GRADUATE & RESEARCH COMMITTEE

COURSE AND CURRICULUM CHANGES

UNIVERSITY FACULTY MEETING
March 21, 2005

CAS MOTIONS
CAS Courses: Adds; Drops; Changes

Biological Sciences
  BICS 477 (Chm 477) Topics in Biochemistry—drop cross-listing
  Bios 471(Chm 471) Eukaryotic Biochemistry—change in title and
  description

Earth and Environmental Science
  EES 451, 455, 458—drop from catalog (instructor no longer at LU)
  EES EES 457 Advanced Remote Sensing—new course

Sociology and Anthropology
  SSP 401 Proseminar in Applied Social Theory—change in
  description
CAS: Biological Sciences

Proposed Course Changes

1. Current course number, title, course description, and credits (from present course catalogue):
   BIOS 471 (CHM 471) Eukaryotic Biochemistry (3) alternate years. Biochemistry of selected eukaryotic processes including hormone chemistry, blood clotting, immunochemistry, vision chemistry, muscle chemistry and photosynthesis. The second part of the course will involve presentation and discussion of the current literature by class participants. Prerequisite: BIOS/CHM 372 or consent of department chair.

2. Proposed course number, title, course description, and credits (as it will appear in course catalogue):
   BIOS 471 (CHM 471) Eukaryotic Signal Transduction (3) alternate years. Signal transduction between and within cells of multi-cellular organisms examined in the context of specialized functions that include: nutrition, hormones and neurotransmitters, vision, muscle contraction, adhesion and the immune system. The evolution of cancer based on mutations in these signaling systems. Lecture, discussion and student presentations. Prerequisite: BIOS 411 or BIOS 372.

3. Nature of proposed change(s)
   
   A. Course title change? If so, provide rationale below:
   Change more accurately reflects current course content

   B. Course number change? If so, provide rationale below:

   C. Change in course credits? If so, provide rationale below:

   D. Change in course description? If so, provide rationale below:
   Change more accurately reflects current course content

   E. Other change(s)? If so, please describe below and provide rationale for each change.

4. Resource Impact

   A. Provide impact statements in the four areas listed below:

   (1) Library impact statement (attach statement, if provided by LTS)
   None

   (2) Computer impact statement (attach statement, if provided by LTS)
   None

   (3) Faculty impact statement (how proposed program affects load on existing faculty or requires new faculty)
   None

   (4) Facilities impact statement (how proposed program affects load on existing facilities or requires new facilities)
   None
CAS: Biological Sciences

Proposed Course Changes

1. Current course number, title, course description, and credits (from present course catalogue):
   BIOS 477 (CHM 477) Topics in Biochemistry (1-3) Selected areas of biochemistry, such as mechanisms of enzymatic action, new developments in the chemistry of lipids, nucleic acids, carbohydrates and proteins. May be repeated for credit when different topics are offered. Prerequisite: consent of the department chair.

2. Proposed course number, title, course description, and credits (as it will appear in course catalogue).

3. Nature of proposed change(s)
   A. Course title change? If so, provide rationale below:
   B. Course number change? If so, provide rationale below:
   C. Change in course credits? If so, provide rationale below:
   D. Change in course description? If so, provide rationale below:
   E. Other change(s)? If so, please describe below and provide rationale for each change.
   Eliminate cross-listing with BIOS (i.e. simply list course as CHM 477). This course is typically offered by Professor Ned Heindel in Chemistry. Each time it is offered, the Department of Biological Sciences needs review the course content to decide whether it is appropriate to have it cross-listed in our department. This is impractical and has led to confusion, particularly on the part of Distance Education graduate students, as to whether or not the course can count as an elective in the Molecular Biology MS degree program. We propose to remove the course from our department's listing and have it listed simply as CHM 477

4. Resource Impact
   A. Provide impact statements in the four areas listed below:
      (1) Library impact statement (attach statement if provided by LTS)
         None
      (2) Computer impact statement (attach statement if provided by LTS)
         None
      (3) Faculty impact statement (how proposed program affects load on existing faculty or requires new faculty)
         None
      (4) Facilities impact statement (how proposed program affects load on existing facilities or requires new facilities)
         None
   B. Provide statement indicating who financial responsibility for new resources.
      N/A
CAS: Earth and Environmental Sciences

