

Curriculum Proposal Cover Sheet - University-Wide Undergraduate Curriculum Committee

Contact Person(s) Dr. Jan K. Wachter	Email Address Jan.Wachter@iup.edu
Proposing Department/Unit Safety Sciences	Phone 7-3275

Check all appropriate lines and complete all information. Use a separate cover sheet for each course proposal and/or program proposal.

1. Course Proposals (check all that apply)

☐ New Course
 ☐ Course Prefix Change
 ☐ Course Deletion
☐ Course Revision
 ☐ Course Number and/or Title Change
 ☐ Catalog Description Change

Current course prefix, number and full title:

Proposed course prefix, number and full title, if changing:

2. Liberal Studies Course Designations, as appropriate

☐ This course is also proposed as a Liberal Studies Course (please mark the appropriate categories below)
☐ Learning Skills ☐ Knowledge Area ☐ Global and Multicultural Awareness ☐ Writing Intensive (include W cover sheet)
☐ Liberal Studies Elective (please mark the designation(s) that applies – must meet at least one)
 ☐ Global Citizenship ☐ Information Literacy ☐ Oral Communication
 ☐ Quantitative Reasoning ☐ Scientific Literacy

3. Other Designations, as appropriate

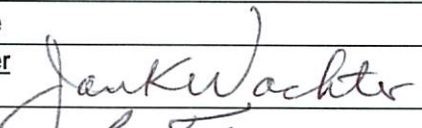
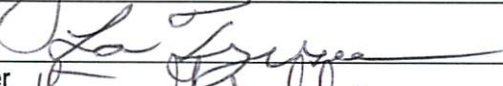
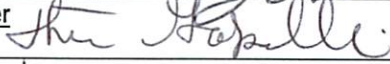
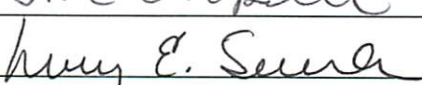
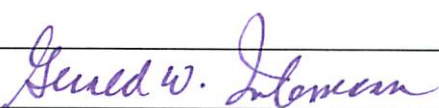
☐ Honors College Course
 ☐ Other: (e.g. Women's Studies, Pan African)

4. Program Proposals

☒ Catalog Description Change
 ☒ Program Revision
 ☐ Program Title Change
 ☐ New Track
☐ New Degree Program
 ☐ New Minor Program
 ☐ Liberal Studies Requirement Changes
 ☐ Other

Current program name: B.S. Degree in Safety, Health and Environmental Applied Sciences

Proposed program name, if changing:

5. Approvals	Signature	Date
Department Curriculum Committee Chair(s)	Dr. Jan K. Wachter 	11/5/2012
Department Chairperson(s)	Dr. Lon Ferguson 	11/5/12
College Curriculum Committee Chair	Dr. Jan K. Wachter 	11/13/12
College Dean	Dr. Mary Swinker 	11/14/12
Director of Liberal Studies (as needed)		
Director of Honors College (as needed)		
Provost (as needed)		11/19/12
Additional signatures (with title) as appropriate:		
UWUCC Co-Chairs		2/19/13 Received

PROGRAM REVISION FOR THE BACHELOR OF SCIENCE DEGREE IN SAFETY SCIENCES

Fall 2012

Part II. Description of Curriculum Change

1. Catalog Description

There is a small change being proposed to the catalog description for the program. With the course revisions that occurred recently in the Biology Department, BIOL 104 **or** BIOL 155 can now satisfy the safety sciences curriculum's additional science and math requirement. It is being proposed that these changes go into effect for the FALL 2013 term/catalog.

The new catalogue description is as follows:

Department of Safety Sciences

Website: www.iup.edu/safetysciences

Lon H. Ferguson, Chairperson: Cekada, Engler, Janicak, Minnick, Paschold, Rhodes, Wachter; and professors emeriti McClay, Pacalo, Soule

The department offers a minor and a Bachelor of Science degree with a major in Safety, Health and Environmental Applied Sciences with a focus on occupational exposures. The program in Safety, Health and Environmental Applied Sciences prepares the student for professional, administrative, managerial and supervisory positions in industry, manufacturing, insurance, transportation, utility, government, construction, trade service industries and others. There remains a need in Pennsylvania and the nation for university-educated occupational safety, health and environmental professionals. As a minimum, the curriculum includes a major of 52 credit in Safety, Health and Environmental Applied Sciences.

