

UNIVERSITY FACULTY SENATE

SUMMARY OF THE AGENDA

April 2, 1990

- I. ADOPTION OF THE AGENDA
- II. APPROVAL OF THE MINUTES: March 5, 1990
- III. REMARKS BY PRESIDENT TRABANT and/or ACTING PROVOST MURRAY
- IV. ANNOUNCEMENTS

- 1. Senate President Dilley

ANNOUNCEMENTS FOR CHALLENGE

- 1. Revision of the minor in Geology
- 2. New minor in Science, Technology and Society
- 3. New minor in Linguistics
- 4. Change in the title of Engineering Technology and Technical Management to Engineering Technology
- 5. Revision of the major in Food Science
- 6. Revision of the Master of Chemical Engineering Degree
- 7. Establishment of an ESL/Bilingualism major under the already existing MA degree in Educational Studies

- V. OLD BUSINESS - None

VI. NEW BUSINESS

- A. Recommendation for the disestablishment of the Master of Counseling Degree Program in Agency Counseling
- B. Recommendation for the conversion of the Art Conservation Program to the Art Conservation Department
- C. Recommendation for a change in the name of the Master of Science Degree in Materials Science to the Master of Materials Science and Engineering
- D. Resolution on the new position of Associate Provost for International Programs and Special Sessions
- E. Recommendation on space allocation for student drama groups
- F. Report on Project Vision
- G. Introduction of new business



University of Delaware

UNIVERSITY FACULTY SENATE
219 McDOWELL HALL
NEWARK, DELAWARE 19716

(302) 451-2921
(302) 451-2922

March 21, 1990

TO: All Faculty Members

FROM: Robert J. Taggart, Vice President
University Faculty Senate

A handwritten signature in cursive script that reads "Robert J. Taggart".

SUBJECT: Regular Faculty Senate Meeting, April 2, 1990

In accordance with Section IV, paragraph 6 of the Constitution, the regular meeting of the University Faculty Senate will be held on Monday, April 2, 1990 at 4:00 p.m. in room 110 Memorial Hall.

AGENDA

- I. Adoption of the Agenda.
- II. Approval of the minutes of the Senate meeting of March 5, 1990.
- III. Remarks by President Trabant and/or Acting Provost Murray.
- IV. Announcements
 1. Senate President Dilley

Announcements for Challenge

 1. Revision of the minor in Geology (Attachment 2)
 2. New minor in Science, Technology and Society (Attachment 3)
 3. New minor in Linguistics (Attachment 4)
 4. Change in the title of Engineering Technology and Technical Management
 5. Revision of the major in Food Science (Attachment 5)
 6. Revision of the Master of Chemical Engineering Degree (Attachment 6)

7. Establishment of an ESL/Bilingualism major under the already existing MA degree in Educational Studies (Attachment 7)

V. Old Business - none.

VI. New Business

- A. Recommendation from the Committee on Graduate Studies (R. Exline, Chairperson), with the concurrence of the Coordinating Committee on Education (L. Goldstein, Chairperson), for the disestablishment of the Master of Counseling Degree Program in Agency Counseling. (Attachment 8)

WHEREAS, the primary mission of the College of Education and the Department of Educational Studies is to educate and train personnel to assume professional roles in schools, and

WHEREAS, the primary function of agency counseling is to provide services outside the school setting, and

WHEREAS, resources needed to train counselors would be better utilized to strengthen the professional training of school counselors, an established degree program more in line with the educational mission of the Department and the College, therefore be it

RESOLVED, that the Master of Counseling Degree Program in Agency Counseling be disestablished effective as of the date of the graduation of the last presently enrolled candidate for that degree.

- B. Recommendation from the Coordinating Committee on Education (L. Goldstein, Chairperson), for the conversion of the Art Conservation Program to the Art Conservation Department. (Attachment 9)

WHEREAS, the Faculty Senate approved the creation of the Art Conservation Ph.D. Program in 1989, and

WHEREAS, the faculty who teach in this program do not constitute a department and do not hold appointments on tenurable lines, therefore be it

RESOLVED, that the Art Conservation Program become the Department of Art Conservation.

- C. Recommendation from the Committee on Graduate Studies (R. Exline, Chairperson), with the concurrence of the Coordinating Committee on Education (L. Goldstein, Chairperson), for a change in the name of the Master of Science Degree in Materials Science to the Master of Materials Science and Engineering. (Attachment 10)

WHEREAS, the master's degree in the Materials Science program is now officially titled: "Masters of Science" and,

WHEREAS, all other master's degrees in the College of Engineering presently incorporate the names of the program, e.g. "Master of Chemical Engineering" etc. Therefore, in the interests of accuracy and consistency be it

RESOLVED, that as of September 1, 1990 the name of the master's degree in Materials Science be changed from "Master of Science" to "Master of Materials Science and Engineering."

- D. Resolution from the Committee on International Studies (J. Rymer, Chairperson), with the concurrence of the Coordinating Committee on Education (L. Goldstein, Chairperson), on the new position of Associate Provost for International Programs and Special Sessions.

WHEREAS, a new position of Associate Provost for International Programs and Special Sessions has been structured from a consolidation of the positions of Assistant Provost for Special Sessions and Special Assistant to the Provost for International Programs, therefore be it

RESOLVED, that the University Faculty Senate approves, in general, this centralization and consolidation of University international programs within this single administrative unit.

- E. Recommendation from the Faculty Senate Executive Committee on space allocation for student drama groups.

WHEREAS, we were assured that the demise of the undergraduate theatre program would not mean the end of student opportunities to perform through such groups as HTAC and E-52, and

WHEREAS, DUSC and other student leadership groups now complain that renovations are now underway which would result in depriving such groups of suitable performing space, therefore be it

RESOLVED, that the University Faculty Senate request the University administration to examine renovation plans to ensure:

1. that suitable performing space be maintained or provided for student performing theatre groups,

2. that such space continue to be available in order that student groups such as HTAC and E-52 may provide cultural enrichment for both performers and the University community as in the past, and
 3. that a report be provided to the Faculty Senate concerning provisions to be made for HTAC, E-52 and other student drama groups.
- F. Report on Project Vision from the Faculty Review Panel, Dr. Frank B. Dilley, Chairperson.
- G. Such items as may come before the Senate. (No motion introduced at this time may be acted upon until the next meeting of the Senate.)

rg

Attachments:

1. Committee Activities Report
2. Revision of the minor in Geology
3. Minor in Science, Technology and Society
4. Minor in Linguistics
5. Revision of the major in Food Science
6. Revision of the Master of Chemical Engineering Degree
7. Establishment of an ESL/Bilingualism major
8. Disestablishment of the Master of Counseling Degree Program in Agency Counseling
9. Conversion of the Art Conservation Program
10. Master of Materials Science and Engineering

COMMITTEE ACTIVITIES REPORT

ACADEMIC APPEALS, COMMITTEE ON (William Nichol)

No committee activity at this time.

BUDGET AND SPACE PRIORITIES, COMMITTEE ON (L. Leon Campbell)

Commuter Rail Parking.

COMMITTEE ON COMMITTEES AND NOMINATIONS, COMMITTEE ON (Jon Olson)

Committee appointments for 1990-91.

CULTURAL ACTIVITIES AND PUBLIC EVENTS, COMMITTEE ON (Hilton Brown)

1. Revision of the "Request for Funding" form.
2. Continuing discussions about how to improve the climate for cultural activities at this University.

DIVESTMENT, AD HOC COMMITTEE ON (David Colton)

First meeting held 2/28/90.

FACULTY WELFARE AND PRIVILEGES, COMMITTEE ON (Gordon J. DiRenzo)

1. Procedures for grievances.
2. Committee organization and mandate.
3. Work policy revisions.
4. Mandatory retirement.

INTERNATIONAL STUDIES, COMMITTEE ON (Jeanne Rymer)

No activity at this time.