Proposed Course Changes
Deletion of EES 451

1. Current course number, title, course description, and credits (from present course catalogue):

EES 451. Advanced Limnology and Paleolimnology (3)

In-depth discussion of current issues in the fields of limnology and paleolimnology. Consideration of both the modern behavior of lake ecosystems, as well as lacustrine dynamics in the past based on interpretation of the fossil record. Topics may range from the interaction of lakes with their watersheds and the atmosphere to the dynamics of algal communities.
Prerequisite: EES 351 or equivalent. Williamson.

2. Proposed course number, title, course description, and credits (as it will appear in course catalogue):

3. Nature of proposed change(s)

   A. Course title change? If so, provide rationale below:

   B. Course number change? If so, provide rationale below:

   C. Change in course credits? If so, provide rationale below:

   D. Change in course description? If so, provide rationale below:

   E. Other change(s)? If so, please describe below and provide rationale for each change.

DELETION FROM COURSE CATALOG, because the instructor is leaving Lehigh University (will not be at Lehigh in the Fall, 2005), and the course will no longer be offered. This was a course taught by the instructor alone, in his area of research expertise. This course, or any similar course, will not be offered in the foreseeable future.

4. Resource Impact

   A. Provide impact statements in the four areas listed below:

      (1) Library impact statement (attach statement, if provided by LTS)

      None

      (2) Computer impact statement (attach statement, if provided by LTS)

      None
(3) Faculty impact statement (how proposed program affects load on existing faculty or requires new faculty)

None

(4) Facilities impact statement (how proposed program affects load on existing facilities or requires new facilities)

None

B. Provide a statement indicating who will assume financial responsibility for any new resources required:

CAS: Earth and Environmental Sciences

Proposed Course Changes
Deletion of EES 455

1. Current course number, title, course description, and credits (from present course catalogue):

EES 455. Advanced Plants and Ecosystems (3)

Intensive study of current issues in plant and terrestrial ecosystem processes. Core curriculum will focus on interactions of plant physiology with terrestrial biogeochemistry (water, energy, elemental fluxes). Seminar discussions will focus on current topics in plant functions at community and ecosystem scales, from historical and future perspectives. Windham.

2. Proposed course number, title, course description, and credits (as it will appear in course catalogue):

3. Nature of proposed change(s)

A. Course title change? If so, provide rationale below:

B. Course number change? If so, provide rationale below:

C. Change in course credits? If so, provide rationale below:

D. Change in course description? If so, provide rationale below:

E. Other change(s)? If so, please describe below and provide rationale for each change.

DELETION FROM COURSE CATALOG, because the instructor has left Lehigh University, and the course will no longer be offered. This was a course taught by the instructor alone, in her area of research expertise. This course, or any similar course, will not be offered in the foreseeable future.
4. Resource Impact

A. Provide impact statements in the four areas listed below:

(1) Library impact statement (attach statement, if provided by LTS)

None

(2) Computer impact statement (attach statement, if provided by LTS)

None

(3) Faculty impact statement (how proposed program affects load on existing faculty or requires new faculty)

None

(4) Facilities impact statement (how proposed program affects load on existing facilities or requires new facilities)

None

B. Provide a statement indicating who will assume financial responsibility for any new resources required:

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CAS: Earth and Environmental Sciences

Proposed Course Changes
Deletion of EES 458

1. Current course number, title, course description, and credits (from present course catalogue):

EES 458. Global Change Ecology (3)

Lectures, seminars, writing, and instruction in quantitative approaches to the ecology of climate change and UV radiation from an ecological perspective. Emphasis will be on the interactive effects of climate change and UV on other ecological processes at the individual, population, community, and ecosystem levels involving both plants and animals. Instruction in writing of scientific proposals that could be submitted to national funding agencies will be a core learning tool in this course. All students will write a proposal related to the ecology of climate change and UV on a topic approved by their advisor. Prerequisite: EES 152 or equivalent. Williamson.

