development to address the need of applying principles of safety, health,	0	0	0	0

Agree	Don't know	Disagree	Not Applicable
	Agree	Agree Don't know	Agree Don't know Disagree

4. The following is the current statement of the OSH&E program student outcomes. Using numbers from 1 to 5 where 1 means the least and 5 means the most, please rate the importance of each outcome.

	1	2	3	4	5	Not Applicable
1.1. Ability to apply basic mathematical and statistical knowledge in the safety, health, and environment field	O	O	O	O	O	O
1.2. Understanding basic principles in chemistry, physics, and biology as it pertains to the practice of safety, health, and environment	0	O	O	O	O	C
1.3. Understanding basic principles in business management as it pertains to the practice of safety, health, and environment	O	©	©	©	O	O
2.A1. Ability to understand occupational safety, health, and environment fundamentals	0	O	O	O	O	O
2.A2. Ability to know legal aspects of	0	O	0	0	0	O

	1	2	3	4	5	Not Applicable
safety, health, and environmental practices 2.A3. Understanding the interactions of physical, chemical, biological, and	O	O	O	\odot	O	O
ergonomic agents, factors, and/or stressors on the human body						
2.A4. Understanding the application of laws, regulations, standards, and codes to safety, health and environmental conditions	0	0	O	0	O	O
2.A5. Ability to understand and use basic principles of fire prevention and protection in the workplace	O	O	O	O	O	O
2.A6. Ability to know industrial and construction safety throughout the work processes	О	O	O	O	O	O
2.B1. Ability to utilize basic laboratory instrumentations associated with safety, health, and environment	0	O	O	O	O	O
2.B2. Ability to anticipate, identify and evaluate hazardous agents,	0	0	O	0	0	0

	1	2	3	4	5	Not Applicable
conditions, and practices						
2.B3. Understanding fundamental exposure assessment and environmental sampling techniques	0	O	O	O	O	O
2.B4. Ability to develop control designs, methods, procedures, and programs to eliminate or mitigate safety, health, and environmental hazards	О	O	O	O	O	O
2.B5. Ability to conduct accident/incident investigation and analysis	0	0	O	0	O	O
2.B6. Ability to implement and manage effective safety, health, and environmental programs	0	O	O	O	O	O
3.1. Ability to effectively express thoughts in oral and written communications	O	O	O	O	O	O
3.2. Understanding the techniques, skills, and modern behavioral tools necessary for the practice of safety, health, and environment	0	O	O	O	O	O

	1	2	3	4	5	Not Applicable
3.3. Ability to effectively function as a part of multidisciplinary team	O	O	O	O	O	О
4.1. Students are encouraged to become members of ASSE (American Society of Safety Engineers) and AIHA (American Industrial Hygiene Association) Southeastern						
Louisiana University Student Sections and be actively involved in the events and activities organized by the Student Sections. At least 50% of upper- level students are ASSE/AIHA members.	C	O	O	0	C	O
4.2. Students are encouraged to continue professional growth and improvement by pursuing the widely recognized certifications						
including, but not limited to: Certified Safety Professional (CSP) and Certified Industrial Hygienist (CIH); and/or by pursuing master's/doctoral degrees in	O	O	O	O	O	0

	1	2	3	4	5	Not Applicable
environmental,						
health, and safety						
and similarly named						
programs. As						
measured on the						
Southeastern						
Alumni Survey, at						
least 50% of the						
OSH&E graduates						
will become CSPs						
and/or CIHs.						

5. Using numbers from 1 to 5 where 1 means the lowest and 5 the highest, please rate the level of Southeastern OSH&E students' competency for each of the OSH&E program student outcomes that are listed in question 4.

	1	2	3	4	5	Not Applicable
1.1. Ability to apply basic mathematical and statistical knowledge in the safety, health, and environment field	O	O	O	О	O	O
1.2. Understanding basic principles in chemistry, physics, and biology as it pertains to the practice of safety, health, and environment	O	O	O	0	O	O
1.3. Understanding basic principles in business management as it pertains to the practice of safety, health, and environment	O	©	©	O	O	O
2.A1. Ability to understand	O	0	0	O	O	\circ

	1	2	3	4	5	Not Applicable
occupational safety, health, and environment fundamentals						
2.A2. Ability to know legal aspects of safety, health, and environmental practices	O	O	O	O	O	O
2.A3. Understanding the interactions of physical, chemical, biological, and ergonomic agents, factors, and/or stressors on the human body	O	O	O	O	O	O
2.A4. Understanding the application of laws, regulations, standards, and codes to safety, health and environmental conditions	O	O	O	O	O	O
2.A5. Ability to understand and use basic principles of fire prevention and protection in the workplace	O	O	O	O	O	O
2.A6. Ability to know industrial and construction safety throughout the work processes	O	O	O	O	O	O
2.B1. Ability to utilize basic laboratory instrumentations associated with	O	O	O	O	O	O

