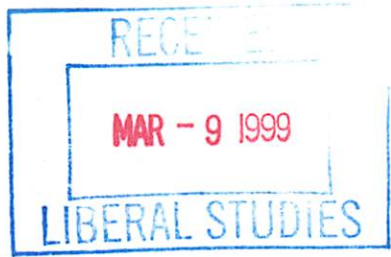


LSC Use Only
 Number: _____
 Submission Date: _____
 Action-Date: _____



UWUCC USE Only
 Number: 98-49a
 Submission Date: 3/28/00
 Action-Date: _____

99-27a
 App 3/28/00
 Senate App 5/2/00

CURRICULUM PROPOSAL COVER SHEET
 University-Wide Undergraduate Curriculum Committee

I. CONTACT

Contact Person Dr. Lon Ferguson Phone 7-3018
 Department Safety Sciences

II. PROPOSAL TYPE (Check All Appropriate Lines)

_____ **COURSE** _____
Suggested 20 character title

_____ **New Course*** _____
Course Number and Full Title

_____ **Course Revision** _____
Course Number and Full Title

_____ **Liberal Studies Approval +** _____
 for new or existing course Course Number and Full Title

_____ **Course Deletion** _____
Course Number and Full Title

_____ **Number and/or Title Change** _____
Old Number and/or Full Old Title

_____ New Number and/or Full New Title

_____ **Course or Catalog Description Change** _____
Course Number and Full Title

PROGRAM: Major _____ Minor _____ Track _____

_____ **New Program*** _____
Program Name

Program Revision* B.S. in Safety Sciences
Program Name

_____ **Program Deletion*** _____
Program Name

_____ **Title Change** _____
Old Program Name

_____ New Program Name

III. Approvals (signatures and date)

Jack C. Reed 3/4/99
 Department Curriculum Committee

Lon H. Ferguson 3/2/99
 Department Chair

Mary C. Swenham 3/4/99
 College Curriculum Committee

Robert J. Boyle 5 Mar 99
 College Dean

+ Director of Liberal Studies (where applicable)

*Provost (where applicable)

*NO previous implications



99-27



Memo

To: Dr. Mark Staszkiwicz
From: Dr. Lon Ferguson, Chair - Safety Sciences Department
Date: 03/22/00
Re: Program Revision - Safety Sciences

This memo is in response to your email concerning three minor changes in the Safety Sciences Curriculum Proposal. What follows is my response to each of these concerns:

1. We are awaiting finalization of the AD 231 information from the TST department. I talked with Dr. Brandenburg on March 22, 2000 and she assured me that all of the issues raised by the UWUCC for AD 231 have been addressed and the course should be moving forward.
2. We will need to see your program edit to correct the other requirements to reflect the correct total. I have changed the number of credits under the "Other Requirements" section to 28.
3. We ask that you reduce the "free electives" to zero to bring the program into line with the normal minimal credit requirement for graduation - or, if you choose not to, we would need to build in a justification for exceeding the 124. I have eliminated the free elective bringing the total number of credits for the program to 124-125.

I believe this memo addresses all of the concerns expressed by the UWUCC. Attached is the revised proposal without the original cover sheet, which the UWUCC received last year.

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

SPRING 1999

Part II. DESCRIPTION OF CURRICULUM CHANGE

1. Catalog Description

There will be one minor change to the catalog description for the program. This change involves increasing the number of semester hours in related professional courses from 15 to 16, see below.

The department offers the Bachelor of Science degree in Safety Sciences with specialization in 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 semester hours in Safety Sciences and an additional 16 semester hours in related professional courses. A variety of elective courses is available in both the major and professional fields that enables students to strengthen their primary interest areas.

The two specific course changes to the program are in **bold print** and *italicized* and the free elective course has been removed.

Bachelor of Science-Safety Sciences

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 55-56 sh.

Mathematics: ***MA 121***

Natural Sciences: CH 101 & 102

Social Sciences: PC 101, SO 151, non western culture required

Liberal Studies Electives: EC 122, MA 217, and CO/IM/BE 101, no course with SA prefix.

Major: 41 sh.