2. Proposed course number, title, course description, and credits (as it will appear in course catalogue):

3. Nature of proposed change(s)

A. Course title change? If so, provide rationale below:
B. Course number change? If so, provide rationale below:

C. Change in course credits? If so, provide rationale below:

D. Change in course description? If so, provide rationale below:

E. Other change(s)? If so, please describe below and provide rationale for each change.

DELETION FROM COURSE CATALOG, because the instructor is leaving Lehigh University (will not be at Lehigh in the Fall, 2005), and the course will no longer be offered. This was a course taught by the instructor alone, in his area of research expertise. This course, or any similar course, will not be offered in the foreseeable future.

4. Resource Impact

A. Provide impact statements in the four areas listed below:

(1) Library impact statement (attach statement if provided by LTS)

None

(2) Computer impact statement (attach statement if provided by LTS)

None

(3) Faculty impact statement (how proposed program affects load on existing faculty or requires new faculty)

None

(4) Facilities impact statement (how proposed program affects load on existing facilities or requires new facilities)

None

B. Provide a statement indicating who will assume financial responsibility for any new resources required:


Proposed New Course

Addition of EES 457

1. Proposed new course number and course description (as it will appear in course catalogue):

[Note: course number was obtained from Carol Goss, Office of the Registrar]

EES 457. Advanced Remote Sensing of the Environment (3)

Seminars and hands-on, quantitative analysis of specialized satellite and aircraft data, including microwave and hyperspectral sources, will be used to investigate significant environmental questions. Students will refine visual and technical skills for image interpretation, digital image processing, change detection of environmental systems, and presentation of spatial data. Required research project. Prerequisites: graduate standing in EES or permission of the Instructor, Ramage.

2. Instructional mode (lecture, recitation, laboratory, seminar, independent study, or other) and number of contact hours per week:

seminar, lecture, independent research

3. Rationale for proposed new course:

This is a new area of expertise for the EES department. Advanced image processing techniques, spatial analysis of environmental systems, and an understanding of sophisticated new data are areas of major importance throughout the earth and environmental sciences. Through this course graduate students in EES will be exposed to material not usually emphasized at an undergraduate level, but increasingly used to understand and document changes in the environment.

4. Academic impact on programs affected by new course:

A. Is the proposed course to be cross-listed?

No

B. Identify any known effects of the proposed new course on other programs at the University.
This course will be of interest to students in the Environmental Initiative, as well as Earth and Environmental Sciences graduate students.

C. If there are known affects, individuals in charge of the affected programs must be consulted about the proposed new course and the following information provided:

(1) Who was consulted?

(2) Is the proposed new course acceptable to all other programs affected?

(3) Will any changes be required in the affected programs? If so, please describe below:

D. Does the proposed new course affect the University's commitment to diversity in any way? If so, please describe below:

8. Resource Impact

A. Provide impact statements in the four areas listed below:

(1) Library impact statement (attach statement if provided by LTS)

The proposed course will require new library materials, including books on specialized topics in the field of remote sensing and image processing, and possibly journal subscriptions, such as Remote Sensing, which has already been requested. The library is aware of the need for new materials associated with the hire of Ramage and has already altered the EES acquisition profile to include books related to remote sensing.

(2) Computer impact statement (attach statement if provided by LTS)

This course will require computers and ongoing support for computer programs and maintenance. To date, Ramage used part of her startup package to provide the software needed for students to be actively involved in research. I believe that the LTS computer committee has authorized support of half of the cost of the lab license fee, but that has not been confirmed in writing. The software requires annual maintenance, which is not covered at present. Maintenance costs will be covered
by research funds and some contribution from EES depending on the required details, class size, etc.

(3) Faculty impact statement (how proposed program affects load on existing faculty or requires new faculty)

This is a new course proposed by a new faculty member. It will not affect the load on existing faculty.

(4) Facilities impact statement (how proposed program affects load on existing facilities or requires new facilities)

This course will require use of computer lab 210 (or similar) but the room will be scheduled in advance.

E. Provide a statement indicating who will assume financial responsibility for any new resources required:

Resources so far have come from Ramage’s startup funds. The department, Environmental Initiative, LTS and the science library are all aware of this new position, and the need for new resources. Future expenses will probably be jointly covered by multiple sources.

