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| For Academic Affairs and Research Use Only | |
| Proposal Number | NHP16 |
| CIP Code: |  |
| Degree Code: |  |

**NEW OR MODIFIED COURSE PROPOSAL FORM**

**[X] Undergraduate Curriculum Council**

**[ ] Graduate Council**

|  |
| --- |
| **[X]New Course, [ ]Experimental Course (1-time offering), or [ ]Modified Course (Check one box)** |

Signed paper copies of proposals submitted for consideration are no longer required. Please type approver name and enter date of approval.

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| --- | --- |
| Amy Hyman 3/16/2022 **Department Curriculum Committee Chair** | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Enter date…  **COPE Chair (if applicable)** |
| Joseph L. Richmond 3/16/2022 **Department Chair** | Julie B. King 3/9/2022  **Head of Unit (if applicable)** |
| Shanon Brantley 3/22/2022  **College Curriculum Committee Chair** | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Enter date…  **Undergraduate Curriculum Council Chair** |
| Mary Elizabeth Spence 3/15/2022 **Office of Assessment (new courses only)** | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Enter date…  **Graduate Curriculum Committee Chair** |
| \_\_\_\_\_\_\_\_\_\_Scott E. Gordon\_\_\_\_\_\_\_\_\_ 3/22/22 **College Dean** | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Enter date…  **Vice Chancellor for Academic Affairs** |
| \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Enter date…  **General Education Committee Chair (if applicable)** |  |

1. **Contact Person (Name, Email Address, Phone Number)**

Dr. Amy Hyman, [ahyman@astate.edu](mailto:ahyman@astate.edu) 870-680-8286

1. **Proposed starting term and Bulletin year for new course or modification to take effect**

Spring 2023, Bulletin Year 2022-2023.

**Instructions:**

*Please complete all sections unless otherwise noted. For course modifications, sections with a “Modification requested?” prompt need not be completed if the answer is “No.”*

|  |  |  |
| --- | --- | --- |
|  | **Current (Course Modifications Only)** | **Proposed (New or Modified)**  *(Indicate “N/A” if no modification)* |
| **Prefix** |  | **OESH** |
| **Number\*** |  | **3123** |
| **Title**  (include a short title that’s 30 characters or fewer) |  | **Issues in Industrial Hygiene** |
| **Description\*\*** |  | **Advanced study in the area of industrial hygiene including: noise, ventilation, and specialized calculations. Prerequisite, OESH 3013. Spring.** |

***\**** Confirm with the Registrar’s Office that number chosen has not been used before and is available for use. For variable credit courses, indicate variable range. *Proposed number for experimental course is 9*.

\*\*Forty words or fewer (excepting prerequisites and other restrictions) as it should appear in the Bulletin.

1. **Proposed prerequisites and major restrictions** **[Modification requested? Yes/No]**

(Indicate all prerequisites. If this course is restricted to a specific major, which major. If a student does not have the prerequisites or does not have the appropriate major, the student will not be allowed to register).

1. **YES** Are there any prerequisites?
   1. If yes, which ones?

OESH 3013 Fundamentals of Occupational Health and Safety

* 1. Why or why not?

This course is meant to be an in-depth study in industrial hygiene and will build upon the prerequisite coursework

1. **NO** Is this course restricted to a specific major?
   1. If yes, which major? Enter text...
2. **Proposed course frequency [Modification requested? Yes/No]**

(e.g. Fall, Spring, Summer; if irregularly offered, please indicate, “irregular.”) *Not applicable to Graduate courses.*

Spring

1. **Proposed course type [Modification requested? Yes/No]**

Will this course be lecture only, lab only, lecture and lab, activity (e.g., physical education), dissertation/thesis, capstone, independent study, internship/practicum, seminar, special topics, or studio? Please choose one.

Lecture.

1. **Proposed grade type [Modification requested? Yes/No]**

What is the grade type (i.e. standard letter, credit/no credit, pass/fail, no grade, developmental, or other [please elaborate])

Standard Letter

1. **NO** Is this course dual-listed (undergraduate/graduate)?
2. **NO** Is this course cross-listed?

*(If it is, all course entries must be identical including course descriptions. Submit appropriate documentation for requested changes. It is important to check the course description of an existing course when adding a new cross-listed course.)*

**a.** – If yes, please list the prefix and course number of the cross-listed course.

Enter text...

**b.** – **Yes / No** Can the cross-listed course be used to satisfy the prerequisite or degree requirements this course satisfies?