Bachelor of Science – Safety, Health and Environmental Applied Sciences

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 44

Mathematics: MATH 105

Natural Sciences: CHEM 101–102

Social Sciences: PSYC 101, global and multicultural awareness/social science elective

Liberal Studies Elective: 3 credits, MATH 217

Major: 52-58

Required Courses:

SAFE 101	Introduction to Occupational Safety and Health	3cr
SAFE 111	Principles of Industrial Safety I – General Industry	3cr
SAFE 211	Principles of Industrial Safety II – Construction Industry	3cr
SAFE 212	Hazard Prevention Management I	3cr
SAFE 215	Safety, Health and Environmental Communications	3cr
SAFE 220	Hazardous Materials and Emergency Management	3cr
SAFE 310	Environmental Safety and Health Regulations and Sustainability	3cr
SAFE 311	Fire Protection	3cr
SAFE 330	Recognition, Evaluation, and Control of Occupational Health Hazards I	4cr
SAFE 335	Industrial and Environmental Stressors	2cr
SAFE 345	Process and Systems Safety	3cr
SAFE 347	Ergonomics	3cr

SAFE 361	Air and Water Pollution	2cr
SAFE 412	Hazard Prevention Management II	3cr
SAFE 430	Recognition, Evaluation, and Control of Occupational Health Hazards II	4cr
SAFE 435	Ethics and Professionalism	1cr
SAFE 488/493	Internship	6-12cr

Other Requirements: 18

Additional Science and Mathematics:

BIOL 104	Human Biology: How the Body Works <i>or</i>	4cr
BIOL 155	Human Physiology and Anatomy	
PHYS 111	Physics I Lecture	3cr
PHYS 121	Physics I Lab	1cr
PHYS 112	Physics II Lecture	3cr
PHYS 122	Physics II Lab	1cr

Business Electives (two 3 credit courses from approved list): 6cr

ACCT 200	Foundations of Accounting
MGMT 300	Human Resource Management
MGMT 310	Principles of Management
MGMT 311	Human Behavior and Organization
MGMT 434	Quality Management

Free Electives: 0-6

Total Degree Requirements: 120

The minor consists of 18 credit hours in Occupational Safety, Health and Environmental Sciences courses as identified below. The minor has improved job opportunities for students in Environmental Geoscience, Criminology, Human Resource Management, International Business, and Management.

Minor - Safety, Health and Environmental Applied Sciences 18

Required Courses:

SAFE 101	Introduction to Occupational Safety and Health	3cr
SAFE 111	Principles of Industrial Safety I – General Industry	3cr
SAFE 220	Hazardous Materials and Emergency Management	3cr

Controlled Electives:

SAFE courses approved by department chair totaling at least 9cr 9cr
and including at least one environmental course (SAFE 310, SAFE 335, or
SAFE 361)

2. Summary of Changes

a. Table 1 summarizes the proposed changes in the Safety, Health and Environmental Applied Sciences Curriculum. The only change made was in the category of "Additional Science and Mathematics" category. It is being proposed that either BIOL 104 Human Biology: How the Body Works *or* BIOL 155 Human Physiology and Anatomy can now be used as the additional biological science requirement in the curriculum. The existing curriculum requirement shows only BIOL 155.