CAS: SOCIOLOGY & ANTHROPOLOGY
Proposed Course Changes

1. Current course number, title, course description, and credits (from present course catalogue):
   SSP 401 Proseminar in Applied Social Theory (3) Staff
   Theoretical perspectives in sociology and their applications to social issues and policy. Issues may include interpersonal dynamics in groups, leadership and team building, race, and gender, AIDS and sexuality, organizational structure and process, addictions policy, educational reform.

2. Proposed course number, title, course description, and credits (as it will appear in course catalogue):
   SSP 401 Proseminar in Applied Social Theory (3) Staff
   Explores influential sociological theory, the differences between classical theoretical traditions, the main strengths and weaknesses of such traditions. Emphasis is placed on understanding the uses of theory in research, and the implications of theoretical models when applied to contemporary research and problems.
3. Nature of proposed change(s)

A. Course title change? If so, provide rationale below:

B. Course number change? If so, provide rationale below:

C. Change in course credits? If so provide rationale below:

D. Change in course description? If so, provide rationale below:
The instructors teaching this course have changed, and the present description is old.

E. Other change(s)? If so, please describe below and provide rationale for each change.

4. Resource Impact NO IMPACT

A. Provide impact statements in the four areas listed below:

   (1) Library impact statement (attach statement, if provided by LTS)
   
   (2) Computer impact statement (attach statement, if provided by LTS)
   
   (3) Faculty impact statement (how proposed program affects load on existing faculty or requires new faculty)
   
   (4) Facilities impact statement (how proposed program affects load on existing facilities or requires new facilities)

B. Provide a statement indicating who will assume financial responsibility for any new resources required:
Proposed New Course

1. Proposed new course number and course description (as it will appear in course catalogue):
   English 443: Eighteenth-century British Literature (3). Course may be repeated for credit as title varies. Possible offerings:
   - Austen, Burney, Edgeworth and the 1790s. This course emphasizes these women writers' complex relation to the rebellious and conservative 1790s and includes their fiction from the period as well as some representative gothic novelists (especially Radcliffe), some radical writers (Hays, Woolstonecraft) and some conservative ones (More, Burke).
   - Literature in the Marketplace. This course focuses on ways in which novels, magazines, children's books and other new forms of eighteenth-century prose fiction are now being re-read against evidence about the eighteenth-century marketplace. We will consider archival materials as well as canonical and uncanonical literature.

2. Instructional mode (lecture, recitation, laboratory, seminar, independent study, or other) and number of contact hours per week:
   Seminar - 3 contact hours

3. Rationale for proposed new course:
   This is a new course number and title but the course content has been given before under English 442. This change is part of a strategy to expand our course numbering and offerings to reflect more accurately the range of the graduate course offerings in English.

4. Academic impact on programs affected by new course:
   None.
   - Is the proposed course to be cross-listed?
   - Identify any known effects of the proposed new course on other programs at the University.
   - If there are known effects, individuals in charge of the affected programs must be consulted about the proposed new course and the following information provided:
     - (1) Who was consulted?
     - (2) Is the proposed new course acceptable to all other programs affected?
     - (3) Will any changes be required in the affected programs? If so, please describe below:
   - Does the proposed new course affect the University's commitment to diversity in any way? If so, please describe below:
   - No

5. Resource Impact
   - Provide impact statements in the four areas listed below:
     - (1) Library impact statement (attach statement if provided by LTS)
       None Course is already occasionally offered under another number

Graduate & Research Committee: Course Changes (7/8/04 rev)
[This form not used to propose new courses programs or certificates. Each of those has its own form.]
(2) Computer impact statement (attach statement if provided by LTS)

None.

(3) Faculty impact statement (how proposed program affects load on existing faculty or requires new faculty)

None.

(4) Facilities impact statement (how proposed program affects load on existing facilities or requires new facilities)

None.

