

LSC Use Only No: 246 LSC Action-Date: \_\_\_\_\_ UWUCC USE Only No. 02-39 UWUCC Action-Date: App 2/4/03 Senate Action Date: App 2/25/03

**Curriculum Proposal Cover Sheet - University-Wide Undergraduate Curriculum Committee**

Contact Person Dr. Lon Ferguson	Email Address Ferguson@iup.edu
Proposing Department/Unit Safety Sciences Department	Phone 7-3019

Check all appropriate lines and complete information as requested. Use a separate cover sheet for each course proposal and for each 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

<u>Current</u> Course prefix, number and full title	<u>Proposed</u> course prefix, number and full title, if changing
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**2. Additional Course Designations: check if appropriate**

This course is also proposed as a Liberal Studies Course.                       Other: (e.g., Women's Studies, Pan-African)  
 This course is also proposed as an Honors College Course.

**3. Program Proposals**

New Degree Program                       Program Title Change                       Program Revision  
 New Minor Program                       New Track                       Other

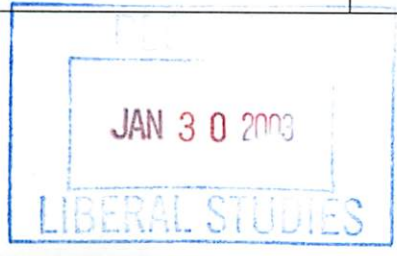
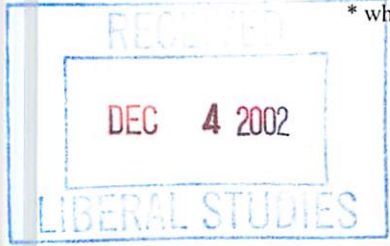
**B.S. Degree in Safety Sciences**

<u>Current</u> program name	<u>Proposed</u> program name, if changing
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**4. Approvals**

		Date
Department Curriculum Committee Chair(s)	<i>Lon H. Ferguson</i>	10/18/02
Department Chair(s)	<i>Lon H. Ferguson</i>	10/18/02
College Curriculum Committee Chair	<i>[Signature]</i>	11-22-02
College Dean	<i>[Signature]</i>	25 Nov 02
Director of Liberal Studies *	<i>[Signature]</i>	1-30-03
Director of Honors College *		
Provost *		
Additional signatures as appropriate: (include title)		
UWUCC Co-Chairs	<i>Gail S. Sechrist</i>	2/4/03

\* where applicable



**PROGRAM REVISION FOR THE BACHELOR OF SCIENCE  
DEGREE IN SAFETY SCIENCES**

Fall 2003

**Part II. Description of Curriculum Change**

**1. Catalog Description**

There will be two minor change to the catalog description for the program and we have added a brief description for the minor in safety sciences. These changes are in "**bold**".

The department offers a **minor and a Bachelor of Science degree in Safety Sciences with a focus** on occupational safety and health. The program in Safety 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 and health professionals. The curriculum includes a major of 41 credit hours in Safety Sciences and an additional 15 credit hours in related professional courses. A variety of elective courses is available in both the major and professional fields that enable students to strengthen their primary interest areas.

Bachelor of Science-Safety Sciences

Liberal Studies: As outlined in Liberal Studies section with the following specifications: **52 cr**

**Mathematics:** (3 credits) MATH 217

**Natural Sciences:** CHEM 101 & 102

**Social Sciences:** PSYC 101, SOC 151, non western culture required

**Liberal Studies Electives:** (7 credits) ECON 122 and MATH 121

Major: **41 cr**

Required Courses:

SAFE 101	Introduction to Occupational Safety & Health	3 cr
SAFE 111	Principles of Industrial Safety I	3 cr.
SAFE 210	Environmental Safety & Health Regulations	3 cr.
SAFE 211	Principles of Industrial Safety II	4 cr.
SAFE 301	Health Hazard Identification	3 cr
SAFE 303	Control of Health Hazards	3 cr.
SAFE 311	Industrial Fire Protection	3 cr.
SAFE 345	Systems	3 cr.
SAFE 347	Ergonomics	3 cr.
SAFE 402	Health Hazard Evaluation	3 cr.
SAFE 412	Hazard Prevention Management	4 cr.
SAFE 488 or 493	Safety Internship	6 cr.