LIBRARY, COMMITTEE ON (James L. Morrison)

1. Academic freedom and censorship.
2. Technological needs of library.
3. Long-term strategies.

STUDENT LIFE, COMMITTEE ON (Roger Spacht)

No specific action item.

/wc

Memorandum

June 1, 1989



TO: Chair, Committee on Undergraduate Studies

FROM: B. P. Glass, Chair *B.P. Glass*
Department of Geology

SUBJECT: Minor in Geology

In August 1988, a revision was made in the requirements for a minor in geology. I am not sure if this revision was sent through the system for the necessary approvals. I attach a copy of the revised curriculum for a minor in geology for your inspection. The revision is simply a result of our change in course offerings for the major in geology (i.e., GEO 302 was split into two courses, GEO 303 and GEO 304). If the curriculum revision has not been approved, I would appreciate your consideration at this time.

jpg
enc.



GEOLOGY MINOR

The minor in geology consists of at least 18 credit hours in geology.
The requirements are as follows:

1. General Geology - GEO 107/108 (8 credits)

2. At least two of the following:

GEO 203	Optical and Petrographic Mineralogy	4 cr. hours
GEO 204	Physical Mineralogy & Crystallography	4 cr. hours
GEO 301	Systematic & Evolutionary Paleontology	4 cr. hours
GEO 303	Sedimentology	3 cr. hours
GEO 304	Stratigraphy	3 cr. hours
GEO 401	Structure & Tectonics of the Earth	4 cr. hours

3. Any 400-level course or courses may be used to obtain the remaining credits needed to reach a total of 18.

The student interested in a minor in geology must see the Department Chairperson (or his designee) and be assigned a faculty advisor.

The student must obtain a C or better in all required courses.



University of Delaware

CENTER FOR SCIENCE AND CULTURE
28 WEST DELAWARE AVENUE
NEWARK, DELAWARE 19716

(302) 451-8194

March 23, 1989

Memorandum

TO: ^{Heyward} Heyward Brock
Dean's Office
College of Arts and Science

FROM: ^{Paul} Paul T. Durbin
Director
Center for Science and Culture

SUBJECT: Minor in Science, Technology, and Society

I just heard that the University Senate Undergraduate Committee noticed a small discrepancy in our Minor in STS proposal. In addition, I was quite sympathetic toward the concerns of those who voted no on the proposal at the A&S Senate meeting Monday. Accordingly, I'd like to amend the proposal -- and thus, reluctantly, send it all the way back to the A&S Educational Affairs committee.

Specifically, the requirements should have read (after the 4 introductory credits):

One 3-credit course in each of the following areas,
plus an additional 3-credit course from any of these areas.

That would make the total add up to 16 credits as it should have.

On the issue of science courses for non-science students who would want to take this minor, a way it has been handled at other universities is this. The requirements statement would now read:

Requirements for science majors: 16 credits, as outlined below. Non-science majors, in addition, would be required ~~take~~ take a sequence of 2 courses in a single science -- e.g., an introductory and an advanced biology course, or a two-semester course in chemistry.

H. Brock
March 23, 1989
Page 2

With these minor changes, and the support the proposal has already received, I trust it will sail through at least those bodies that have already reviewed it.

PTD/cw
Attachment

cc: David Allmendinger
President, Arts and Science Senate

James Morrison
Chair, University Senate Undergraduate Committee

DRAFT OF A PROPOSAL
FOR A
MINOR IN SCIENCE, TECHNOLOGY, AND SOCIETY
IN THE CENTER FOR SCIENCE AND CULTURE

In the Center for Science and Culture, we have always defined our teaching efforts in terms of multi- or inter-disciplinarity. This proposal for a Minor in Science, Technology, and Society is in that spirit. Instead of the usual minor as an abbreviated version of a major, we are proposing a minor that is complementary to a major in some technical field. What the minor would offer a student is a concentration in the history, philosophy, and social dimensions of some technical specialty. As presently envisioned, it would require the cooperation of the Anthropology, Geography, History, Philosophy, and Sociology Departments. Hopefully, departments in engineering and science will find these courses appealing for students to fulfill their humanities and social science breadth requirements; it may even be that some departments would strongly urge at least some students to take the entire set of courses required for the minor.

It is also possible that students in other areas such as arts and humanities would take this minor in order to give themselves a grounding in ways that science and technology affect culture in today's world.

Requirements for science majors: 16 credits, as outlined below. Non-science majors, in addition, would be required to take a sequence of 2 courses in a single science -- e.g., an introductory and an advanced biology course, or a two-semester course in chemistry.

- CSC 206 Introduction to Science, Technology, and Society,
 3 credits [= new number and title for CSC/PHL 326,
 Theories of Science]
- CSC ³⁵⁶ ~~356~~ Individual Studies in Science, Technology, and
 Society, 1 credit

One 3-credit course in each of the following areas, plus an additional 3-credit course from any of these areas.

-- History of Science or Technology

H280	Science and Technology and Civilization
H281	American Technology
H328	American Industrial Society from 1815 to Present
H 383	History of Science and Medicine I
H 384	History of Science and Medicine II
CSC/H 385	History of Biological Ideas
H 387	Technology in Western Civilization I
H 388	Technology in Western Civilization II

-- Philosophy of Science/Technology

CSC/PHL 207	Technology and Values
CSC/PHL 245	Ethical Issues in Scientific Research
CSC/PHL 250	Engineering Ethics

-- Social and Cultural Dimensions of Science/Technology

C 100	Chemistry and the Human Environment
G 203	Introduction to Cultural Geography
ANT 222	Technology and Culture
CSC/WS 233	Women, Biology, and Medicine
WS 338	Race, Gender, and Science
CSC/CIS/ SOC 355	Computers, Ethics, and Society
CSC/E 368	Literature and Science

UNIVERSITY OF DELAWARE
-COURSE INVENTORY SYSTEM-
COURSE APPROVAL FORM

COLG DEPT	COURSE
0 2	4 2 3 6 6

☒ NEW COURSE

PRINTED:
VERSION:

GRADE TYPE

DEPT SYMBOL	COURSE TITLE (32)
0110 C S C	0120 I N D I V . S T U D I E S , S C I . , T E C H , & S O C .

L-LETTER
P-PASS/FAIL

0135	L
------	---

CREDIT HOURS (FIXED OR VARIABLE)

0150	FIXED	VAR. MIN.	VAR. MAX.
0154	0 1	0155	0156

REPLACES:

COLG DEPT	COURSE
0350	

CROSS-LISTED WITH:

0320	COLG DEPT	COURSE	COLG DEPT	COURSE
0321			0322	
			0323	

CONTACT: HOURS

0160	LECT.	LAB.
0162	0 1	0164

CONTACT: WEEKS

0170	LECT.	LAB.
0172	1 4	0174

OFFICE
USE
ONLY

DATES

APPROVED YR. MO.	INACTIVE YR. MO.	TERM EFF
0210	0220	0230

CROSS-LIST
INDICATOR

Y-YI N-NI
0310

COURSE DESCRIPTION
(45 WORDS OR LESS)

CSC

Individual Studies, Science, Technology, and Society 1

Opportunity for student to work closely with a particular professor specializing in one or another of the humanities or social science disciplines dealing with science and technology.

APPROVALS AND REVIEW:

INSTRUCTOR	Paul T. Dunlin	DATE	1/23/89	COLLEGE DEAN	DATE
DEPT. COMM.		DATE		UNOGR. STUDIES COMM.	DATE
DEPT. CHAIR	Paul T. Dunlin	DATE	1/23/89	GRAD. STUDIES COMM.	DATE
COLG. COMM.		DATE		PROVOST	DATE

PS00711-R-270

REV. 377

To be resubmitted for spring cycle on
permanent number 356

SUPPLEMENT TO COURSE APPROVAL FORM

Course symbol and number: CSC 366 356

1. Justify the need to initiate, revise or delete this course.

Another part of our proposed Minor in Science, Technology, and Society, this course is intended to provide students with an opportunity to work closely on a one-to-one basis with one of our professors who specialize in science and technology. Totally new course and new idea for us.