B. Provide a statement indicating who will assume financial responsibility for any new resources required:
College of Arts and Sciences: Department of English

Proposed New Course

1. Proposed new course number and course description (as it will appear in course catalogue):

   English 447: British Victorian Literature (3). Course may be repeated for credit as title varies. Possible offerings:
   Nineteenth-Century Narrative and the Making of Selves. This course investigates the intersection of narrative and the
   construction of interiority and subjectivity in nineteenth-century British novels, poetry, and autobiography.
   We will examine that ways in which narratives construct "selves," in the context of nineteenth-century theories of
   the mind as well as more recent Psychoanalytical, Gender, and Cultural theory.

   The Problem of Knowledge in the Victorian Age. Nineteenth-century Britain was haunted by the problem of
   knowledge. Readings - from Mill, Tennyson, Browning, Arnold, Clough, Pater, Wilde, Darwin and Huxley - will
   reveal the intensity of the debate over knowledge and the striking formulations it produced in poetry, scientific
   writing and social critique.

2. Instructional mode (lecture, recitation, laboratory, seminar, independent study or other) and number of contact hours per week:

   Seminar - 3 contact hours

3. Rationale for proposed new course:

   This is a new course number and title but the course content has been given before under English 445. This change
   is part of a strategy to expand our course numbering and offerings to reflect more accurately the range of the
   graduate course offerings in English.

4. Academic impact on programs affected by new course:

   None.

   A. Is the proposed course to be cross-listed?

   B. Identify any known effects of the proposed new course on other programs at the University.

   C. If there are known effects, individuals in charge of the affected programs must be consulted
      about the proposed new course and the following information provided:

      (1) Who was consulted?

      (2) Is the proposed new course acceptable to all other programs affected?

      (3) Will any changes be required in the affected programs? If so, please describe below:

   D. Does the proposed new course affect the University's commitment to diversity in any way?
      If so, please describe below:

   No.

5. Resource Impact

   A. Provide impact statements in the four areas listed below:

      (1) Library impact statement (attach statement if provided by LTS)

      Note: Course is already occasionally offered under another number.

Graduate & Research Committee: Course Changes (7/5/04 rev)

[This form not used to propose new courses programs, or certificates. Each of those has its own form.]
(2) Computer impact statement (attach statement if provided by LTS)

None.

(3) Faculty impact statement (how proposed program affects load on existing faculty or requires new faculty)

None.

(4) Facilities impact statement (how proposed program affects load on existing facilities or requires new facilities)

None.

B. Provide a statement indicating who will assume financial responsibility for any new resources required:
 Proposed New Course

1. Proposed new course number and course description (as it will appear in course catalogue):
   English 451: Contemporary British Literature (3) Course may be repeated for credit as title varies. Possible offerings:
   Contemporary British and Postcolonial Literature. Survey course featuring British, South Asian, African, and Caribbean writers, between 1945 and the present. The course is organized around themes which vary at the discretion of the instructor.
   Contemporary Literature from the United Kingdom and the Commonwealth: The course includes authors such as Rushdie, Munro, O'Brien, Phillips, and Carter among others. Themes include political and social change, race, gender and ethnicity, cultural and historical conflict.

2. Instructional mode (lecture, recitation, laboratory, seminar, independent study, or other) and number of contact hours per week:
   Seminar - 3 contact hours

3. Rationale for proposed new course:
   This is a new course number and title but the course content has been given before under English 449. This change is part of a strategy to expand our course numbering and offerings to reflect more accurately the range of the graduate course offerings in English.

4. Academic impact on programs affected by new course:
   None.

   A. Is the proposed course to be cross-listed?

   B. Identify any known effects of the proposed new course on other programs at the University.

   C. If there are known effects, individuals in charge of the affected programs must be consulted about the proposed new course and the following information provided:

      (1) Who was consulted?

      (2) Is the proposed new course acceptable to all other programs affected?

      (3) Will any changes be required in the affected programs? If so, please describe below:

   D. Does the proposed new course affect the University's commitment to diversity in any way? If so, please describe below:

   None.

5. Resource Impact

   A. Provide impact statements in the four areas listed below:

      (1) Library impact statement (attach statement if provided by LTS)

      None. Course is already occasionally offered under another number.

Graduates & Research Committee: Course Changes (7/6/04 rev)

[This form not used to propose new courses, programs, or certificates. Each of those has its own form.]
(2) **Computer impact statement** (attach statement if provided by LTS)

None.