Other Requirements: **27 cr**

Additional Science and Mathematics:

BIOL 155	Human Physiology & Anatomy	4 cr
PHYS 111	Physics I Lecture	3 cr
PHYS 112	Physics II Lecture	3 cr

PHYS 121	Physics I Lab	1 cr
PHYS 122	Physics II Lab	1 cr

Professional Courses:

BTST 321 Business & Interpersonal Communications	3 cr
MGMT 311 Human Behavior in Organizations	3 cr
<b>Three courses that form a concentration in a professional area</b>	<b>9 cr</b>

**Total Degree Requirements: 120 cr**

Minor - Safety Sciences 18 cr

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

Required Courses

SAFE 101 Introduction to Occupational Safety and Health	3cr
SAFE 111 Principles of Industrial Safety I	3cr
SAFE 301 Health Hazard Identification	3cr

Controlled Electives

Three SAFE courses approved by department chair	9cr
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2. Summary of Changes

- a. Table 1 summarizes the proposed changes in the Safety Sciences Curriculum. Table 1 "Program Comparison" illustrates program changes for the entire curriculum based on the Liberal Studies Requirements, Professional Courses, Free Electives, Prerequisite Courses, and SA Major Courses. Again, the specific changes are in **bold** and *italicized*.

TABLE 1. PROGRAM COMPARISON

Current Safety Sciences Program	Revised Safety Sciences Program
<i>LIBERAL STUDIES</i>	<i>LIBERAL STUDIES</i>
English Composition: EN 101 & 202 - 7 cr.	English Composition: ENGL 101 & 202 - 7 cr.
Mathematics: MA 121 - 4 cr.	Mathematics: MATH 121 - 4 cr.
Humanities: HI 195, EN/FL 121 & Philosophy/Religious Study Elective - 9 cr.	Humanities: HIST 195, ENGL/FNGL 121 OR ENGL 122 & Philosophy/Religious Study Elective - 9 cr.
Fine Arts Elective - 3 cr.	Fine Arts Elective - 3 cr.
Natural Science: CH101-102 - 8 cr.	Natural Science: CHEM101-102 - 8 cr.
Social Science: PC 101, SO 151 & non western culture required- 9 cr.	Social Science: PSYC 101, SOC 151 & non western culture required - 9 cr.
Health & Wellness: HP 143 or FN 143 - 3 cr. or MS101 - 102 Military Science - 4 cr.	Health & Wellness: HPED 143 or FDNT 143 - 3 cr. or MLSC 101-102 Military Science - 4 cr.
Electives: EC 122, MA 217, <b>CO/IM/BE 101</b> , no course with SA prefix. - 9cr.	Electives: ECON 122, MATH 217, no course with SAFE prefix. - 6 cr.
Synthesis Course - 3 cr.	Synthesis Course - 3 cr.
Total Liberal Studies: 55-56	Total Liberal Studies: <b>52-53</b>