Enter text...

1. **NO** Is this course in support of a new program?

a. If yes, what program?

Enter text...

1. **NO** Will this course be a one-to-one equivalent to a deleted course or previous version of this course (please check with the Registrar if unsure)?

a. If yes, which course?

Enter text...

**Course Details**

1. **Proposed outline** **[Modification requested? Yes/No]**

(The course outline should be topical by weeks and should be sufficient in detail to allow for judgment of the content of the course.)

|  |  |
| --- | --- |
| Week | Topic/Assignments |
| 1 | Introduction to Industrial Hygiene |
| 2 | Basic Ear anatomy and simple noise calculations |
| 3 | Advanced noise calculations |
| 4 | Topic Application: Hearing Protection Devices |
| 5 | Basic Industrial Ventilation: Air Behavior |
| 6 | Airflow measurement techniques |
| 7 | General Exhaust Ventilation: Air Exchange |
| 8 | Local Exhaust Ventilation: Simple Fume hoods |
| 9 | Local Exhaust Ventilation: Advanced Hood Design |
| 10 | Topic Application: Ventilation Hood Project Presentation |
| 11 | IH calculations: Calibration guidelines |
| 12 | IH calculations: Gas and Vapor Concentrations |
| 13 | IH calculations: Particulate concentrations |
| 14 | IH calculations: Program costs and return on investments |
| 15 | IH calculations: interest calculations |
|  |  |

1. **Proposed special features** **[Modification requested? Yes/No]**

(e.g. labs, exhibits, site visitations, etc.)

None

1. **Department staffing and classroom/lab resources**

Current or adjunct OESH faculty will teach this course

1. Will this require additional faculty, supplies, etc.?

NO

1. **NO** Does this course require course fees?

*If yes: please attach the New Program Tuition and Fees form, which is available from the UCC website.*

**Justification**

**Modification Justification (Course Modifications Only)**

1. Justification for Modification(s)

Enter text...

**New Course Justification (New Courses Only)**

1. Justification for course. Must include:

a. Academic rationale and goals for the course (skills or level of knowledge students can be expected to attain)

Occupational safety professionals are an integral part of both public and private sector industry. These professionals must be trained to anticipate, recognize, evaluate, and control hazards in occupational settings. This course is meant to give an in-depth study of topics common in industrial hygiene including noise, ventilation, and to cover calculations common to the study of industrial hygiene. With this in-depth knowledge, students will be better prepared for certification exams upon graduation such as the Associate Safety Professional (ASP) and the Certified Industrial Hygienist (CIH) exam.

b. How does the course fit with the mission of the department? If course is mandated by an accrediting or certifying agency, include the directive.

The core mission of the College of Nursing and Health Professions is to provide a comprehensive and quality education to students seeking careers in various areas of health professions including occupational health and safety. The mission of the OESH program is to educate the next generation(s) of environmental health and safety practitioners that will be able to function effectively in industrial settings or the public sector.

c. Student population served.

This course is meant to serve upper level OESH students who have an interest in becoming certified as Certified Industrial Hygienists. Other OESH students will also be served by an in depth study of common IH topics.

d. Rationale for the level of the course (lower, upper, or graduate).

Offering this as an upper level course allows students to apply knowledge associated with already completed math and chemistry courses as well as some lower level OESH coursework. Thus, the level of this course meets requirements consistent with upper division academic rigor.

**Assessment**

**Assessment Plan Modifications (Course Modifications Only)**

1. **Yes / No** Do the proposed modifications result in a change to the assessment plan?

*If yes, please complete the Assessment section of the proposal*

**Relationship with Current Program-Level Assessment Process (Course modifications skip this section unless the answer to #18 is “Yes”)**

1. What is/are the intended program-level learning outcome/s for students enrolled in this course? Where will this course fit into an already existing program assessment process?

The intended program-level outcomes for students enrolled in this course are to develop critical thinking skills as they apply to anticipating, recognizing, evaluating, and controlling occupational hazards. Students are also expected to develop communication skills consistent with the program-level outcomes. This course will provide an in-depth study of topics typically encountered by industrial hygienists such as noise, industrial ventilation and various gas/vapor/particulate calculations. This course is designed to help students prepare for the Certified Industrial Hygiene examination.

SLO – 1 Students will demonstrate critical thinking skills to anticipate, recognize, and evaluate hazards affecting human health and the environment and develop and evaluate effective strategies to solve problems and mitigate risk.