(3) **Faculty impact statement** (how proposed program affects load on existing faculty or requires new faculty)

None.

(4) **Facilities impact statement** (how proposed program affects load on existing facilities or requires new facilities)

None.

B. **Provide a statement indicating who will assume financial responsibility for any new resources required:**
Proposed New Course

1. Proposed new course number and course description (as it will appear in course catalogue):
   English 475: Late Nineteenth-century American Literature (3) Course may be repeated for credit as title varies.
   Possible offerings:
   Realism and Romanticism in Urban and Regional Turn of the Century Novels. This course takes as its starting
   point two assumptions about U.S. social history and American literary history and tests them by reading four “urban
   realist” novels and four “regional romances.”
   Realism and Naturalism in American Literature. This course will explore realist and naturalist writing in an
   evolving effort to represent the powerful social forces shaping American life in an era of rapid industrialization. The
   role of realist and naturalist idioms in shaping the theoretical narratives of Marxism and psychoanalysis will also be
   considered.

2. Instructional mode (lecture, recitation, laboratory, seminar, independent study, or other) and number of contact hours per week:
   Seminar - 3 contact hours

3. Rationale for proposed new course:
   This is a new course number and title but the course content has been given before under English 473. This change
   is part of a strategy to expand our course numbering and offerings to reflect more accurately the range of the
   graduate course offerings in English.

4. Academic impact on programs affected by new course:
   None.

   A. Is the proposed course to be cross-listed?

   B. Identify any known effects of the proposed new course on other programs at the University.

   C. If there are known effects, individuals in charge of the affected programs must be consulted
      about the proposed new course and the following information provided:

      (1) Who was consulted?

      (2) Is the proposed new course acceptable to all other programs affected?

      (3) Will any changes be required in the affected programs? If so, please describe below:

   D. Does the proposed new course affect the University’s commitment to diversity in any way?
      If so, please describe below:

   No.

5. Resource Impact

   A. Provide impact statements in the four areas listed below:

      (1) Library impact statement (attach statement if provided by LTS)
      None. Course is already occasionally offered under another number.

Graduate & Research Committee: Course Changes (7/6/04 rev)
[This form not used to propose new courses, programs, or certificates. Each of those has its own form]
(2) Computer impact statement (attach statement if provided by LTS)

None.

(3) Faculty impact statement (how proposed program affects load on existing faculty or requires new faculty)

None

(4) Facilities impact statement (how proposed program affects load on existing facilities or requires new facilities)

None.

B. Provide a statement indicating who will assume financial responsibility for any new resources required:
1. Proposed new course number and course description (as it will appear in course catalogue):

   English 478: Contemporary American Literature (3). Course may be repeated for credit as title varies. Possible offerings:

   Contemporary Native American Fiction. Fiction by American Indian writers since the 1970s. We will read works by Leslie Marmon Silko, James Welch, Michael Dorris, Susan Power, and Sherman Alexie and focus especially on the work of Louise Erdrich. We will pay attention in our discussions to ways to present Indian fiction to non-Indian undergraduate students.

   Late Twentieth-Century American Literature. Masters of poetry, drama, or fiction of the second half of the twentieth century. Poets might include Stone, Ashbery, Merrill, Clifton, Bell, and others. Dramatists might include Norman, A. Wilson, Wilson, Foote, Mamet and others. Fiction might include Boyle, Carver, Baxter, Ford, Oates, and others.

2. Instructional mode (lecture, recitation, laboratory, seminar, independent study, or other) and number of contact hours per week:

   Seminar - 3 contact hours

3. Rationale for proposed new course:

   This is a new course number and title but the course content has been given before under English 477. This change is part of a strategy to expand our course numbering and offerings to reflect more accurately the range of the graduate course offerings in English.

4. Academic impact on programs affected by new course:

   None.

   A. Is the proposed course to be cross-listed?

   B. Identify any known effects of the proposed new course on other programs at the University.

   C. If there are known effects, individuals in charge of the affected programs must be consulted about the proposed new course and the following information provided:

      (1) Who was consulted?