<i>PROFESSIONAL COURSES</i>	<i>PROFESSIONAL COURSES</i>
MG 311 Human Behavior in Organizations - 3 cr.	MGMT 311 Human Behavior in Organizations - 3 cr.
AD 321 Business & Interpersonal Commun. - 3cr.	BTST 321 Business & Interpersonal Commun. - 3cr.
<b>AD 231 Speech Communication for Prof. 1cr</b>	<b>REMOVED</b>
Three professional courses approved by advisor -9 cr.	Three courses approved by advisor that form a concentration in a professional area -9 cr.
Total Professional Courses: 16 cr.	Total Professional Courses: 15cr.
<i>SA PREREQUISITE COURSES</i>	<i>SAFE PREREQUISITE COURSES</i>
PY 111 & 112 - 4 cr..	PHYS 111 & 112 - 4 cr.
PY 121 & 122 - 4 cr.	PHYS 121 & 122 - 4 cr.
BI 155 - 4 cr.	BIOL 155 - 4 cr.
Total Prerequisite Courses: 12 cr.	Total Prerequisite Courses: 12 cr.
<i>SA REQUIRED COURSES</i>	<i>SAFE REQUIRED COURSES</i>
SA 101 Intro. to Occup. Safety & Health - 3 cr.	SAFE 101 Intro. to Occup. Safety & Health - 3 cr.
SA 111 Principles of Industrial Safety I - 3 cr.	SAFE 111 Principles of Industrial Safety I - 3 cr.
SA 210 Environ. Safety & Health Regul. - 3cr.	SAFE 210 Environ. Safety & Health Regul. - 3cr.
SA 211 Principles of Industrial Safety II - 4 cr.	SAFE 211 Principles of Industrial Safety II - 4 cr.
SA 301 Health Hazard Identification - 3 cr	SAFE 301 Health Hazard Identification - 3 cr
SA 303 Control of Health Hazards - 3 cr.	SAFE 303 Control of Health Hazards - 3 cr.
SA 311 Industrial Fire Protection - 3 cr.	SAFE 311 Industrial Fire Protection - 3 cr.
SA 345 Systems - 3 cr.	SAFE 345 Systems - 3 cr.
SA 347 Ergonomics - 3 cr.	SAFE 347 Ergonomics - 3 cr.
SA 402 Health Hazard Evaluation - 3 cr.	SAFE 402 Health Hazard Evaluation - 3 cr.
SA 412 Hazard Prevention Management - 4 cr.	SAFE 412 Hazard Prevention Management - 4 cr.
SA 493 Safety Internship - 6 cr. or SA 488 Safety Internship - 12 cr. (If SA 488 is used, 6 credits are counted toward the Professional Electives).	SAFE 493 Safety Internship - 6 cr. or SAFE 488 Safety Internship - 12 cr. (If SAFE 488 is used, 6 credits are counted toward the Professional Electives).
Credits in Major: 41 cr.	Credits in Major: 41 cr.
Total Degree Requirements: 124-125 cr.	Total Degree Requirements: <b>120 cr.</b>

b. List of all associated course changes:

- SAFE 101 Introduction to Occupational Safety and Health  
Minor course revision to update objectives and course content.
- SAFE 211 Principles of Industrial Safety II  
Minor course revision to update objectives and course content.
- SAFE 311 Industrial Fire Protection  
Course revision to update objectives, course content and add a laboratory component to this course.
- SAFE 345 Systems Safety  
Minor course revision to update objectives and course content.

- SAFE 347 Ergonomics  
Minor course revision to update objectives and course content.
- SAFE 412 Hazard Prevention Management  
Minor course revision to update objectives and course content.
- BTST 231 Speech Communication  
Remove as a requirement for the program.
- Remove three credits from the list: Liberal Studies Electives  
Remove COSC/IFMG/BEDU 101 as a Liberal Studies Elective requirement for the program.

### **3. Rationale for Program Changes:**

#### **A. Remove BTST 231 Speech Communication (formerly AD 231).**

**Rationale:** BTST 231 was added to the SA curriculum in 1999 because at that time our accreditation organization (Related Accreditation Commission of the Accreditation Board for Engineering and Technology) required a course in Speech Communications. During a site visit in 1998, the ABET site visit team did not agree that BTST 321 provided enough speech (verbal communications). In their report to the university in September 1998, they indicate we must require our students to take a class that is primarily directed at teaching speech principles. Therefore, BTST 231 Speech Communication was specifically created by the BTST Department for our students with the hopes that students from other majors would also be interested in taking the course. Unfortunately, there has been insufficient enrollment the last two years to offer the course and it has been cancelled during the Fall 2000, 2001, and 2002 semesters. Because of this fact, the department has waived the course for some of the current students applying for graduation because it was not available for them to take the past three years.