2. Identify and justify any effect on other courses in your department or in another department. Specifically list other department chairpersons and/or faculty consulted and summarize results of discussion.

Should have no effect on other courses. Even if taken in conjunction with another course (e.g., philosophy or history), this would allow in-depth treatment of materials in a way unavailable to other students.

3. Identify the main emphasis of the course along with major topics covered. If the proposal is a revision, indicate the nature of the change(s).

Emphasis would vary according to interests of student and professor. A tutorial.

4. If you are proposing that this course satisfy the undergraduate degree multicultural course requirement, complete page 2 of the supplement.

N/A

Supplement to Course Approval Form
Request for Multicultural Course Approval

- 4a. Describe the multicultural, ethnic and/or gender-related content of the course.

- 4b. Estimate proportion of course given to these contents (must be a course "stressing" them):

- 4c. Are there any special considerations you want to bring to the attention of the committee, e.g., the relationship of the course to your department major, or your mission to serve non-majors?

INPUT ID

CM0
CM9
CM1

CM2

COURSE SEQUENCE NO.
02 - 42 - 326

DELETION ☒ REVISION ☐ NEW COURSE ☐

COLG DEPT COURSE

UNIVERSITY OF DELAWARE
-COURSE INVENTORY SYSTEM-
COURSE APPROVAL FORM

2478

PRINTED : 07/23/88

VERSION : 09/04/87

CSC DEPT SYMBOL
0110

THEORIES OF SCIENCE
0120

GRADE TYPE

L-LETTER
L
P-PASS/FAIL
0135

CREDIT HOURS (FIXED OR VARIABLE)

0150 → 03
0154 → FIXED
0155 VAR. MIN.
0156 VAR. MAX.

REPLACES :

0350 COLG DEPT COURSE

CROSS-LISTED WITH :

0320 02 - 31 - 326
0321 → COLG DEPT COURSE
0322 COLG DEPT COURSE
0323 COLG DEPT COURSE

CONTACT : HOURS

0160 → 03
0162 → LECT.
0164 LAB.

CONTACT : WEEKS

0170 → 14
0172 → LECT.
0174 LAB.

OFFICE
USE
ONLY →

DATES

APPROVED YR. MO. 0210 0220 0230
INACTIVE YR. MO. 0220 0230

TERM EFF.

CROSS-LIST
INDICATORS

Y
Y-YES
N-NO
0310

COURSE DESCRIPTION
(45 WORDS OR LESS)

CSC 326 Theories of Science 3

An introduction to scientific concepts in historical perspective; includes social as well as natural science, and a discussion of the social context of science. Interdisciplinary and team taught. May be cross-listed with PHL 326.

APPROVALS AND REVIEW :

INSTRUCTOR Paul T. Dunbar DATE 1/20/89 COLLEGE DEAN _____ DATE _____

DEPT. COMM. Paul T. Dunbar (CSC) DATE 1/20/89 UNDGR. STUDIES COMM. _____ DATE _____

DEPT. CHAIR Paul T. Dunbar (CSC) DATE 1/23/89 GRAD. STUDIES COMM. _____ DATE _____

COLG. COMM. Paul T. Dunbar DATE _____ PROVOST _____ DATE _____

SUPPLEMENT TO COURSE APPROVAL FORM

Course symbol and number: CSC/PHL 326

1. Justify the need to initiate, revise or delete this course.

This course number and title is being deleted in order to replace it with PHL/CSC 206 -- change needed to use the course as an introduction to a proposed new Minor in Science, Technology, and Science.

2. Identify and justify any effect on other courses in your department or in another department. Specifically list other department chairpersons and/or faculty consulted and summarize results of discussion.
3. Identify the main emphasis of the course along with major topics covered. If the proposal is a revision, indicate the nature of the change(s).
4. If you are proposing that this course satisfy the undergraduate degree multicultural course requirement, complete page 2 of the supplement.

10
CM10
CM9
CM11

COURSE SEQUENCE NO.
COLG DEPT T COURSE
0 2 4 2 2 0 6

UNIVERSITY OF DELAWARE
-COURSE INVENTORY SYSTEM-
COURSE APPROVAL FORM

PRINTED:
VERSION:

☒ NEW COURSE

GRADE TYPE

DEPT. SYMBOL	C S C	
0110		
COURSE TITLE (32)		
I N T R O S C I E N C E , T E C H N O L O G Y & S O C		
0120		

L-LETTER
P-PASS/FAIL

0135	L
------	---

CREDIT HOURS (FIXED OR VARIABLE)

0150	FIXED	0 3	0155	VAR. MIN.	0156	VAR. MAX.
0154	0 3	0155			0156	

REPLACES:

COLG DEPT COURSE
0350

CROSS-LISTED WITH:

0320	COLG DEPT COURSE	0320	COLG DEPT COURSE
0321	0 2 3 1 2 0 6	0322	COLG DEPT COURSE
0323		0323	COLG DEPT COURSE

CONTACT: HOURS

0160	LECT.	0 3	0164	LAB.
0162	0 3	0164		

CONTACT: WEEKS

0170	LECT.	1 4	0174	LAB.
0172	1 4	0174		

OFFICE USE ONLY

0210	APPROVED YR. MO.	0220	INACTIVE YR. MO.	0230
0210		0220		0230

DATES

TERM EFF.

CROSS-LIST INDICATOR

0310	Y-YES N-NO
0310	

COURSE DESCRIPTION
(45 WORDS OR LESS)

CSC 206 INTRODUCTION TO SCIENCE, TECHNOLOGY, AND SOCIETY 3

An introduction to scientific and technological concepts in historical perspective; includes social as well as natural science, and a discussion of the social context of science and technology. Interdisciplinary and team taught. May be cross-listed with PHL 206.

APPROVALS AND REVIEW:

INSTRUCTOR	Paul T. Dunlin	DATE	1/23/89	COLLEGE DEAN	DATE
DEPT. COMM.	Paul T. Dunlin	DATE	1/23/89	UNGR. STUDIES COMM.	DATE
DEPT. CHAIR	Paul T. Dunlin	DATE	1/23/89	GRAD. STUDIES COMM.	DATE
COLG. COMM.	Paul T. Dunlin	DATE	1/23/89	PROVOST	DATE

SUPPLEMENT TO COURSE APPROVAL FORM

Course symbol and number: CSC/PHL 206

1. Justify the need to initiate, revise or delete this course.

In fact, this is just a new number and title for PHL/CSC 326 -- change needed to use the course as an introduction to a proposed new Minor in Science, Technology, and Society.

2. Identify and justify any effect on other courses in your department or in another department. Specifically list other department chairpersons and/or faculty consulted and summarize results of discussion.

Since PHL/CSC 326 has been offered only once and this is only a level and title change, there should be no impact on any other departments.

3. Identify the main emphasis of the course along with major topics covered. If the proposal is a revision, indicate the nature of the change(s).

Although the course will include the standard introduction to philosophy of science issues -- scientific method, evidence, the status of theories, etc. -- a principal focus in the revised version will be the history (including current practice) of science as it has developed up to and including its present form in R&D settings. Also, social science will be emphasized as well as the natural sciences.

4. If you are proposing that this course satisfy the undergraduate degree multicultural course requirement, complete page 2 of the supplement.

Not multicultural.

Supplement to Course Approval Form
Request for Multicultural Course Approval

- 4a. Describe the multicultural, ethnic and/or gender-related content of the course.
- 4b. Estimate proportion of course given to these contents (must be a course "stressing" them):
- 4c. Are there any special considerations you want to bring to the attention of the committee, e.g., the relationship of the course to your department major, or your mission to serve non-majors?