      (2) Is the proposed new course acceptable to all other programs affected?

      (3) Will any changes be required in the affected programs? If so, please describe below:

   D. Does the proposed new course affect the University’s commitment to diversity in any way? If so, please describe below:

   No.

5. Resource Impact

   A. Provide impact statements in the four areas listed below:

   Graduate & Research Committee: Course Changes (7/6/04 rev)

   [This form not used to propose new courses, programs or certificates. Each of those has its own form]
(1) Library impact statement (attach statement if provided by LTS)  
None. Course is already occasionally offered under another number

(2) Computer impact statement (attach statement if provided by LTS)  
None

(3) Faculty impact statement (how proposed program affects load on existing faculty or requires new faculty)  
None.

(4) Facilities impact statement (how proposed program affects load on existing facilities or requires new facilities)  
None.

B. Provide a statement indicating who will assume financial responsibility for any new resources required:
**Proposed New Course**

1. **Proposed new course number and course description (as it will appear in course catalogue):**

   English 479: Twentieth-Century World Literature (3). Course may be repeated for credit as title varies. Possible offerings:
   - Terror, Rebellion, and Revolution in Contemporary World Literature. This course traces the sources, processes, and outcomes of violent revolutions in contemporary fiction and film. Possible authors include V.S. Naipaul, Chomski, Sebene, Condé, and Phillips. Possible films include *State of Siege*, *Ararat*, *Asama* and *Kandahar*.
   - Writing, the Body, and the Other. This course explores the representation of writing in modern literary texts, specifically the power of writing to inscribe both “identity” and “difference.” Primary texts by twentieth-century British and postcolonial writers and the introduction of the post-structuralist tradition in literary theory.

2. **Instructional mode (lecture, recitation, laboratory, seminar, independent study, or other) and number of contact hours per week:**

   Seminar - 3 contact hours

3. **Rationale for proposed new course:**

   This is a new course number and title but the course content has been given before under English 449. This change is part of a strategy to expand our course numbering and offerings to reflect more accurately the range of the graduate course offerings in English.

4. **Academic impact on programs affected by new course:**

   None.

   A. Is the proposed course to be cross-listed?

   B. Identify any known effects of the proposed new course on other programs at the University.

   C. If there are known effects, individuals in charge of the affected programs must be consulted about the proposed new course and the following information provided:

      1. Who was consulted?

      2. Is the proposed new course acceptable to all other programs affected?

      3. Will any changes be required in the affected programs? If so, please describe below:

   D. Does the proposed new course affect the University’s commitment to diversity in any way? If so, please describe below:

   No.

5. **Resource impact**

   A. Provide impact statements in the four areas listed below:

      1. **Library impact statement** (attach statement if provided by LTS)

         None. Course is already occasionally offered under another number.

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Graduate & Research Committee. Course Changes (7/6/04 rev)

(This form not used to propose new courses, programs, or certificates. Each of those has its own form.)
(2) Computer impact statement (attach statement if provided by LTS)
None.

(3) Faculty impact statement (how proposed program affects load on existing faculty or requires new faculty)
None.

(4) Facilities impact statement (how proposed program affects load on existing facilities or requires new facilities)
None.

B. Provide a statement indicating who will assume financial responsibility for any new resources required:
College of Arts and Sciences: Department of English

Proposed New Course

1. Proposed new course number and course description (as it will appear in course catalogue):

   English 483: Creative Writing and Literary Studies (3). Course may be repeated for credit as title varies. Possible offering:
   From the Inside: Creative Writing and Reading. A combination of seminar and workshop, this course uses instruction and practice in the techniques and genres of creative writing (prose, narratology, characterization, etc.) to develop tools for studying literary texts. Prerequisite: consent of instructor.

2. Instructional mode (lecture, recitation, laboratory, seminar, independent study, or other) and number of contact hours per week:

   Seminar – 3 contact hours

3. Rationale for proposed new course:

   Graduate students can practice creative writing and its techniques as a way of improving their understanding of and analytical abilities with the texts of others. This is a course which the department has long wished to offer but we’ve never before had the faculty to make it possible.