Required Courses:

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

Other Requirements: 28 sh.

Additional Science and Mathematics:

PY 111	Physics I Lecture	3 sh.
PY 112	Physics II Lecture	3 sh.
PY 121	Physics I Lab	1 sh.
PY 122	Physics II Lab	1 sh.
BI 155	Human Physiology & Anatomy	4 sh.

Professional Courses:

AD 321	Business & Interpersonal Communications	3 sh.
<i>AD 231</i>	<i>Speech Communication for Professionals</i>	<i>1 sh.</i>
MG 311	Human Behavior in Organizations	3 sh.
Three Professional Courses Approved by Student's Advisor		9 sh.

Total Degree Requirements: 124-125 sh.

2. Summary of Changes

The following table has been developed to summarize the proposed change 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 change is in **bold** and *italicized*.

TABLE 1. PROGRAM COMPARISON

Current Safety Sciences Program	Revised Safety Sciences Program
LIBERAL STUDIES	LIBERAL STUDIES
English Composition: EN 101 & 202 - 7 sh.	English Composition: EN 101 & 202 - 7 sh.
Mathematics: MA 123 - 4 sh.	Mathematics: MA 121 - 4 sh.
Humanities: HI 195, EN/FL 121 & Philosophy/Religious Study Elective - 9 sh.	Humanities: HI 195, EN/FL 121 & Philosophy/Religious Study Elective - 9 sh.
Fine Arts Elective - 3 sh.	Fine Arts Elective - 3 sh.
Natural Science: CH101-102 - 8 sh.	Natural Science: CH101-102 - 8 sh.
Social Science: PC 101, SO 151 & non western culture required- 9 sh.	Social Science: PC 101, SO 151 & non western culture required - 9 sh.
Health & Wellness: HP 143 or FN 143 - 3 sh. or MS101 - 102 Military Science - 4 sh.	Health & Wellness: HP 143 or FN 143 - 3 sh. or MS 101-102 Military Science - 4 sh.
Electives: EC 122, MA 217, CO/IM/BE 101, no course with SA prefix. - 9sh.	Electives: EC 122, MA 217, CO/IM/BE 101, no course with SA prefix. - 9 sh.
Synthesis Course - 3 sh.	Synthesis Course - 3 sh.
Total Liberal Studies: 55-56	Total Liberal Studies: 55-56
PROFESSIONAL COURSES	PROFESSIONAL COURSES
MG 311 Human Behavior in Organizations - 3 sh.	MG 311 Human Behavior in Organizations - 3 sh.
AD 321 Business & Interpersonal Commun. - 3sh.	AD 321 Business & Interpersonal Commun. - 3sh.
<i>Not currently required</i>	AD 231 Speech Communication for Professionals 1sh.
Three profes. courses approved by advisor -9 sh.	Three profes. courses approved by advisor -9 sh.
Total Professional Courses: 15 sh.	Total Professional Courses: 16sh.
FREE ELECTIVES	FREE ELECTIVES
3 sh	No Free electives
SA PREREQUISITE COURSES	SA PREREQUISITE COURSES
PY 111 & 112 - 4 sh..	PY 111 & 112 - 4 sh.
PY 121 & 122 - 4 sh.	PY 121 & 122 - 4 sh.
BI 155 - 4 sh.	BI 155 - 4 sh.
Total Prerequisite Courses: 12 sh.	Total Prerequisite Courses: 12 sh.
SA REQUIRED COURSES	SA REQUIRED COURSES
SA 101 Intro. to Occup. Safety & Health - 3 sh.	SA 101 Intro. to Occup. Safety & Health - 3 sh.
SA 111 Principles of Industrial Safety I - 3 sh.	SA 111 Principles of Industrial Safety I - 3 sh.
SA 210 Environ. Safety & Health Regul. - 3sh.	SA 210 Environ. Safety & Health Regul. - 3sh.
SA 211 Principles of Industrial Safety II - 4 sh.	SA 211 Principles of Industrial Safety II - 4 sh.
SA 301 Health Hazard Identification - 3 sh	SA 301 Health Hazard Identification - 3 sh
SA 303 Control of Health Hazards - 3 sh.	SA 303 Control of Health Hazards - 3 sh.
SA 311 Industrial Fire Protection - 3 sh.	SA 311 Industrial Fire Protection - 3 sh.
SA 345 Systems Safety Analysis - 3 sh.	SA 345 Systems Safety Analysis- 3 sh.
SA 347 Ergonomics - 3 sh.	SA 347 Ergonomics - 3 sh.
SA 402 Health Hazard Evaluation - 3 sh.	SA 402 Health Hazard Evaluation - 3 sh.
SA 412 Hazard Prevention Management - 4 sh.	SA 412 Hazard Prevention Management - 4 sh.
SA 493 Safety Internship - 6 sh. or SA 488 Safety Internship - 12 sh. (If SA 488 is used, 6 credits are counted toward either the Free Elective and a Professional Elective).	SA 493 Safety Internship - 6 sh. or SA 488 Safety Internship - 12 sh. (If SA 488 is used, 6 credits are counted toward either the Free Elective and a Professional Elective).
Credits in Major: 41 sh.	Credits in Major: 41 sh.
Total Degree Requirements: 126/127 sh.	Total Degree Requirements: 124/125 sh.