University of Delaware

CENTER FOR SCIENCE AND CULTURE
28 WEST DELAWARE AVENUE
NEWARK, DELAWARE 19716

(302) 451-8194

January 19, 1989

MEMORANDUM

TO: *Heyward* Dr. Heyward Brock
Dean's Office
College of Arts and Science

FROM: *Paul* Paul T. Durbin
Director
Center for Science and Culture

SUBJECT: Minor in Science, Technology, and Society

You're aware, I know, that we sent through earlier a proposal for a Minor in Medical Humanities. Here, now, is another proposal -- for a Minor in Science, Technology, and Society. As you'll see if you peruse this proposal even superficially, the two represent a package -- and should go forward together. (The earlier proposal is, I understand, held up at the level of the Senate Undergraduate Committee; that's okay because it provides an opportunity for this to catch up with it.)

After you look this over, could you pass it along to the appropriate persons and committees next in line?

I think the two minors together will make a wonderful addition to the University's programs -- and will significantly enhance the program of the Center along lines Dean Gouldner has been suggesting for a long while.

Thanks for your help!

PTD/cw
Attachment

Proposal for an Undergraduate Minor in Linguistics

Motivation & Proposed Curriculum

The Department of Linguistics wishes to establish an undergraduate minor in linguistics. This proposal is motivated by the six to ten requests per year for some formal program in the discipline at the undergraduate level. At present, these requests cannot be accommodated (given the primarily graduate focus of the Department). This unavailability of any formal program at the undergraduate level strikes the Department as undesirable, especially since all the necessary courses are already in place and are offered regularly with no strain on the faculty and no reallocation of resources. In short, a minor in linguistics simply formalizes an already existing curriculum.

The Department of Linguistics, therefore, proposes the undergraduate minor outlined below:

The minor in linguistics requires 18 credits, distributed as follows:

- A. LIN 101 Introduction to Linguistics
- B. one of the following: LIN 407 Introduction to Phonology, LIN 409 Syntax I, LIN 491 Semantics I
- C. any four additional LIN courses, two of which must be at the 300-level or above.

Special problems and courses other than those specified above must have approval of the Undergraduate Studies Committee of the Department of Linguistics.

Students

Students who elect the minor in linguistics will typically have a major in the following departments: English, Foreign Languages, Computer Science, Anthropology, Communication, Psychology, and Educational Studies. Students from Philosophy, Sociology, and Educational Development may also be expected to take the minor in linguistics. Over the past three years, the Department of Linguistics has administered several ad hoc majors in linguistics (through the BALS and Dean's Scholar program), and the Department continually receives inquiries about a formal program from students in the above listed departments. This fall, for example, three students inquired about a minor (two from FLL, one from English). While the Department of Linguistics is, at present, not interested in offering an undergraduate major, the Department is committed to accommodating undergraduate students, where such accommodation is justified and feasible. The proposed minor codifies a set of courses already populated by the very students who have made inquiries about a formal minor.

Staffing and Curriculum

The Department presently has thirty-five approved courses at the undergraduate level (excluding non-Western languages). The courses required for the minor are offered regularly: at least three sections of LIN 101 are offered every semester; LIN 407 and LIN 409 are offered every fall; LIN 491 is offered every spring. The remainder of the requirements can be satisfied with a variety of regularly offered courses. In 90A, for example, the Department is offering four sections of LIN 101, three sections of LIN 265 (rotating topics; technically three different courses), LIN 267 (experimental course), LIN 301 Dictionaries, and nine 400-level courses. Courses are staffed mainly by full-time faculty members. The Department is experiencing rapid growth in staff and so regular undergraduate offerings can be expected to continue, with no strain on existing allocations or resources, as indicated above.

Impact

The minor codifies an existing curriculum and requires no new resources; it overlaps with no current minor and has a clientele of its own. The impact of the minor thus can only be positive. The minor will bring together students from a variety of disciplines who have a common interest in the science of language and expose them to the Department's ongoing research.

UNIVERSITY OF DELAWARE INTER-DEPARTMENTAL

Memorandum



TO: Harry Hall, chair
Undergraduate Studies Committee

DATE: December 19, 1989

FROM: Robert W. Keown
Food Science

RE: Food Science Curriculum

The only change in the curriculum for food science majors is the designation of a computer course to fit the college of Agricultural Sciences Math and Computer Science group requirement. The number of free electives is reduced.

ALL COURSES REMAIN IN THE FSC CURRICULUM.

There are no deletions and no additions other than the one course listed above. Due to the change in college the courses are simply arranged differently to fit into existing Ag Science Group requirements such as:

Mathematics and Computer Science
Agricultural and Biological Sciences
Literature and Arts
Social Sciences and Humanities
Physical Sciences

From the old curriculum the humanities and social science courses are listed in the new Social Science and Humanities group. PSY309 is moved to the sciences section as PSY201 fills the limit of one PSY course in the SS/Humanities group.

With the change in college, ND 200 can no longer be listed as "within the college" and is therefore included in the sciences section. The "within the college" credits remain and are now in the Agricultural and Bio. Science Group.

The math courses are the same and are now listed in the mathematics and computer science group.

The Physical Sciences group includes chemistry which list C102, C104 from the sciences section.

B207 is now listed in the Agricultural & Biological Sciences group. B208 remains in the science section.



Harry Hall, chair
page 2

The College of Agricultural Sciences group requirements are consistent with the listings for other College of Agriculture majors. In summary, the curriculum adds one computer course; all other courses remain the same. Basically, this is a change in format. I hope this will help clarify the curriculum revision. If it is necessary to come answer questions to assist in the review process, I would be happy to do so.

Thank you.

RWK/r1

Attachments

CC: R. D. Shippy, Assoc. Dean

MASTERS DEGREE IN CHEMICAL ENGINEERING
DEPARTMENT OF CHEMICAL ENGINEERING
UNIVERSITY OF DELAWARE

The Department of Chemical Engineering offers two options for graduate education leading to a Master of Chemical Engineering (MChE) Degree. Our thesis option requires 6 credit hours of thesis work and 24 credit hours of course work and is designed for full-time graduate students in residence. Our course option requires 30 credits of course work and is designed for engineers who are studying part-time.

Students in both options must satisfy the Requirements for Admission as listed in the Chemical Engineering Section of the current Graduate Catalog of the University of Delaware. The faculty member supervising the thesis research will act as an advisor for students in the thesis option. The Department's graduate student advisor will act as an advisor to all students in the course work option. Ordinarily the course option is not available to graduate students who have entered the graduate program as full-time students.

Both options require 12 credits (four courses) of core courses in chemical engineering fundamentals.

ChE 825 Chemical Engineering Thermodynamics (3)

Applications of classical and molecular thermodynamics to industrial problems in chemical and phase equilibrium. Topics include nonideal solutions, high pressure systems, complex reaction equilibria, generalized correlations, and equations of state.

Prereq: ChE 325 and C 444.

ChE 830 Fluid Mechanics (3)

Use of field equations of motion and a variety of constitutive assumptions to solve problems involving both laminar and turbulent flows. Emphasizes polymer processing, fluids transport and boundary layer theory.

Prereq: Undergraduate study in fluid mechanics or transport phenomena.

(continued)

ChE 835 Applied Chemical Kinetics (3)

The application of modern methods and recent experimental data to the design of chemical reaction equipment.

Prereq: Undergraduate reaction engineering, physical chemistry.

ChE 863 Diffusional Operations (3)

An advanced course covering the latest theoretical and experimental studies in several fields involving mass transfer. These fields include humidification, absorption, extraction, distillation, ion exchange, and adsorption.

Prereq: C 444.

Both options also require 3 credits (one course) in applied mathematics. The following courses are available.

ChE 827 Chemical Engineering Problems (2 or 3)

The application of mathematical methods to the solution of chemical engineering problems. The use of ordinary and partial differential equations and of difference equations in fluid flow, heat transfer, diffusion, and other unit operations.

Prereq: ChE 443, M 302

ME 864 Engineering Analysis (3)

Linear analysis; Bessel functions; partial differential equations; Green's functions; perturbation methods. Engineering applications.

Prereq: ME 863 or consent of instructor.