Proposed Program: Bachelor of Science—Safety, Health and Environmental Applied Sciences		Proposed Program: Bachelor of Science—Safety, Health and Environmental Applied Sciences	
Liberal Studies: As outlined in Liberal Studies section with the following specifications: Mathematics: MATH 105 Natural Sciences: CHEM 101-102 Social Science: PSYC 101, global and multicultural awareness course Liberal Studies Electives: 3cr, MATH 217	44	Liberal Studies: As outlined in Liberal Studies section with the following specifications: Mathematics: MATH 105 Natural Sciences: CHEM 101-102 Social Science: PSYC 101, global and multicultural awareness course Liberal Studies Electives: 3cr, MATH 217	44
Major: Required Courses:	52-58	Major: Required Courses:	52-58
SAFE 101 Introduction to Occupational Safety and Health	3cr	SAFE 101 Introduction to Occupational Safety and Health	3cr
SAFE 111 Principles of Industrial Safety I—General Industry	3cr	SAFE 111 Principles of Industrial Safety I—General Industry	3cr
SAFE 211 Principles of Industrial Safety II—Construction Industry	3cr	SAFE 211 Principles of Industrial Safety II—Construction Industry	3cr
SAFE 212 Hazard Prevention Management I	3cr	SAFE 212 Hazard Prevention Management I	3cr
SAFE 215 Safety, Health and Environmental Communications (W)	3cr	SAFE 215 Safety, Health and Environmental Communications (W)	3cr
SAFE 220 Hazardous Materials and Emergency Management	3cr	SAFE 220 Hazardous Materials and Emergency Management	3cr
SAFE 310 Environmental Safety and Health Regulations and Sustainability	3cr	SAFE 310 Environmental Safety and Health Regulations and Sustainability	3cr
SAFE 311 Fire Protection	3cr	SAFE 311 Fire Protection	3cr
SAFE 330 Recognition, Evaluation, and Control of Occupation Health Hazards I	4cr	SAFE 330 Recognition, Evaluation, and Control of Occupation Health Hazards I	4cr
SAFE 335 Industrial and Environmental Stressors	2cr	SAFE 335 Industrial and Environmental Stressors	2cr
SAFE 345 Process and Systems Safety	3cr	SAFE 345 Process and Systems Safety	3cr
SAFE 347 Ergonomics	3cr	SAFE 347 Ergonomics	3cr
SAFE 361 Air and Water Pollution	2cr	SAFE 361 Air and Water Pollution	2cr
SAFE 412 Hazard Prevention Management II	3cr	SAFE 412 Hazard Prevention Management II	3cr
SAFE 430 Recognition, Evaluation, and Control of Occupational Health Hazards II	4cr	SAFE 430 Recognition, Evaluation, and Control of Occupational Health Hazards II	4cr
SAFE 435 Ethics and Professionalism	1cr	SAFE 435 Ethics and Professionalism	1cr
SAFE 488/493 Internship (W)	6-12cr	SAFE 488/493 Internship (W)	6-12cr
Other Requirements: Additional Science and Mathematics: BIOL 155 Human Physiology and Anatomy PHYS 111 Physics I Lecture PHYS 112 Physics II Lecture PHYS 121 Physics I Lab PHYS 122 Physics II Lab Business Electives (two 3 credit courses from approved list): ACCT 200 Foundations of Accounting MGMT 300 Human Resource Management MGMT 310 Principles of Management MGMT 311 Human Behavior and Organization MGMT 434 Quality Management Free Electives: Total Degree Requirements:	18 4cr 3cr 3cr 1cr 1cr 6cr 0-6 120	Other Requirements: Additional Science and Mathematics: BIOL 104 Human Biology: How the Body Works or BIOL 155 Human Physiology and Anatomy PHYS 111 Physics I Lecture PHYS 112 Physics II Lecture PHYS 121 Physics I Lab PHYS 122 Physics II Lab Business Electives (two 3 credit courses from approved list): ACCT 200 Foundations of Accounting MGMT 300 Human Resource Management MGMT 310 Principles of Management MGMT 311 Human Behavior and Organization MGMT 434 Quality Management Free Electives: Total Degree Requirements:	18 4cr 3cr 3cr 1cr 1cr 6cr 0-6 120

Minor-Safety, Health and Environmental Applied Sciences	18	Minor-Safety, Health and Environmental Applied Sciences	18
Required Courses:		Required Courses:	
SAFE 101 Introduction to Occupational Safety and Health	3cr	SAFE 101 Introduction to Occupational Safety and Health	3cr
SAFE 111 Principles of Industrial Safety I–General Industry	3cr	SAFE 111 Principles of Industrial Safety I–General Industry	3cr
SAFE 220 Hazardous Materials and Emergency Management	3cr	SAFE 220 Hazardous Materials and Emergency Management	3cr
Controlled Electives:	9cr	Controlled Electives:	9cr
SAFE courses approved by department chair totaling at least nine credits and including at least one environmental course (SAFE 310, SAFE 335, or SAFE 361)		SAFE courses approved by department chair totaling at least nine credits and including at least one environmental course (SAFE 310, SAFE 335, or SAFE 361)	

b. List of all associated course changes:

- No major course changes are directly associated with this program revision.
- However, prerequisites/corequisites for SAFE 330, 335, 347 and 430 were changed to include BIOL 104 or BIOL 155 (rather than only citing BIOL 155 as the biological science course prerequisite or corequisite).

3. Rationale for Program Changes:

BIOL 155 – Human Physiology and Anatomy – has been the traditional mandatory biology course that safety science majors have taken in their curriculum to prepare them for their profession and for taking some of the more biologically-related safety science courses. The Department of Biology has recently revised some of their non-biology major courses. A revised course - BIOL 104 Human Biology: How the Human Body Works - now also covers physiology and anatomy topics that are sufficient to prepare safety science students. Thus, either BIOL 155 or BIOL 104 can now be used for educating safety science students on human anatomy, human physiology, and how the body works.