In addition, since 1999, the Related Accreditation Commission has become the Applied Sciences Commission and starting in 2000 the commission has converted to an "outcomes" based criteria. There is no longer a requirement for a "speech" course but there is the following program outcome: "Graduates shall demonstrate proficiency in written composition and oral communications."

Based on the above, SA Department Faculty believe our current program with requirements for BTST 321 Business and Interpersonal Communications, English 202 Research Writing and numerous requirements in SAFE courses for written and oral communications provide enough coverage that we can demonstrate our students have proficiency in written and oral communications.

**B. Add a laboratory to SAFE 311 Industrial Fire Protection.**

**Rationale:** In 2000, the department received outside financial support and equipment donations that allowed us to finish the fire laboratory in room 110 of Johnson Hall. The fire laboratory now has the capability to demonstrate a variety of fire suppression systems including a wet pipe, dry pipe and deluge system in addition to a variety of detection and alarm systems. This new equipment in addition to some other existing fire equipment now allows the department to expand this course to include some hands-on laboratory exercises for the students. There will be 14 laboratory exercises which will cover the following topics:

- Design of Paint Spray Booths
- Emergency Response Plans
- Life Safety
- Portable Fire Extinguishers
- Sprinkler Systems
- Design of Flammable Liquid Storage Rooms
- Electricity as a Fire Hazard
- Response to Hazardous Materials
- Fire Inspections and Audits

**C. Require students to take three courses to form a concentration in a professional area.**

**Rationale:** The Safety Sciences has always been a very multidisciplinary profession requiring students to have both a strong technical and managerial background. Today, the role of the safety professional has expanded into areas not even considered in the 1980's. Some of these new areas include: workplace violence, risk management and insurance, ethics, disaster preparedness, training, and human behavior. The expanding role of the profession is discussed in numerous publications including a study by the Institute of Medicine titled "Safe Work in the 21<sup>st</sup> Century – Education and Training Needs for the Next Decade's Occupational Safety and Health Professional". Surveys of our alumni over the past several years continue to discuss the need for addressing the expanding roles of the profession.

A "concentration" will be a set of three courses in a professional area that a student and faculty advisor agree will enhance the student's performance as a safety professional. Department faculty believe this proposed change will benefit our students in two major ways:

1. Students will be able to take courses in professional areas that will enhance their performance as a safety professional.
2. The students will have the flexibility to choose the professional area they wish to concentrate based on personal or professional interests.

**D. Remove COSC/IFMG/BEDU 101 as a Liberal Studies Elective requirement for the program.**

**Rationale:** To meet the Board of Governors mandated 120 credit maximum for a Baccalaureate Degree, IUP reduced the Liberal Studies Elective requirements from 9 credits to 0-9 credits. Therefore the department removed COSC/IFMG/BEDU 101 as a Liberal Studies Elective requirement in our program. Department Faculty believed many of our incoming high school students already had adequate computer skills.

## **Part III Implementation**

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

Removal of BTST 231 and COSC/IFMG/BEDU 101 starting with the Fall 2003 semester. Students already in the existing program who have not already taken these two courses will receive course waivers for both courses. For BTST 231 this is not a change from what we have been doing for the past two years. As mentioned previously, there has been insufficient enrollment the last three years to offer BTST 231 and it has been cancelled during the Fall 2000, 2001, and 2002 semesters. Current students applying for graduation received waivers because it was not available for them to take the past three years.

Addition of the laboratory for SAFE 311 Industrial Fire Protection. Current students in our program will take the revised SAFE 311 course which includes a laboratory component.

Require students to take three courses to form a concentration in a professional area. Current students will not be required to take three courses to form a concentration but will continue to take three courses as their professional elective courses.

### **2. Are faculty resources adequate?**

No additional faculty are necessary to accommodate these program and course changes.