M 514 Topics in Advanced Mathematics for Engineers (3)

Basic methods of analysis for engineering students: Introduction to complex variables; special functions including Bessel functions and Legendre polynomials; Fourier series and integrals; partial differential equations; emphasis on engineering applications.

Prereq: M 302

The Department offers a range of technical elective courses in both chemical engineering and material science which are designed to expand ones knowledge in specialized areas. For the thesis option, 9 credits (3 courses) of technical electives are required, in addition to the 6 credits of thesis research (ChE 869). For the course option, 15 credits (5 courses) are required. In both options, two of the courses may be taken outside the Department of Chemical Engineering upon approval of the graduate advisor. Typical technical elective courses are:

- ChE 601 Structure and Properties of Polymer Materials (3)
- ChE 602 Polymer Process Analysis and Design (3)
- ChE 603 Polymerization Reaction Engineering (3)
- ChE 604 Introduction to Polymer Science and Engineering II (3)
- ChE 606 Introduction to Catalysis (3)
- ChE 610 Industrial and Engineering Chemistry (3)
- ChE 612 Applied Process Heat Transfer (3)
- ChE 615 Special Topics in Mixing (3)
- ChE 616 Chemistry & Physics of Surfaces and Interfaces (3)
- ChE 620 Biochemical Engineering (3)
- ChE 635 Air Pollution and Its Control (3)
- ChE 650 Biomedical Engineering I (3)
- ChE 665 Distillation (3)
- ChE 691 Technical Project Management (3)
- ChE 695 Patent Law for Engineers and Scientists (2-3)
- ChE 826 Chemical Engineering Thermodynamics (3)
- ChE 827 Chemical Engineering Problems (2 or 3)
- ChE 828 Statistical Thermodynamics (3)
- ChE 836 Applied Chemical Kinetics (3)
- ChE 850 Fossil Fuel Conversion (3)
- ChE 868 Research (1-9)
- ChE 869 Master's Thesis (1-6)

Memorandum



March 1, 1990

TO: Ralph Exline, Chair
Graduate Studies Committee

FROM: Victor Martuza, Chair *VM*
Educational Studies

SUBJECT: Proposed MA Specialization in ESL/Bilingualism

Dr. Gabriella Hermon has informed me that your committee may be concerned about the budgetary implications of this proposed program. Let me assure you that the program will require no new resources at this time or in the foreseeable future. Most of the core courses are already being taught by faculty members in Linguistics and EDS. The two new courses (EDS/LIN 676 and EDS/LIN 677) will be taught by Dr. Hermon as part of her regular teaching assignment. In fact, the first of these has already been offered twice under an experimental number.

I want to stress the importance of this program in view of the demographic changes occurring throughout the country due to the influx of immigrants from Latin America and Asia. This program is not only responsive to the land grant mission of the University, but will also play a part in attracting foreign students who can contribute to the achievement of our cultural diversity goals. I hope that your committee will handle this proposal expeditiously so we can begin recruiting students for this program.

VM:blo

cc: Gaby Hermon
Frank Murray, Dean

Proposal For a Specialization in ESL/Bilingualism

We would like to propose an ESL/Bilingualism specialization in the Master of Arts of Educational Studies degree. This specialization is a unique program, in that it is a cooperative effort between the departments of Educational Studies and Linguistics.

Reason for proposal: There is an increasing need in Delaware, as well as in the neighboring states for teachers (grades K-12) trained for working in bilingual and/or ESL programs. In general, populations of children of limited English proficiency (LEP students) in the United States are expanding at a faster rate than the English-speaking majority. It has been estimated that nearly one teacher in four has had LEP students in class and that by the year 2000, the number of LEP students aged 5-14 will reach approximately 3.4 million. In a recent study published by the National Clearinghouse for Bilingual Education, Virginia Collier reports that the 1980-1982 Teachers Language Skills Survey identified the need for 100,000 bilingual teachers. In 1982 there were an estimated 27,000 to 32,000 trained bilingual teachers, thus leaving 68,000 to 73,000 yet to be trained. Since 168 Institutes of Higher Education currently graduate approximately 2,000 trained bilingual teachers each year, we have a long way to go. The survey also identified 103,000 teachers who were assigned to teach ESL and of whom only 40 percent had received any training in methods of teaching ESL. It was estimated that at least 350,000 teachers need specialized ESL training. (Figures are from Blatchford 1982 and O'Malley and Wagoner 1984).

As far as the situation in Delaware is concerned, Rebecca Scarborough, state supervisor of foreign languages, reports that Delaware public schools enroll some 640 LEP students, including 361 students in the Hispanic bilingual program run by Red Clay. See the attached report on state initiatives in this area.

The new ESL/Bilingual specialization would have a twofold purpose:

- a. It would provide teachers who are currently teaching in the school systems (grades K-12) with the skills necessary to work in school settings requiring extensive knowledge and experience in dealing with children and adults of varied cultural and linguistic backgrounds. Thus, the program, which would lead to certification as an ESL or bilingual teacher, would be aimed at training teachers to work with LEP students. The coursework offered by the program would be appropriate not only for teachers who are new to the ESL/bilingual area, but also for current ESL/bilingual teachers who wish to further their careers through advanced study.

b. The program would also be attractive to students who do not necessarily want to teach in the US public schools, but who wish to obtain a masters degree in ESL in order to teach English abroad. In addition, the ESL degree will be of interest to foreign students, in particular students from Taiwan, China, Korea, and Japan, who wish to return to their own countries to teach English.

The ESL/ Bilingual Masters program will consist of 33 graduate hours. The 33 hours of course requirements include a core of 12 hours of coursework in education, a concentration of 15 credit hours in Linguistics, Bilingualism and ESL, and 6 credit hours of elective courses (including a 3 credit hour research course). The elective courses are to be selected from a list of recommended courses and will vary depending on whether the student is mainly interested in teaching in a bilingual or an ESL setting. In addition, in order to satisfy the research requirement for the general M.A. degree in Educational Studies, students are required to write a research paper of publishable quality covering either design, experimental, or analysis work. In designing the program we followed the integrated approach to training bilingual and ESL teachers argued for in Collier (1987) and Ovando and Collier (1985).

The following is an outline of the proposed program:

Admission Requirements:

1. A minimum undergraduate cumulative index of 3.0 (B).
2. A minimum graduate cumulative index of 3.5 for all graduate courses completed.
3. Graduate Record Examination quantitative and verbal test scores. (A TOEFL may be substituted for the GRE-Verbal Score by applicants whose primary language is not English.)
4. A TOEFL score of 550 for applicants whose primary language is not English.
5. Three letters of recommendation from individuals able to assess the applicant's academic potential.

Program Requirements:

Education Courses (12 credit hours; choose one course from each category)

1. Research Techniques: EDS 607 - Educational Research Procedures, or equivalent.

2. Curriculum/teaching: EDS 629 - Psychology of Teaching, or EDS 627 - Models of Instructions, or equivalent.
3. Cognition/Instruction: EDS 636 - Advanced Educational Psychology, or EDS 820 - Cognition and Instruction, or equivalent.
4. Foundations: EDD 612 - Ethnic Studies and Multicultural Education, or EDS 640 - Philosophy of Education, or EDS 641 - Social Philosophy of Education, or EDS 648 - Politics of Educational Policy, or equivalent.

For students with appropriate background, relevant 800-level seminars may be substituted for any of these requirements. Permission of the Program Coordinator must be obtained for such a substitution.

Linguistics, ESL and Bilingualism (15 credit hours)

1. *EDS 676 - Language and Bilingualism
2. LIN 698 - Teaching English as a Second Language or equivalent (such as *LIN 699 - Issues in Teaching LEP Students)
3. LIN 622 - Language Syllabus Design
4. LIN 624 - Second Language Testing
5. *EDS/LIN 677 - The Structure of English. This is a course in current linguistic theory and its application to the study of English syntax. Students in the program need to write a paper contrasting the structure of English with the structure of a second language.