3. Explanation & Rationale for Program Change:

A. Require students to take MA 121 rather than MA 123

Rationale: MA 123 was added to the SA curriculum in 1996 because it was application oriented which better met the needs of our students in technical areas. However, since 1996, MA 123 has changed and the audience, which once was primarily Natural Science Majors, now includes Math Majors. The success rate of Safety Science Students in this class has been dismal, approximately 15% pass the first time through. In fact, most students are not even eligible to take the course based on math placement tests without taking at least one lower level math course such as MA 110 Elementary Functions.

Based on the above, Safety Sciences Department Faculty believe it is in the best interest of the program and our students that we go back to MA 121 which is the calculus course used prior to 1996. Attached is a memo from the Math Department that both recommends and supports this change.

B. Require students to take AD 231 Speech Communication for Professionals.

Rationale: Our current accrediting body is the Accreditation Board for Engineering & Technology (ABET). ABET criteria, which is attached, requires course coverage in both written and verbal communications. In 1996, the department submitted a program revision that required all our students to AD 321 Business and Interpersonal Communications. The Safety Sciences Faculty believed this course was idea for our students because it provided both written and verbal communications. However, the ABET site visit team did not agree that AD 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. A copy of the ABET report is attached.

Department faculty discussed this problem with the TST Department in the hopes they might in some way be able to change AD 321 so that in fact the focus was on speech principles. This was not possible because AD 321 is currently a writing intensive course. An alternative suggested by the TST Department was for them to develop a one credit course that specifically addressed speech principles for professionals. The attached memo from Dr. Wayne Moore, Chair TST, outlines this proposed new course which will tentatively be offered as a special topics course the summer of 1999.

C. Eliminate the requirement for a "Free Elective Course".

Rationale: The free elective course requirement in the old curriculum was removed so that our total number of credits would be more in line with the normal minimal credit requirements of the university.

Part III IMPLEMENTATION

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

The major changes in the revised program will require students to take MA 121 instead of MA 123, take the one credit AD 231 Speech Communications for Professionals during their fifth semester and a free elective course is no longer required. The new course added to the program was discussed with the TST Department and letters of support are attached.

Students already enrolled in our program will not have to take AD 231 Speech Communications for Professionals. Students currently enrolled will have the option to take either MA 123, required in the current program, or MA 121 which is being proposed. A course substitution will be completed if current students chose to take MA 121 instead of MA 123. Current students who have not already taken a free elective will receive a waiver from this requirement.

2. How will the proposed revision affect faculty teaching loads?

A memo from the TST and Math Department Chairs indicate they currently have adequate faculty resources to accommodate the above changes. No additional faculty are necessary.

3. Are other resources adequate?

The memo from the TST Department Chair indicates they have adequate resources to accommodate the above change.