### **3. Are other resources adequate?**

We currently have adequate resources to accommodate the above changes. As mentioned previously, two years ago the department received outside financial support and equipment donations that allowed us to finish the fire laboratory in room 110 of Johnson Hall. The fire laboratory now has the capability to demonstrate a variety of fire suppression systems including a wet pipe, dry pipe and deluge system in addition to a variety of detection and alarm systems.

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

Although we have decreased the number of credits in the program by four from 124 to 120, we do not expect these changes to affect enrollment in our program. We may eventually see an increased interest in our SAFE elective courses now that we are requiring a concentration. With average enrollment in these courses below 10 the increased enrollment can easily be handled with existing faculty complement.

## Part IV. Periodic Assessment

### 1. Describe the evaluation plan.

Periodic assessment of the program will include both an internal and external evaluation. The internal evaluation is completed annually by the department faculty. This evaluation includes a review of the following six program outcomes:

- I. Demonstrated their ability to anticipate, identify, evaluate and develop hazard prevention/control designs, methods, procedures and programs.
- II. Acquired those basic research skills necessary to analyze and interpret data.
- III. Developed an understanding of the professional and ethical responsibilities within the Safety, Health and Environmental Profession.
- IV. Developed an ability to communicate effectively and work in multidisciplinary teams.
- V. Acquired an ability to apply the arts and sciences as it relates to the Safety, Health and Environmental Profession.
- VI. Developed an ability to analyze and improve the management system with the goal of preventing the occurrence of hazardous acts and conditions that lead to loss incidents.

This internal evaluation also includes a review of course outcomes, recommendations from our graduate students and our Advisory Committee. The advisory committee meets on a semi-annual basis with one of their responsibilities being the evaluation of our program. The committee has a membership of twenty including two IUP faculty from outside the department and two current Safety, Health and Environmental Professions Faculty. Many of the SAFE Course revisions included in this proposal result from the internal evaluation that occurred during the Spring 2002 semester.

For individual courses several different evaluation methodologies will be used to evaluate student-learning outcomes. The instructor of each class will be evaluated following the criteria outlined in Article 42 of the Collective Bargaining Agreement (CBA). Both the Student Evaluation Instrument for Distance Learning and the Student Evaluation of Technology for Web Based (on-line) Courses will be used to evaluate the instructors and the courses when they are offered using distance education technologies. The Student Evaluation Instrument when the courses are offered by "traditional means".

The external evaluation will be conducted by an ABET accreditation team for a period of time not to exceed six months. The team will visit our program and complete a three day review of the curriculum which will focus on the achievement of program outcomes as well as a review of facilities, faculty, students and resources. The program is currently in the process of preparing outcome assessment materials and a self-study report for the next accreditation visit which will be the Fall 2003 semester.

### 2. Specify the frequency of the evaluation.

Internal evaluation of the program is completed annually by Department faculty. The Department Advisory Committee will evaluate our programs semi-annually and the ABET Accreditation evaluations are completed every six years.



### **3. Identify the evaluating entity.**

Internal Evaluation: Department Faculty and students.

External Evaluations: Safety Science Advisory Committee and the Accreditation Board for Engineering and Technology (ABET)

## **Part V. Course Proposals**

The proposals for course revisions to SAFE 301, 311, 345, 347 and 412 are attached. As mentioned earlier most of these revisions involve minor course changes, the one exception is SAFE 311 which is a major course revision involving the addition of a laboratory.

## **Part VI. Letters of Support**

A memo from the Technology Support and Training Department Chair indicate their support for removing BTST 231 as a requirement for our program.

We have also sent memos to the Chairpersons of the three departments offering Microbased Computer Literacy to inform them we will no longer be requiring our students to take this course as a Liberal Studies Free Elective. These emails are attached as well as acknowledgement from the Computer Science Department.