***New Courses**

Electives (3 credit hours)

One of the following courses:

1. Language Planning - LIN 617
2. Second Language Acquisition - LIN 880
3. Seminar in Language Development - EDS/LIN 841
4. Applied Spanish Linguistics - LIN 631
5. Sociolinguistics - LIN 618
6. Dynamics of Language Contact - LIN 604
7. Psycholinguistics - LIN 696
8. Psycholinguistics of Second Language Reading - LIN 693
9. Syntax I - LIN 609

Research project (3 credit hours)

The electives are to be chosen with the approval of the program coordinator and should reflect the primary interest of the student. New courses may be added to the list in the future. Note that not all the elective courses may be available in any given semester or year. Some courses may be offered during the summer. For example, teachers may participate in the Bilingual Education/ESL Institute co-sponsored by the Department of Public Instruction and the Georgetown University Bilingual Education Service Center. In addition, some of the courses (such as LIN 698 and LIN 699) may be offered at the Dover campus.

Field Experience and Student Teaching

It is expected that completion of the program will take three semesters. Ongoing field experience in a bilingual and/or ESL setting will be provided as an integral part of the methods courses (LIN 698 and LIN 699) and the syllabus design course (LIN 622). Opportunities for field experience are available in the Red Clay school district's bilingual program and in the various ESL classes offered on campus. In addition, students who possess teaching certificates and who wish to be certified as ESL/bilingual teachers will have to complete 9 weeks of student teaching in a bilingual/ESL setting or document previous ESL/bilingual work experience.

CERTIFICATION REQUIREMENTS

Although the program is designed to meet both NASDTEC and DPI certification standards (see attached table), it does not automatically certify students as ESL or Bilingual teachers. In order to get certified, students completing the program may have to satisfy additional requirements, such as student teaching and foreign language requirements. (See addendum on Certification Requirements). The following is a summary of the language requirement for certification:

For bilingual teachers: Bilingual teachers need to be able to effectively communicate in the target group's language in order to be able to teach content areas in that language. This requirement can be fulfilled by completing 15 hours of course work in the target language at or above third year college level or by passing a language proficiency test (advanced level, ACTFL standards).

For ESL teachers: ESL teachers need to have at least 6 hours of a foreign language at the 200 - 300 level and pass a proficiency test (intermediate level, ACTFL standards).

Note that language courses are not counted as degree credits. Students are encouraged to complete the language requirement over the winter and summer sessions.

Suggested Two Year Schedule

Fall EDS 607: Research Procedures
 Curriculum Teaching Course
 LIN 624: Second Language Testing
 LIN 699 or LIN 698 (Methods course)

Spring Foundations course
 EDS 676: Language and Bilingualism
 LIN 622: Language Syllabus Design
 Elective

Fall Cognition and Instruction
 EDS/LIN 674: The Structure of the English Language
 Research Requirement

Spring Student teaching (if required)
 Additional Language Courses (if required)

References

- Collier, V. P. (1987). University Models for ESL and Bilingual Teacher Training. Issues in English Language Development. National Clearinghouse for Bilingual Education.
- Ovando, C. J., & Collier, V. P. (1985). Bilingualism and ESL Classrooms: Teaching in Multicultural Contexts. New York: McGraw-Hill.
- Blatchford, C. H. (1982). Directory of Teacher Preparation Programs in TESOL and Bilingual Education: 1981-1984. Washington, DC: Teachers of English to Speakers of Other Languages (TESOL).
- O'Malley, J. M., & Wagoner, D. (1984). Public Schools Teacher Preparation and the Teaching of ESL. TESOL Newsletter, 18, No. 3.

NASDTEC Certification Standards (abbreviated)

Content Standard in English for
Speakers of Other Languages

Course Offerings

- | | |
|--|---|
| 1. Nature of Language, Structure of English | EDS 676 Bilingualism and Language
EDS/LIN 674 The Structure of English |
| 2. Demonstrated proficiency in English | TOEFL score, remedial English courses (if needed) |
| 3. Demonstrated proficiency in a second language | Second language courses, proficiency at intermediate level (ACTFL standards) |
| 4. L1 and L2 acquisition process | EDS 676 Bilingualism and Language
LIN 698: Teaching English as a Second Language |
| 5. Socio Cultural variables | EDD 612: Multicultural Education, courses in sociolinguistics |
| 6. Language assessment, program development, implementation and evaluation | LIN 622: Language Syllabus Design
LIN 624: Second Language Testing |

Content Standard in Bilingual Education

Course Offerings

- | | |
|---|---|
| 1. Proficiency in L1 and L2 | Second language courses, proficiency at advanced level (ACTFL standards) |
| 2. Knowledge of target group's culture | EDD 612: Multicultural Education
EDS 676: Bilingualism and Language |
| 3. Historical/legal bases for bilingual education | EDS 676: Bilingualism and Language |
| 4. Organizational models for programs/classrooms in bilingual education | LIN 699: Issues in Teaching LEP Students
LIN 622: Language Syllabus Design |
| 5. L2 methods of teaching | LIN 698: TESL
LIN 699: Issues in Teaching LEP Students |
| 6. Bilingual experience | Student teaching or work experience in Bilingual setting |

Descriptions of Required Courses

Core courses in Education:

EDS 607 Educational Research Procedures 3

An introduction to quantitative methods in education through study of educational research procedures; for example, measurement, evaluation, experimental and quasi-experimental design, internal and external validity. Small projects are conducted.

EDS 629 Psychology of Teaching 3

A study of the research on teacher characteristics, teaching style and method, and teaching teaching.

EDS 636 Advanced Educational Psychology 3

Study of research and theory in educational psychology and their application to instruction and schooling.

EDD 612 Ethnic Studies and Multicultural Education 3

Content, strategies, concepts and resources for teaching comparative ethnic studies and integrating these studies into the regular curriculum. Techniques for evaluating multicultural education outcomes. Surveys the culture and history of major American ethnic groups; emphasizes the major ethnic groups in our geographic area.

Linguistics, ESL and Bilingualism

*EDS 676 Bilingualism and Language

Bilingualism and the role of language in thinking. The linguistic, psychological and social experiences of the bilingual. The influences of first language on second language learning. The role of bilingualism in education and methods of bilingual instruction.

LIN 698 Teaching English as a Second Language 3

Investigation of the literature containing the traditional and modern techniques of teaching the pronunciation, grammar, and vocabulary of American English; devising and presenting lesson plans.

***LIN 699 Issues in Teaching LEP Students**

Theoretical and instructional issues related to teaching limited English proficient students. Issues in bilingual education, theories of L2 acquisition, LEP educational models, assessment of LEP skills and understanding cultural diversity.

LIN 622 Language Syllabus Design 3

Study of the main approaches to language syllabus design and materials development including grammatically sequenced, situational, notional-functional and verbal strategy approaches. Practice in simplification, standardization, textbook evaluation and adaptation, and in design and implementation of learning units for second-language, special purpose and bilingual learners.

LIN 624 Second-Language Testing 3

Study of the principles and techniques of second-language testing including measurement of the four skills and of communicative competence. Bilingual measures. Discrete point versus integrative or pragmatic measures. Practice in item construction and analysis.

***EDS/LIN 677 The Structure of English**

The course explores current generative linguistic theories and the analysis of English phonology/morphology and syntax in the light of these theories. Contrastive analysis of English and a second language (such as Spanish).

LIN 631 Applied Spanish Linguistics 3

The application of linguistic theory to the study of Spanish structure (morphology/syntax), semantics, discourse and pragmatics. Special attention given to Spanish/English contrastive analysis and on resolving problems inherent in the teaching of Spanish. The course also focuses on refining the student's language skills.