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

There may be a slight increase in the number of students because of the reduction in the number of total credits from 127 to 124. Students with aversions to math may be more willing to enter the program now that MA 121 is required instead of Math 123.

Part IV Course Proposals

1. The TST Department is currently in the process of submitting the New Course Proposal for AD 231 Speech Communication for Professionals.

Part V Letters of Support

Letters of support from the TST and Mathematics Departments are attached. Also attached is a copy of the Safety Sciences Department's Progress Report which was sent to ABET in response to their Statement to the Institution. The Department Chair received notice from ABET in July, 1999 that our response was acceptable and that all issues, including the computer course and professional electives, had been resolved. The B.S. and M.S. in Safety Sciences are now accredited through 2003.

DEPARTMENT OF SAFETY SCIENCES
INDIANA UNIVERSITY OF PENNSYLVANIA

CURRICULUM SEQUENCE

Name						Social Security No.						Advisor						Expected Graduation					
Semester	SH	Sem	Year	Grade	Note	Semester	SH	Sem	Year	Grade	Note	Semester	SH	Sem	Year	Grade	Note	Semester	SH	Sem	Year	Grade	Note
<i>Fall (Semester 1)</i>												<i>Spring (Semester 2)</i>											
MA 121 Calculus I	4	___	___	___	___	PC 101 General Psych	3	___	___	___	___	HI 195 History: Mod Era	3	___	___	___	___	CH 102 College Chem II	4	___	___	___	___
EN 101 College Writing	4	___	___	___	___	SA 111 Prin of Safety I	3	___	___	___	___	___ Wellness Elective*	3-4	___	___	___	___	___	___	___	___	___	___
CH 101 College Chem I	4	___	___	___	___																		
SA 101 Int Occ Sfty & Hlth	3	___	___	___	___																		
	15																						
<i>Fall (Semester 3)</i>												<i>Spring (Semester 4)</i>											
BI 155 Hmn Phys & Anat	4	___	___	___	___	___ Hum Lit Elective*	3	___	___	___	___	PY 112 Physics II	3	___	___	___	___	PY 122 Physics II Lab	1	___	___	___	___
PY 111 Physics I	3	___	___	___	___	EC 122 Prin of Econ II	3	___	___	___	LS-E	SA 211 Prin of Safety II	4	___	___	___	___	MA 217 Prob & Stat	3	___	___	___	LS-E
PY 121 Physics Lab	1	___	___	___	___																		
SA 210 Environ Safety Reg	3	___	___	___	___																		
___ Computer Elective*	3	___	___	___	LS-E																		
EN 202 Research Writing	3	___	___	___	___																		
	17																						
<i>Fall (Semester 5)</i>												<i>Spring (Semester 6)</i>											
___ Non-West Culture*	3	___	___	___	___	SA 303 Ctrl of Hltz Hazards	3	___	___	___	___	SA 347 Ergonomics	3	___	___	___	___	___ Fine Arts Elective*	3	___	___	___	___
SA 301 Hlth Hazard Ident	3	___	___	___	___	SA 311 Ind Fire Protection	3	___	___	___	___	AD 321 Bus&Intprs Comm	3	___	___	___	W						
SA 345 System Sfty Anal	3	___	___	___	___																		
MG 311 Hum Bhvr in Org	3	___	___	___	___																		
SO 151 Prin of Sociology	3	___	___	___	___																		
AD 231 Speech Commun.	1	___	___	___	___																		
	16																						
<i>Fall (Semester 7)</i>												<i>Spring (Semester 8)</i>											
SA 402 Hlth Hazard Eval	3	___	___	___	___	SA ___ Internship	6	___	___	___	W	___ Prof Elective*	3	___	___	___	___	___ Prof Elective*	3	___	___	___	___
SA 412 Haz Prev Mgmt	4	___	___	___	___																		
LS 499 Synthesis Course	3	___	___	___	___																		
___ Prof Elective*	3	___	___	___	___																		
___ Philos/Religion*	3	___	___	___	___																		
	16																						
Other Courses: _____																							

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

*See list on back for course options

Philosophy/Religion Elective* (select one)