**Lon Ferguson**

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**From:** "lfszul" <lfszul@iup.edu>  
**To:** <FERGUSON@iup.edu>  
**Sent:** Thursday, September 19, 2002 3:34 PM  
**Subject:** BTST 231 Speech Communications

Lon,

Wayne forwarded your message concerning the removal of BTST 231 from your curriculum.

Please consider this email formal approval from the Department of Technology Support & Training for the removal of BTST 231, Speech Communications, from the B.S. in Safety Science.

Linda F. Szul, Chair  
Department of Technology Support & Training

-----Original Message-----

**From:** Dr. Wayne Moore [mailto:moore@iup.edu]  
**Sent:** Thursday, September 19, 2002 2:55 PM  
**To:** [lfszul@iup.edu](mailto:lfszul@iup.edu)  
**Subject:** FW: BTST 231 Speech Communications

Linda--

As chair, please respond to Lon Ferguson that we support the removal of BTST231 from their curriculum.

Thanks

Wayne

-----Original Message-----

**From:** Lon Ferguson [mailto:ferguson@iup.edu]  
**Sent:** Thursday, September 19, 2002 1:35 PM  
**To:** [moore@iup.edu](mailto:moore@iup.edu)  
**Cc:** [ferguson@iup.edu](mailto:ferguson@iup.edu)  
**Subject:** BTST 231 Speech Communications

Hi Wayne:

We are in the process of revising our B.S. Program in Safety Sciences and one of the changes we are proposing will affect your department. Specifically, we want to remove the requirement for BTST 231 Speech Communications. The rationale for this change follows:

9/19/2002

BTST 231 was added to the SA curriculum in 1999 because at that time our accreditation organization (Related Accreditation Commission of the Accreditation Board for Engineering and Technology) required a course in Speech Communications. BTST 231 Speech Communications was specifically created by the BTST Department for our students with the hopes that students from other majors would also be interested in taking the course. Unfortunately, there has been insufficient enrollment the last two years to offer the course and it has been cancelled during the Fall 2000, 2001, and 2002 semesters. Because of this fact, the department has waived the course for some of the current students applying for graduation because it was not available for them to take the past two years.

In addition, since 1999, the Related Accreditation Commission has become the Applied Sciences Commission and starting in 2000 the commission has converted to an "outcomes" based criteria. There is no longer a requirement for a "speech" course but there is the following program outcome: "Graduates shall demonstrate proficiency in written composition and oral communications." Based on the above, SA Department Faculty believe our current program with requirements for BTST 321 Business and Interpersonal Communications, English 202 Research Writing and numerous requirements in SAFE courses for written and oral communications provide enough coverage that we can demonstrate our students have proficiency in written and oral communications.

Based on the above rationale would you please email or mail me a letter of support to make this change!

Thank You!

Dr. Lon H. Ferguson, CSP  
Chairperson, Safety Sciences Department  
Indiana University of Pennsylvania  
116 Johnson Hall, 1010 Oakland Avenue  
Indiana, PA 15705

Linda F. Szul, Professor

**Lon Ferguson**

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**From:** "Lon H Ferguson" <ferguson@iup.edu>  
**To:** <jtwolfe@iup.edu>  
**Cc:** <lburky@iup.edu>  
**Sent:** Thursday, November 07, 2002 5:34 PM  
**Subject:** Microbased Computer Literacy Course

Drs. Wolfe and Burky:

Just wanted to inform you that the Safety Sciences Department is currently changing the requirements for our B.S. program. Specifically, we are reducing the number of liberal studies electives from 3 courses to 2 courses to meet the state mandate of 120 credits.

Therefore, our students will no longer be required to take a microbased computer elective course!