***new courses (see attached course proposals)**



University of Delaware

5

COLLEGE OF ARTS & SCIENCE
DEPARTMENT OF LINGUISTICS
46 E. DELAWARE AVENUE
NEWARK, DELAWARE 19716

(302) 451-6806

MEMO TO: Gabriella Hermon
Dept. of Educational Studies
School of Education

FROM: Angela Labarca
Chairman, Pedagogy & Testing Committee

DATE: March 2, 1989

RE: Proposal for an ESL/Bilingualism Specialization

The Pedagogy and Testing Committee of the Department of Linguistics has reviewed the proposal for the new ESL/Bilingual specialization in the Master of Arts in Educational Studies Degree. We feel that the creation of this program is an important step in meeting the growing challenge of multicultural education on this campus. We are therefore, eager to cooperate with the College of Education, and to fully contribute our resources to insuring the success of the program.

A handwritten signature in cursive script, appearing to read "Angela Labarca".

Angela Labarca
Chairman, Pedagogy & Testing
Committee

A handwritten signature in cursive script, appearing to read "Peter Cole".

Peter Cole
Chairman, Linguistics Dept.

Memorandum

UNIVERSITY FACULTY SENATE

January 30, 1990

TO: Leslie F. Goldstein, Chairperson
Coordinating Committee on Education

FROM: Ralph V. Exline, Chairperson *RVE/uc*
Committee on Graduate Studies

SUBJECT: Disestablishment of the Master of Counseling Degree Program in
Agency Counseling

In its January meeting the University Faculty Senate Committee on Graduate Studies approved the request of the Department of Educational Studies to disestablish its Master of Counseling Degree in Agency Counseling. The following resolution is forwarded to you for your consideration as an item for the agenda of a future Faculty Senate meeting.

WHEREAS, the primary mission of the College of Education and the Department of Educational Studies is to educate and train personnel to assume professional roles in schools, and

WHEREAS, the primary function of agency counseling is to provide services outside the school setting, and

WHEREAS, resources needed to train counselors would be better utilized to strengthen the professional training of school counselors, an established degree program more in line with the educational mission of the Department and the College, therefore be it

RESOLVED, that the Master of Counseling Degree Program in Agency Counseling be disestablished effective as of the date of the graduation of the last presently enrolled candidate for that degree.

RVE/wc

cc: C. Hoffecker, Acting Associate Provost for Graduate Studies
F. Murray, Dean, College of Education
V. Martuza, Chairperson, Department of Educational Studies

AGENCY COUNSELING
COURSE REQUIREMENTS

RECEIVED

JAN 19 1990

STUDENT NAME _____

GRADUATE OFFICE

DATE OF ENROLLMENT _____ EXPECTED COMPLETION _____

EDS607 Educational Research Procedures _____
EDS621 Human Services Management _____
EDS652 Tools & Techn. of Counsel. _____
EDS653 Occupational & Educ. Information _____
EDS654 Counseling Theories & Interview. _____
EDS655 Intro. to Family Counseling _____
EDS658 Group Counsel. Procedures _____
EDS661 Prof. Seminar I _____
EDS663 Counseling Skills Lab _____
EDS664 Counseling Services _____
EDS808 Internship _____
EDS857 Practicum for Agency Couns. _____

Comprehensive exam will be given in the Spring when the student completes the program.

The research proposal or project is to be completed by the same semester the student takes Comprehensive exam.

CURRICULUM DELETION: MC/EAG SUPPORTING DOCUMENTATION

Agency Counseling is being deleted as a major. The primary function of the Department and College is to provide educational opportunities for training personnel to assume professional roles in schools. Thus, we believe we have a responsibility to provide professional training for school counseling, particularly since the University is the only institution in the State to do so. On the other hand, providing professional training for agency counselors whose primary function is to provide services outside the school setting is much more tangentially related to the mission of the Department or College. Thus, this program detracts Department efforts and resources which are more appropriately expended on programs more central to our mission.

In reviewing the school counseling program in light of national professional standards and in communication with professional associations of school counselors within Delaware, it became apparent that our program was weak in relation to professional standards within the state and nationally, both in terms of course work and internship both in terms of course work and internship experiences. The resulting proposal attempts to deal with deficiencies by substantially revising and upgrading the program. To do this, however will require efforts and resources which would not be available if we also had to maintain the agency counseling program. Further, we did not believe the Department would care to request additional resources in order to maintain the agency counseling program, both in terms of the above or in terms of other more important competing programs for which we are likely to request additional resources in the near future.

Mission of the Art Conservation Program/Department

The mission of the Art Conservation Program is:

1. To educate and train art conservators, conservation scientists, and researchers in the field of preservation of cultural property on three levels (an undergraduate preparatory major, a magisterial and, beginning September, 1990, a doctoral program)
2. To provide a scholarly environment to nurture research in fields related to the conservation of cultural property.
3. To encourage advancement of the profession through publications, consultation, lectures, service to professional organizations, and public education by both faculty and students.

Proposal to
convert the
Art Conservation Program
to the
Art Conservation Department
at the
University of Delaware

The Art Conservation Program at the University of Delaware has been in existence since 1974. It has under its aegis:

- 1) An undergraduate major (A B.A. degree program in the Technology of Artistic and Historic Objects which began in 1971 as an interdepartmental major and has graduated about 25 majors), and
- 2) A three-year Master's Degree program in art conservation sponsored jointly with the Winterthur Museum which will have awarded 122 M.S. degrees by September, 1989.

Beginning in September, 1990:

- 3) A new Ph.D. program in art conservation research will accept its first students.

Conversion to departmental status will provide a more integral relationship to other departments through the faculty senates, faculty committees etc., and will allow the Art Conservation faculty to draw up departmental policies on promotion and tenure to allow faculty to be tenured within the discipline of art conservation. (It is understood that with the exception of the Black Studies Program, a program is not allowed to grant tenure.) It seems inappropriate that full-time professors in conservation

science and conservation practice should be required to have their tenure reside in the chemistry, art history or anthropology departments which have different missions and objectives.

Faculty

In September, 1989, Art Conservation will have five full-time University faculty positions, 14 adjunct faculty at Winterthur Museum, and 4 regularly-scheduled guest instructors:

University faculty:

Hilton Brown, Professor of Art, Art History, and Art Conservation, Advisor for the TAH undergraduate major, artist and art technologist, M.F.A. (Art Institute of Chicago)

Debra Hess Norris, Assistant Director, Assistant Professor, and Conservator of Photographs, M.S. (Delaware)

Chandra Reedy, Assistant Professor, and Conservation Scientist, Ph.D., (UCLA)

Joyce Hill Stoner, Director of Art Conservation, Associate Professor, and Conservator of Paintings, M.A. (New York)

Richard Wolbers, Associate Professor, and Conservator of Paintings, M.F.A. (UCSD), M.S. (Delaware)

Adjunct faculty at Winterthur:

Mark Anderson, Associate Furniture Conservator, B.A. (Maryland)

Kory Berrett, Objects Conservator, B.A. (Utah)

Janice Carlson, Museum Scientist, M.S. (Michigan)

Herb Crossan, Museum Photographer

Claudia Deschu, Assistant Objects Conservator, M.S. (Delaware)

Margaret Fikioris, Textile Conservator, M.A. (Columbia)
Don Heller, Objects Conservator
Charles Hummel, Deputy Director for Collections and Adjunct Associate
Professor of Early American Culture Program, M.A. (Delaware)
John Krill, Paper Conservator, M.A. (Pennsylvania State Univ.), advanced
training, New York Univ.
Gregory Landrey, Furniture Conservator, B.A. (Gettysburg)
Debora Mayer, Associate Paper Conservator, M.S. (Delaware)
Michael Podmaniczky, Associate Furniture Conservator, B.A. (Kenyon)
George Reilly, Head, Science Research Section, Ph.D. (Massachusetts)
Wendy Samet, Associate Paintings Conservator, M.S. (Delaware)

Regular guest lecturers:

Thomas Brill, Professor of Chemistry, Ph.D. (Minnesota)
Vicki Cassman, Textile Conservator, M.S. (Delaware)
Melanie Gifford, Microscopist and Painting Conservator, M.A. (Cooperstown),
M.A. (Clark Art Institute)
P. Andrew Lins, Metallurgist and Objects Conservator, M.A. (NYU), M.S. (London
Polytechnical)

The Art Conservation Program is one of only three graduate fine art conservation programs in the U.S. The Master's Degree program is the only program sponsored jointly by a university and a museum, and the only program with a major in photographic materials, and it has the most extensive staff and facilities. We are currently the only program in the country to offer an undergraduate preparatory major in art conservation. We have recently received and nearly completed the match for a \$500,000 challenge endowment

grant from the J. Paul Getty Trust and another \$500,000 from the Andrew W. Mellon Foundation. The top ten candidates accepted regularly turn down other choices to attend the Delaware program. Yet we are the only program in the U.S. which cannot grant tenure within its own department.