SLO – 3 Students will be able to design and conduct environmental or workplace studies, experiments, or investigations, then analyze data and draw appropriate conclusions using sound scientific judgment.

SLO – 4 Students should be able to design, analyze, and evaluate environmental health or occupational safety management systems or programs including placing an emphasis on ethical considerations, stakeholder interests, and fiscal responsibility

1. Considering the indicated program-level learning outcome/s (from question #19), please fill out the following table to show how and where this course fits into the program’s continuous improvement assessment process.

*For further assistance, please see the ‘Expanded Instructions’ document available on the UCC - Forms website for guidance, or contact the Office of Assessment at 870-972-2989.*

|  |  |
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| **Program-Level Outcome 1 (from question #19)** | SLO – 1 Students will demonstrate critical thinking skills to anticipate, recognize, and evaluate hazards affecting human health and the environment and develop and evaluate effective strategies to solve problems and mitigate risk. |
| Assessment Measure | Direct measure: OESH 4003 Internship and OESH 4401 Senior Seminar act as a capstone to the program. Internship preceptors and instructors will be given a detailed evaluation form to fill out upon internship completion to assess for critical thinking skills in anticipating, recognizing and evaluating environmental health and occupational safety hazards. Students will also be given mock certification exams in either environmental health or occupational safety in the OESH 4401 Senior Seminar course. The grade outcomes of these exams will also be used to assess the program. Indirect measures: Students will be given program exit surveys in the OESH 4401 Senior Seminar course to assess the program. |
| Assessment  Timetable | Annually |
| Who is responsible for assessing and reporting on the results? | Course faculty and program chair: Julie King, Arkansas State University, College of Nursing & Health Professions, P.O. Box 910, State University, AR 72469, juking@astate.edu 870-972-3920 |

*(Repeat if this new course will support additional program-level outcomes)*

|  |  |
| --- | --- |
| **Program-Level Outcome 3 (from question #19)** | Students will be able to design and conduct environmental or workplace studies, experiments, or investigations, then analyze data and draw appropriate conclusions using sound scientific judgement. |
| Assessment Measure | Direct measure: OESH 4003 Internship and OESH 4401 Senior Seminar act as a capstone to the program. Internship preceptors and instructors will be given a detailed evaluation form to fill out upon internship completion to assess for critical thinking skills in anticipating, recognizing and evaluating environmental health and occupational safety hazards. Students will also be given mock certification exams in either environmental health or occupational safety in the OESH 4401 Senior Seminar course. The grade outcomes of these exams will also be used to assess the program. Indirect measures: Students will be given program exit surveys in the OESH 4401 Senior Seminar course to assess the program. |
| Assessment  Timetable | Annually |
| Who is responsible for assessing and reporting on the results? | Course faculty and program chair: Julie King, Arkansas State University, College of Nursing & Health Professions, P.O. Box 910, State University, AR 72469, juking@astate.edu 870-972-3920 |

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| **Program-Level Outcome 4 (from question #19)** | Students should be able to design, analyze, and evaluate environmental health or occupational safety management systems or programs including placing an emphasis on ethical considerations, stakeholder interests, and fiscal responsibility. |
| Assessment Measure | Direct measure: OESH 4003 Internship and OESH 4401 Senior Seminar act as a capstone to the program. Internship preceptors and instructors will be given a detailed evaluation form to fill out upon internship completion to assess for critical thinking skills in anticipating, recognizing and evaluating environmental health and occupational safety hazards. Students will also be given mock certification exams in either environmental health or occupational safety in the OESH 4401 Senior Seminar course. The grade outcomes of these exams will also be used to assess the program. Indirect measures: Students will be given program exit surveys in the OESH 4401 Senior Seminar course to assess the program. |
| Assessment  Timetable | Annually |
| Who is responsible for assessing and reporting on the results? | Course faculty and program chair: Julie King, Arkansas State University, College of Nursing & Health Professions, P.O. Box 910, State University, AR 72469, juking@astate.edu 870-972-3920 |

**Course-Level Outcomes**

1. What are the course-level outcomes for students enrolled in this course and the associated assessment measures?

|  |  |
| --- | --- |
| **Outcome 1** | Students should be able to apply concepts from the course to the design and interpretation of a complex noise study. |
| Which learning activities are responsible for this outcome? | Lectures  Readings  Discussion board  Topical presentation |
| Assessment Measure | A topical presentation with rubric 85% |