PH 101 Informal Logic: Methods of Critical Thinking	3
PH 120 Intro to Philosophy	3
PH 221 Intro to Symbolic Logic	3
PH 222 Ethics	3
RS 100 Intro to Religion	3
RS 250 Understanding the Bible	3
RS 290 Christianity	3
PH 223 Philosophy of Art	3
RS 110 World Religions	3

Humanities Literature Elective* (select one)

EN 121 Humanities: Literature	3
FL 121 Humanities	3

Fine Arts Elective (select one)

AH 101 Introduction to Art	3
MH 101 Introduction to Music	3
TH 101 Introduction to Theater	3
TH 102 Introduction to Dance	3

Computer Elective (select one)

CO 101 Microbased Computer Literacy	3
IM 101 Microbased Computer Literacy	3
BE 101 Microbased Computer Literacy	3

Wellness Elective (select one)

HP 143 Health and Wellness	3
FN 143 Nutrition and Wellness	3
MS 101 Intro to Military Science <u>and</u>	2
MS 102 Fundamentals of Military Science	2

Non-Western Culture Elective (select one)

AN 110 Contemporary Anthropology	3
AN 211 Cultural Anthropology	3
GE 104 Geography of the Non-Western World	3
PS 101 World Politics	3

Professional Electives (select nine credit hours)

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

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

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

Department of Mathematics
Indiana University of Pennsylvania
233 Stright Hall
Indiana, Pennsylvania 15705-1072

(724) 357-2608
(724) 357-5700 FAX



February 24, 1999

Dr. Lon Ferguson, Chairperson
Safety Sciences Department
Indiana University of Pennsylvania

Dear Dr. Ferguson:

I have perused your proposal for revising the B.S. Degree in Safety Sciences and I strongly support the change from MA123 Calculus I for Physics, Chemistry, and Mathematics to MA121 Calculus I for Business, Natural and Social Sciences.

Your rationale states that the clientele in MA123 has changed since your students began taking it in 1996, and that is correct. The University Senate approved the changes to Mathematics Department programs in January, 1998 whereby students majoring in these programs now take MA123. I believe this change has made MA121 the more appropriate calculus course for Safety Science majors.

The Mathematics Department offers approximately twenty sections of MA121 each academic year, enrolling between seven and eight hundred students. Approximately eight sections of MA123 are offered each academic year, enrolling about three hundred students. Safety Science students make up about ten percent of the MA123 enrollment. Adjusting the number of sections of each course to accommodate the Safety Science students will not require additional resources, simply a reassignment of current resources.

Sincerely,

A handwritten signature in cursive script that reads "Gerald Buriok".

Gerald Buriok, Chairman
Mathematics Department

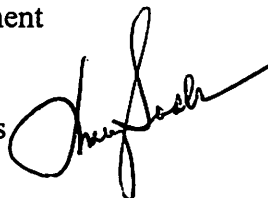
Liberal Studies Office
352 Sutton ext. 7-5715

Mary Sadler
email: msadler

Date: April 22, 1999

To: Dr. Lon Ferguson
Chairperson, Safety Science Department

From: Mary Sadler, Director Liberal Studies

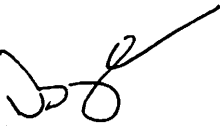


Subject: Liberal Studies – Program Revision

The Liberal Studies Committee approved your request to change the Math requirement from MA 123 to MA 121 for the Bachelor of Science in Safety Science degree program. This information was reported to the UWUCC for approval at the April 20, 1999 meeting.

CC: Dr. Carleen Zoni, Dean

TO: Dr. Lon Ferguson, Chair
Safety Sciences Department

FROM: Dr. Wayne A. Moore, Chair 
Technology Support & Training Department

SUBJECT: AD 231 Speech Communications for Professionals

DATE: March 11, 1999

The Technology Support and Training Department recognizes your need for the Speech Communication for Professionals course in your program. After discussion with our Dean, Bob Camp, we have developed a proposal for a one-credit course - AD 231 Speech Communications for Professionals. We are looking forward to the opportunity of teaching this critical course and are planning to offer the course two to three times per semester and summer based on student need.

RZ