The mission statement for the Art Conservation Program is attached. We would like to take the appropriate steps beginning in September, 1989 through the Dean's office and the faculty senate to see if approval for the change to departmental status could be secured, perhaps by September of 1990.



MATERIALS SCIENCE PROGRAM
COLBURN LABORATORY
NEWARK, DELAWARE 19716

(302) 451-2062
(302) 451-8145
FAX: (302) 451-1048

MEMORANDUM

To: Dr. C. E. Hoffeecker
Acting Associate Provost
for Graduate Studies

From: Dr. I. W. Hall
Acting Chairman
Materials Science Program

Date: 2/27/90

Subject: Revision of Current Academic Program in Materials Science

The present Graduate Program in Materials Science has been in existence for over 20 years, supplying trained scientists for American industry and academia. The Program awards Doctorate and Masters Degrees and has graduated approximately 150 students. It has become clear to all concerned that the educational component of the Program must respond to the changing nature of Materials Science. Some years ago the name was changed from Program in Materials and Metallurgy to its present name and some minor curricular changes were instituted. However, we now believe that rather more substantial changes are necessary and these are the subject of the attached documents which I submit for approval by your committee.

We have thoroughly reviewed our Program, considered how Materials Science and Engineering is taught elsewhere, and taken notes from the recent National Research Council Report on Materials Science and Engineering. This has led to a redefinition of the academic Program according to the Graduate Program Policy Statement attached. A copy of the old Policy Statement is also attached for reference.

This is the relevant section

The principal revisions are as follows:

1. The degrees will be named "*Master of Materials Science and Engineering*" and "*Doctor of Philosophy*" in Materials Science and Engineering rather than the present non-specific Master of Science and Doctor of Philosophy. This is in line with all the other graduate programs in the College of Engineering which offer, for example, Master of Mechanical Engineering and Master of Chemical Engineering degrees. The name of the proposed degree now incorporates the word "Engineering" to reflect more accurately the fact that there is much emphasis on the practical applications of Materials, both in the teaching curriculum and in the research carried out.

2. A *required curriculum*, covering what are accepted to be the fundamentals of modern Materials Science and Engineering, is laid out. Master's students will take 6 required courses and two electives from an area of specialization: 6 credit hours of thesis are also required. Ph.D. students will take 9 required courses and 9 credit hours of electives from an area of specialization. The establishment of a fixed curriculum is new and offers several major advantages.

First, students will now know exactly which courses they must take and when they will be offered: this contrasts with the present situation where certain courses are "recommended" or "normally taken", a system open to considerable abuse, both deliberate and accidental.

Second, planning of faculty teaching schedules is more straightforward and will result in less frequent course changes and reassignments. This is of importance since the teaching faculty all have appointments in one of the Departments of the College of Engineering and must reconcile teaching commitments in the parent Department as well.

Third, the Departments in the College of Engineering (and the rest of the University) can inform their Seniors of the regular availability of 600 level courses in Materials to fulfill Technical Elective requirements.

Fourth, since the core courses for each degree overlap, suitably qualified students may enter the Ph.D. Program directly and be assured of having covered the same material as the Masters students. Conversely, students who enter the Masters Program and who then wish to continue for the Ph.D. will have already completed many of the required courses and the additional requirements will not be too onerous.

Fifth, the specified core of courses defines the material which will be tested in the Ph.D. qualifying examination.

3. Course changes.

In order to tailor the curriculum to the needs of our typical entry level graduate students, some modifications are necessary to existing courses and one new course will be instituted. The required Course Approval Forms are attached.

Modifications:

i) MAT 803, Equilibria in Material Systems, 3 credits
Course description changed slightly

ii) MAT 804, Kinetics in Materials Systems, 3 credits
Course description changed slightly

iii) MAT 806
Title changed to "Physical Properties of Solids", 3 credits

iv) MAT 602, "Structure of Materials", 3 credits

The course description has been changed by the addition of a section on crystallography and the elimination of the coverage of fluorescence and microanalysis. It has been reduced to a 3 credit course and the laboratory exercises which used to be included have now been removed and expanded into full course format in MAT 603 below.

v) MAT 603, "Analytical Techniques in Materials Science", 3 credits

This is a new course, based on an expanded version of the laboratory section of the previous MAT.602. Many analytical techniques which were considered highly specialized or advanced a few years ago have now become standard in every materials laboratory; familiarity with the capabilities of these techniques and the interpretation of the results from them are essential. The course will give all students hands-on experience of a wide variety of analytical techniques with which they will need to be familiar.

vi) MAT 615, "Mechanical Properties of Materials"

Permanent number assigned to a course taught twice previously, now required. This is also to be cross-listed as ME 615 and required for ME students.

REQUIREMENT CHART

College: Engineering
 Department: Materials Science Program
 Degree: Master of Materials Science and Engineering

SUGGESTED CURRICULUM	CREDITS	TYPICAL FIRST YEAR STUDENT COMPLETES	TYPICAL SECOND YEAR STUDENT COMPLETES
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UNIVERSITY REQUIREMENTS

MAT 869 (Masters Thesis)	6		6
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COLLEGE REQUIREMENTS N/A

MAJOR REQUIREMENTS

Within the Program

MAT 803 (Equilibria in Material Systems)	3	3	
MAT 804 (Kinetics in Material Systems)	3	3	
MAT 602 (Structure of Materials)	3	3	
MAT 603 (Analytical Techniques in Mat. Sci.)	3	3	
MAT 806 or MAT 615 (Physical Properties of Solids or Mechanical Properties of Materials)	3	3	

Within the College

ME 863 (Engineering Analysis)	3		3
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ELECTIVES

Electives	6	3	3
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Credits to total a minimum of 30

Special Notes:

This is a modification of the present (2/20/90) Masters Degree Program, in which no specifically required courses are listed except the University requirement of 6 credits of Research. The total number of credits is unchanged. The name of the Degree is to be "Master of Materials Science and Engineering".

REQUIREMENT CHART

College: Engineering
 Department: Materials Science Program
 Degree: Doctor of Philosophy
 Concentration: Materials Science

SUGGESTED CURRICULUM	CREDITS	TYPICAL 1st/2nd YEAR STUDENT COMPLETES	TYPICAL LATER YEAR STUDENT COMPLETES
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UNIVERSITY REQUIREMENTS

MAT 869 (Masters Thesis)	6		6
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COLLEGE REQUIREMENTS N/A

MAJOR REQUIREMENTS

Within the Program

MAT 803 (Equilibria in Material Systems)	3	3	
MAT 804 (Kinetics in Material Systems)	3	3	
MAT 602 (Structure of Materials)	3	3	
MAT 603 (Analytical Techniques in Mat. Sci.)	3	3	
MAT 806 (Physical Properties of Solids)	3	3	
MAT 615 (Mechanical Properties of Materials)	3		3

Within the College

ME 863 (Engineering Analysis)	3		3
ME 864 (Engineering Analysis)	3		3

Outside the College

PS 621 (Introduction to Modern Physics)	3		3
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ELECTIVES

Electives	9		9
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Credits to total a minimum of 36

Special Notes:

This is a modification of the present (2/20/90) Ph.D. Degree Program, in which no specifically required courses are listed.