Dr. Lon Ferguson  
116 Johnson Hall  
1010 Oakland Avenue  
Indiana, PA 15705  
Dr. Lon Ferguson  
116 Johnson Hall  
1010 Oakland Avenue  
Indiana, PA 15705

11/8/2002

**Lon Ferguson**

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**From:** "Lon H Ferguson" <ferguson@iup.edu>  
**To:** <lfszul@iup.edu>  
**Cc:** <ferguson@iup.edu>  
**Sent:** Thursday, November 07, 2002 5:37 PM  
**Attach:** ATT00011.eml  
**Subject:** Fwd: Microbased Computer Literacy Course

Dr. Szul:

Just wanted to inform you that the Safety Sciences Department is currently changing the requirements for our B.S. program. Specifically, we are reducing the number of liberal studies electives from 3 courses to 2 courses to meet the state mandate of 120 credits.

Therefore, our students will no longer be required to take a microbased computer elective course!

Dr. Lon Ferguson  
116 Johnson Hall  
1010 Oakland Avenue  
Indiana, PA 15705

--- the forwarded message follows ---

**Lon Ferguson**

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**From:** "Jim Wolfe" <jtwolfe@iup.edu>  
**To:** "Lon H Ferguson" <ferguson@iup.edu>  
**Sent:** Sunday, November 17, 2002 5:38 PM  
**Subject:** Re: Microbased Computer Literacy Course

Dr. Ferguson,

On behalf of the Computer Science Department, I want to express our disappointment with your decision to no longer require Microbased Computer Literacy. We would expect that Safety Science students would have specific needs for the spreadsheet and database components of the course. We would think that the data analysis and information processing needed in the field of Safety Science would require graduates to use and create both spreadsheets and databases.

Our surveys and the exemption exam for the Microbased Computer Literacy course have revealed that although students often have some knowledge of wordprocessing from High School, they have little knowledge of spreadsheets and almost no knowledge of databases. We would presume that some courses you teach would require your students to make use of these information processing mechanisms. Hopefully, you have found some alternative way of addressing these needs.

Good luck with your revision.

Jim Wolfe  
Chair, Computer Science



DEPARTMENT OF SAFETY SCIENCES  
INDIANA UNIVERSITY OF PENNSYLVANIA

CURRICULUM SEQUENCE

Name \_\_\_\_\_ Banner User ID \_\_\_\_\_ Advisor \_\_\_\_\_ Expected Graduation \_\_\_\_\_

Semester	SH	Sem	Year	Grade	Note	Semester	SH	Sem	Year	Grade	Note
<i>Fall (Semester 1)</i>						<i>Spring (Semester 2)</i>					
MATH 121 Calculus I	4	_____	_____	_____	_____	PSYC 101 General Psych	3	_____	_____	_____	_____
ENGL 101 College Writing	4	_____	_____	_____	_____	HIST 195 History Modern Era	3	_____	_____	_____	_____
CHEM 101 College Chem I	4	_____	_____	_____	_____	CHEM 102 College Chem II	4	_____	_____	_____	_____
SAFE 101 Intro Occu Sfty&Hlth	3	_____	_____	_____	_____	SAFE 111 Prin of Safety I	3	_____	_____	_____	_____
	15					_____ Wellness Elective*	3-4	_____	_____	_____	_____
							16-17				
<i>Fall (Semester 3)</i>						<i>Spring (Semester 4)</i>					
BICL 155 Hum Phys&Anat	4	_____	_____	_____	_____	_____ Hum Lit Elective*	3	_____	_____	_____	_____
PHYS 111 Physics I	3	_____	_____	_____	_____	PHYS 112 Physics II	3	_____	_____	_____	_____
PHYS 121 Physics Lab	1	_____	_____	_____	_____	PHYS 122 Physics II Lab	1	_____	_____	_____	_____
SAFE 211 Prin of Safety II	4	_____	_____	_____	_____	ECON 122 Prin of Econ II	3	_____	_____	_____	LS-E
ENGL 202 Research Writing	3	_____	_____	_____	_____	SAFE 210 Env Sfty & Hlth Reg	3	_____	_____	_____	_____
	15					MATH 217 Prob & Stat	3	_____	_____	_____	LS-E
							16				
<i>Fall (Semester 5)</i>						<i>Spring (Semester 6)</i>					
_____ Non-West Culture*	3	_____	_____	_____	_____	SAFE 303 Control of Hlth Haz	3	_____	_____	_____	_____
SAFE 301 Health Hazard Iden	3	_____	_____	_____	_____	SAFE 347 Ergonomics	3	_____	_____	_____	_____
SAFE 345 System Sfty Analysis	3	_____	_____	_____	_____	_____ Fine Arts Elective*	3	_____	_____	_____	_____
MGMT 311 Hum Behav in Org	3	_____	_____	_____	_____	SAFE 311 Indus Fire Protection	3	_____	_____	_____	_____
SOC 151 Prin of Sociology	3	_____	_____	_____	_____	BTST 321 Bus&Interpers Com	3	_____	_____	_____	W
	15						15				
<i>Fall (Semester 7)</i>						<i>Spring (Semester 8)</i>					
SAFE 402 Health Hazard Eval	3	_____	_____	_____	_____	SAFE _____ Internship	6	_____	_____	_____	_____
SAFE 412 Hazard Prev Mgt	4	_____	_____	_____	_____	_____ Prof Elective*	3	_____	_____	_____	_____
LBST 499 Synthesis Course	3	_____	_____	_____	_____	_____ Prof Elective*	3	_____	_____	_____	_____
_____ Philos/Rel Elective*	3	_____	_____	_____	_____		12				
_____ Prof Elective*	3	_____	_____	_____	_____						
	16										