Note: Most safety science students are currently taking BIOL 155 as their biological science course requirement. However, some students are taking BIOL 104 to fulfill this requirement and substitution forms are being processed and approved to allow the substitution of BIOL 104 for BIOL 155 to occur. Thus, this program change will provide students flexibility in their biology course selection as well as the elimination of the need for processing substitution forms.

Part III Implementation

1. How will the proposed revision affect students already in the existing program?

It will not affect students already in the existing program, since most are already taking BIOL 155 as their biological science course requirement – and this option is still available under the program revision. However, some students are taking BIOL 104 to fulfill this requirement and substitution forms are being processed and approved to allow the substitution of BIOL 104 for BIOL 155. This program change will provide students flexibility in the biology course selection as well as eliminate the need for processing substitution forms.

2. Are faculty resources adequate?

Resources are adequate. Students will select either BIOL 104 or BIOL 155 as their required biology course as determined by available spaces in these courses.

3. Are other resources adequate?

Yes.

4. Do you expect an increase or decrease in the number of students as a result of these revisions?

No. This change should not affect enrollment in the safety, health and environmental (SHE) applied sciences program.

Part IV. Periodic Assessment

1. Describe the evaluation plan.

Periodic assessment of the SHE applied sciences program will include both an internal and external evaluation. The internal evaluation is completed annually by department faculty. This evaluation includes a review of all of our student outcomes which are linked directly to the ASAC/ABET outcomes.

2. Specify the frequency of the evaluations.

The internal evaluations of the program are completed annually by department faculty. The Department Advisory Committee review our programs semi-annually and the ABET Accreditation evaluations occur once every six years.

3. Identify the evaluating entity.

Internal Evaluation: Department Faculty and students.

External Evaluations: Safety, Health and Environmental Sciences Advisory Committee and the Accreditation Board for Engineering and Technology (ABET), Applied Science Accreditation Commission.

Part V. Course Proposals

The following proposals are attached:

Course catalog revisions (i.e., prerequisite/corequisite changes for SAFE courses to also include BIOL 104 as an option when BIOL 155 is listed as a prerequisite): SAFE 330, SAFE 335, SAFE 347, and SAFE 430.

Part VI. Letters of Support

From: Carl Luciano <luciano@iup.edu>

Date: 11/02/12 10:11 AM

To: Jan K Wachter <jan.wachter@iup.edu>

Cc: Sandra Newell <sjnewell@iup.edu>, Lon.Ferguson@iup.edu, Carl Luciano <luciano@iup.edu>

Jan

Yes, we support this. Thanks to Safety Sciences for the collaboration on this issue and for our productive discussions-CL

Carl Luciano
Professor and Chair
Department of Biology
Indiana University of Pennsylvania

-----Original Message----- From: Jan K Wachter
Sent: Friday, November 02, 2012 10:05 AM
To: Carl S. Luciano
Cc: Sandra Newell ; Lon.Ferguson@iup.edu
Subject: Re: SAFETY SCIENCES PROGRAM REVISION PROPOSAL - Letter of Support

Dr. Luciano - Safety Sciences is in the process of putting forth a minor program revision in its undergrad curriculum that allows using either BIOL 104 or BIOL 155 to satisfy its biological science requirement (currently, only BIOL 155 can be used). We discussed this a while ago.

The justification provided in the program revision is as follows:

BIOL 155 - Human Physiology and Anatomy - has been the traditional mandatory biology course that safety science majors have taken in their curriculum to prepare them for their profession and for taking some of the more biologically-related safety science courses. The Department of Biology has recently revised some of their non-biology major courses. A revised course - BIOL 104 Human Biology: How the Human Body Works - now also covers physiology and anatomy topics that are sufficient to prepare safety science students. Thus, either BIOL 155 or BIOL 104 can now be used for educating safety science students on human anatomy, human physiology, and how the body works.

Note: Most safety science students are currently taking BIOL 155 as their biological science course requirement. However, some students are taking BIOL 104 to fulfill this requirement and substitution forms are being processed and approved to allow the substitution of BIOL 104 for BIOL 155 to occur. Thus, this program change will provide students flexibility in their biology course selection as well as the elimination of the need for processing substitution forms.

Would you send Lon and I an e-mail supporting this change so I can include it in our program revision?

Thanks,

Jan Wachter