*(Repeat if needed for additional outcomes)*

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| **Outcome 2** | Students should be able to perform typical business industrial hygiene calculations pay special attention to stakeholders’ financial interests, ethical responsibility, and fiscal responsibility. |
| Which learning activities are responsible for this outcome? | Lectures  Readings  Discussion board  Topical presentation |
| Assessment Measure | Students will give a business presentation with rubric 85% |

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| **Outcome 3** | Students should be able to perform advanced ventilation calculations in the design of a LEV system. |
| Which learning activities are responsible for this outcome? | Lectures  Readings  Discussion board  Exams |
| Assessment Measure | Final Exam rubric 85% |

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| **Outcome 4** | Students should show proficiency with typical industrial hygiene Calculations found on the CIH exam given only the appropriate formula sheet. |
| Which learning activities are responsible for this outcome? | Lectures  Readings  Exams  Homework |
| Assessment Measure | Final Exam rubric 85% |

**Bulletin Changes**

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| **Instructions** |
| **Please visit** [**http://www.astate.edu/a/registrar/students/bulletins/index.dot**](http://www.astate.edu/a/registrar/students/bulletins/index.dot) **and select the most recent version of the bulletin. Copy and paste all bulletin pages this proposal affects below. Please include a before (with changed areas highlighted) and after of all affected sections.**  **\*Please note: Courses are often listed in multiple sections of the bulletin. To ensure that all affected sections have been located, please search the bulletin (ctrl+F) for the appropriate courses before submission of this form.** |

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|  |  |
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| **University Requirements:** |  |
| See University General Requirements for Baccalaureate degrees (p. 47) |  |
| **First Year Making Connections Course:** | **Sem. Hrs.** |
| UC 1013, Making Connections | **3** |
| **General Education Requirements:** | **Sem. Hrs.** |
| See General Education Curriculum for Baccalaureate degrees (p. 84)  **Students with this major must take the following:**  *MATH 1023, College Algebra or MATH course that requires MATH 1023 as a prerequisite CHEM 1013 and CHEM 1011 General Chemistry and Lab*  *BIO 2013 and BIO 2011 Biology of the Cell and Lab*  *COMS 1203, Oral Communication (Required Departmental Gen. Ed. Option)* | **35** |
| **Major Requirements:** | **Sem. Hrs.** |
| OESH 3013, Fundamentals of Occupational Health and Safety | 3 |
| OESH 3023, Principles of Environmental Health | 3 |
| OESH 3103, Recognition of Occupational Hazards | 3 |
| OESH 3113, Toxicology | 3 |
| OESH 3123 Issues in Industrial Hygiene | 3 |
| OESH 3203, Control of Occupational Hazards | 3 |
| OESH 3223, Industrial Hygiene Sampling and Analysis Laboratory | 3 |
| OESH 3303, Water, Wastewater, Solid and Hazardous Waste Treatment | 3 |
| OESH 3313, Epidemiology and Biostatistics | 3 |
| DPEM 3503, Principles of Disaster Preparedness and Emergency Management | 3 |
| OESH 4003, OESH Internship | 3 |
| OESH 4013, OSHA Standards and Practices | 3 |
| OESH 4113, Environmental Health and Safety Management | 3 |
| OESH 4203, Principles of Food Safety and Sanitation | 3 |
| OESH 4213, Construction Safety | 3 |
| OESH 4223, Accident Investigation and Analysis | 3 |
| OESH 4303, Environmental Risk Assessment | 3 |
| OESH 4313, Ergonomics | 3 |
| OESH 4323, Air Pollution | 3 |
| OESH 4401, OESH Senior Seminar | 1 |
| POSC 4633, Environmental Law and Administration | 3 |
| **Sub-total** | **58** |

Page 573 Course Descriptions BEFORE

**Occupational and Environmental Safety and Health (OESH)**

**OESH 3013. Fundamentals of Occupational Health and Safety** Introduction to major con- cepts and issues in occupational health and safety, including general principles, human work environment, control of hazards in the occupational environment, and occupational safety and health program requirements. Admission to the Occupational and Environmental Safety and Health Program required. Fall.

**OESH 3023. Principles of Environmental Healt**h Overview of traditional, emerging, and controversial issues associated with environmental health. Admission to the Occupational and Environmental Safety and Health Program required. Fall.

**OESH 3103. Recognition of Occupational Hazards** Introduction to the principles and practice of Industrial Hygiene through the study of chemical, physical, and biological agents responsible for occupational illness. Admission to the Occupational and Environmental Safety and Health Program required. Fall.