\*See list on back for course options.

W - Writing Intensive Courses  
LBST-E - Liberal Studies Elective

Other Courses: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



**\*Philosophy/Religion Elective  
(select one)**

PHIL 101 Informal Logic: Methods of Critical Thinking	3
PHIL 120 Intro to Philosophy	3
PHIL 221 Intro to Symbolic Logic	3
PHIL 222 Ethics	3
RLST 100 Intro to Religion	3
RLST 250 Understanding the Bible	3
RLST 290 Christianity	3

**\*Humanities Literature Elective (select one)**

ENGL 121 Humanities: Literature	3
FL 121 Humanities Literature	3

**Fine Arts Elective (select one)**

ARHT 101 Introduction to Art	3
MUHI 101 Introduction to Music	3
THTR 101 Introduction to Theater	3
THTR 102 Introduction to Dance	3

**Wellness Elective (select one)**

HPED 143 Health and Wellness	3
FDNT 143 Nutrition and Wellness	3
MLSC 101 Intro to Military Science <u>and</u>	2
MLSC 102 Fundamentals of Military Science	2

**Non-Western Culture Elective (select one)**

ANTH 110 Contemporary Anthropology	3
ANTH 211 Cultural Anthropology	3
GEOG 104 Geography of the Non-Western World	3
PLSC 101 World Politics	3

**Elective Courses for Professional Concentration  
(select nine credit hours)**

Professional electives are courses that a student and adviser agree will enhance the student's performance as a professional. This list is an example of some professional elective courses. Other courses are permitted with the advisor's approval.

BLAW 235 Introduction to Business Law	3
COMM 335 Consulting Practices in Communications	3
ECON 283 Environmental Economics	3
ECON 333 Regulations in Industry	3
ENGL 310 Public Speaking	3
ENGL 322 Technical Writing I	3
IFMG 251 Business Systems Analysis & Design	3
MGMT 334 Quality Management	3
MGMT 330 Productions and Operations Management	3
MGMT 401 Management Development & Training	3
PSYC 390 Industrial-Organization Psychology	3
SAFE 245 Product Safety	3
SAFE 370 Fleet Safety	3
SAFE 380 Institutional Safety Management	3
SAFE 441 Accident Investigation	3
SAFE 461 Air Pollution	3
SAFE 462 Radiological Health	3
SAFE 472 Process Safety in the Chemical Industry	3
SAFE 481 Special Topics	3

\*The Humanities requirement group consists of HI 195 plus one Philosophy/Religion Elective plus one Humanities/Literature Elective.