	1	2	3	4	5	Not Applicable
safety, health, and environment						
2.B2. Ability to anticipate, identify and evaluate hazardous agents, conditions, and practices	0	O	O	O	O	O
2.B3. Understanding fundamental exposure assessment and environmental sampling techniques	O	0	O	O	O	O
2.B4. Ability to develop control designs, methods, procedures, and programs to eliminate or mitigate safety, health, and environmental hazards	O	O	O	©	\circ	O
2.B5. Ability to conduct accident/incident investigation and analysis	0	0	0	0	O	0
2.B6. Ability to implement and manage effective safety, health, and environmental programs	0	O	O	©	O	O
3.1. Ability to effectively express thoughts in oral and written communications	0	0	O	0	0	O
3.2. Understanding the techniques,	O	C	0	0	O	O

	1	2	3	4	5	Not Applicable
skills, and modern behavioral tools necessary for the practice of safety, health, and environment						Дриосью
3.3. Ability to effectively function as a part of multidisciplinary team	C	O	O	O	O	O
4.1. Students are encouraged to become members of ASSE (American Society of Safety Engineers) and AIHA (American Industrial Hygiene Association) Southeastern						
Louisiana University Student Sections and be actively involved in the events and activities organized by the Student Sections. At least 50% of upper- level students are ASSE/AIHA members.	C	C	O	0	O	0
4.2. Students are encouraged to continue professional growth and improvement by pursuing the widely recognized certifications including, but not limited to: Certified Safety Professional	0	O	0	O	O	•

	1	2	3	4	5	Not Applicable
(CSP) and Certified						
Industrial Hygienist						
(CIH); and/or by						
pursuing						
master's/doctoral						
degrees in						
environmental,						
health, and safety						
and similarly named						
programs. As						
measured on the						
Southeastern						
Alumni Survey, at						
least 50% of the						
OSH&E graduates						
will become CSPs						
and/or CIHs.						

6. Using numbers from 1 to 5 where 1 means the least and 5 means the most, please rate the importance of the following courses in the current Southeastern OSH&E Bachelor of Science curriculum. Details of the course content are available at http://bit.ly/w3nLvb.

	1	2	3	4	5	Not Applicable
OSHE 111 Introduction to Occupational Safety, Health, and Environment	O	O	O	O	O	O
OSHE 112 Design of Hazard Controls	0	0	0	0	O	O
OSHE 121 Safety and Health Program Management and Administration	O	O	O	O	0	0
OSHE 141 Principles of Industrial Hygiene	О	0	0	0	C	С

	1	2	3	4	5	Not Applicable
OSHE 231 Safety Laws, Regulations, and Standards	O	O	O	O	O	O
OSHE 242 Ergonomics	0	0	0	0	\odot	O
OSHE 251 Environmental Laws and Practices	0	0	0	0	O	0
OSHE 261 Fire Protection and Prevention	O	0	0	0	O	0
OSHE 341 Field Methods of Industrial Hygiene and Toxicology	0	0	O	0	O	0
OSHE 381 Safety in Chemical and Process Industries	0	0	O	0	O	0
OSHE 382 Construction Safety	0	O	0	O	O	O
OSHE 421 Measurement of Safety Performance and Accident Investigation and Analysis	O	©	©	©	O	O
OSHE 424 System Safety Methodologies	0	0	0	O	O	0
OSHE 452 Pollution Foundamentals and Control Technologies	0	0	O	0	0	0
OSHE 311 Safety and Health Program Development	0	0	0	0	O	0
OSHE 322 Behavior Aspects of Safety	0	O	0	0	O	O

	1	2	3	4	Not 5 Applicable		
OSHE 323 Product Safety and Liability	О	C	O	0	0 0		
OSHE 441 Industrial Toxicology	\circ	O	O	0 (o o		
OSHE 451 Hazardous Materials Management	O	O	O	© (o o		
OSHE 471 Education and Training Methods for Occupational Safety and Health	0	O	0	0 (o o		
students to take co Science, and Busin suggest any other curriculum to mee	ness, etc. B courses or	ased on yo concepts t	ur professior hat should be	nal experienc e incorporate	e, please d in the		
8. How do you feel		_	_		-		
Qualifications and competencies	Excellent	Good	Average	Below Aver	age Not Applicable		
Size of full-time faculty	O	0	O	O	O		
9. The OSH&E current equipment inventory is available at http://bit.ly/sY4PQk. How do you feel about the sufficiency of these equipment and instruments? Please write down the names of any equipment/instruments that you suggest to be added.							

10. How do you feel about the following aspects in regard to the institutional and industrial support for the OSH&E program?

	Excellent	Good	Average	Below Average	Not Applicable
Leadship of the program	O	O	0	O	O
Program budget and financial support	О	O	O	0	O
Staffing and institutional services	O	C	О	0	O
Support for faculty professional development	O	O	0	0	O
Support from local industries	O	\circ	0	O	0
		Done	9		

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