**OESH 3113. Toxicology** Principles of toxicology with industrial and environmental implications and the toxicological effects of certain dangerous substances, chemicals, metals, and environ- mentally relevant pesticides. Admission to the Occupational and Environmental Safety and Health Program required. Fall.

**OESH 3123. Issues in Industrial Hygiene**  Advanced study in the area of industrial hygiene including: noise, ventilation, and specialized calculations. Prerequisite OESH 3013. Spring.

**OESH 3203. Control of Occupational Hazards** Introduction to control strategies to reduce or eliminate occupational hazards including administrative and engineering controls, ventilation, shielding, noise control, and biohazard, thermal stress and emission control. Admission to the Occupational and Environmental Safety and Health Program required. Prerequisites, OESH 3013, OESH 3023, OESH 3103, and OESH 3113, and DPEM 3503. Spring.

**OESH 3223. Industrial Hygiene Sampling and Analysis Laboratory** Introduction to the most common types of field measurements, sampling collection methods, and laboratory analyses that are used in evaluating occupational health hazards. Admission to the Occupational and Environmental Safety and Health Program required. Prerequisites, OESH 3013, OESH 3023, OESH 3103, OESH 3113, and DPEM 3503. Spring.

PAGE 400 After

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| **University Requirements:** |  |
| See University General Requirements for Baccalaureate degrees (p. 47) |  |
| **First Year Making Connections Course:** | **Sem. Hrs.** |
| UC 1013, Making Connections | **3** |
| **General Education Requirements:** | **Sem. Hrs.** |
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| **Major Requirements:** | **Sem. Hrs.** |
| OESH 3013, Fundamentals of Occupational Health and Safety | 3 |
| OESH 3023, Principles of Environmental Health | 3 |
| OESH 3103, Recognition of Occupational Hazards | 3 |
| OESH 3113, Toxicology | 3 |
| OESH 3123 Special Topics in Industrial Hygiene | 3 |
| OESH 3203, Control of Occupational Hazards | 3 |
| OESH 3223, Industrial Hygiene Sampling and Analysis Laboratory | 3 |
| OESH 3303, Water, Wastewater, Solid and Hazardous Waste Treatment | 3 |
| OESH 3313, Epidemiology and Biostatistics | 3 |
| DPEM 3503, Principles of Disaster Preparedness and Emergency Management | 3 |
| OESH 4003, OESH Internship | 3 |
| OESH 4013, OSHA Standards and Practices | 3 |
| OESH 4113, Environmental Health and Safety Management | 3 |
| OESH 4203, Principles of Food Safety and Sanitation | 3 |
| OESH 4213, Construction Safety | 3 |
| OESH 4223, Accident Investigation and Analysis | 3 |
| OESH 4303, Environmental Risk Assessment | 3 |
| OESH 4313, Ergonomics | 3 |
| OESH 4323, Air Pollution | 3 |
| OESH 4401, OESH Senior Seminar | 1 |
| POSC 4633, Environmental Law and Administration | 3 |
| **Sub-total** | **58** |

PAGE 573 Course Descriptions AFTER

**Occupational and Environmental Safety and Health (OESH)**

**OESH 3013. Fundamentals of Occupational Health and Safety** Introduction to major con- cepts and issues in occupational health and safety, including general principles, human work environment, control of hazards in the occupational environment, and occupational safety and health program requirements. Admission to the Occupational and Environmental Safety and Health Program required. Fall.

**OESH 3023. Principles of Environmental Healt**h Overview of traditional, emerging, and controversial issues associated with environmental health. Admission to the Occupational and Environmental Safety and Health Program required. Fall.

**OESH 3103. Recognition of Occupational Hazards** Introduction to the principles and practice of Industrial Hygiene through the study of chemical, physical, and biological agents responsible for occupational illness. Admission to the Occupational and Environmental Safety and Health Program required. Fall.

**OESH 3113. Toxicology** Principles of toxicology with industrial and environmental implications and the toxicological effects of certain dangerous substances, chemicals, metals, and environ- mentally relevant pesticides. Admission to the Occupational and Environmental Safety and Health Program required. Fall.

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**OESH 3223. Industrial Hygiene Sampling and Analysis Laboratory** Introduction to the most common types of field measurements, sampling collection methods, and laboratory analyses that are used in evaluating occupational health hazards. Admission to the Occupational and Environmental Safety and Health Program required. Prerequisites, OESH 3013, OESH 3023, OESH 3103, OESH 3113, and DPEM 3503. Spring.