4. Academic impact on programs affected by new course:

   The only academic impact should be to enrich student participation in other courses in the English department.
   A. Is the proposed course to be cross-listed?

      No.

   B. Identify any known effects of the proposed new course on other programs at the University.

      No known effects.

   C. If there are known effects, individuals in charge of the affected programs must be consulted about the proposed new course and the following information provided:

      (1) Who was consulted?

      (2) Is the proposed new course acceptable to all other programs affected?

      (3) Will any changes be required in the affected programs? If so, please describe below:

   D. Does the proposed new course affect the University’s commitment to diversity in any way?

      If so, please describe below:

      No.

5. Resource Impact

   No additional resources will be necessary for this course. The faculty is already available for it, and the resources given to the Creative Writing program on the undergraduate level will sustain this course as well.

   A. Provide impact statements in the four areas listed below:

      (1) Library impact statement (attach statement if provided by LTS)

      No impact.

      (2) Computer impact statement (attach statement if provided by LTS)

      No impact.

Graduate & Research Committee: Course Changes (7/6/04 rev)

[This form not used to propose new courses, programs, or certificates. Each of those has its own form.]
(3) Faculty impact statement (how proposed program affects load on existing faculty or requires new faculty)
Current faculty can make this part of regular load (one faculty member hired this year has had a course release to get Creative Writing Program underway) The course will be offered once every two years.

(4) Facilities impact statement (how proposed program affects load on existing facilities or requires new facilities)
Will use existing facilities in Drown and Humanities Center

B. Provide a statement indicating who will assume financial responsibility for any new resources required:
No new resources required.
Proposed Course Changes

1. Current course number, title, course description, and credits (from present course catalogue):

   English 442, Restoration and Eighteenth-Century British Literature (3). Course may be repeated as title varies. Possible offerings:
   Restoration and Early Eighteenth-Century Drama: Examination of the drama written between 1660 and 1720 and of the culture shaping it and shaped by it. Cavendish, Philips, Dryden, Behn, Wycherley, Etherege, Congreve, Shadwell, Steele will be among the writers we study.
   Tory Feminist? Close investigation of the complex position of early modern women writers (including Cavendish, Philips, Behn, Pix, Centlivre, Pinch, Montagu); consideration of the conditions of authorship, for men and women, in late seventeenth-century Britain.
   Frances Burney and Jane Austen: Major novels of Burney and the novels and juvenilia of Austen in their social and literary contexts. Examination of what it means to be a professional woman writer between 1770-1820.

   Literature in the Marketplace: Study of the eighteenth-century marketplace through examining "canonical" works in relation to the print culture that engendered and then influenced them. Sources for this examination include periodical literature, children's books, "rural" fiction, and booksellers' records.

2. Proposed course number, title, course description, and credits (as it will appear in course catalogue):

   English 442. British Literature of the Restoration (3). Course may be repeated as title varies. Possible offerings:
   Cultural Fictions and Public Lying. The English Civil War taught many thinkers that public life depends on necessary fictions about which all must deceive themselves. Primary texts by Hobbes, Cavendish, Behn, Wycherley, Swift, and Mandeville; recent writing by Goffman, Bourdieu, Kellor and Haraway.
   Witchcraft and History. Eighteenth-century texts continue to use the contradictory "logic" of witchcraft to police women's behavior. Primary texts (Shakespeare, Behn, Defoe, Haywood, Pope, Davys) and recent theoretical writings (Bourdieu, Foucault) will provoke questions about how to make claims about the past that participants themselves may have been unable to articulate.

3. Nature of proposed change(s)

   Title and description
   A. Course title change? If so, provide rationale below:
   We are dividing some of the larger historical periods covered by our umbrella course numbers to move clearly indicate the range of our course offerings. This title now indicates a historical period about half as large as the former title did.

   B. Course number change? If so, provide rationale below:

   C. Change in course credits? If so, provide rationale below:

   D. Change in course description? If so, provide rationale below:
   The title of this course has been changed to reflect the formerly restricted historical period covered by the course. It has also been updated to describe the offerings most likely in the next few years.

   E. Other change(s)? If so, please describe below and provide rationale for each change.

4. Resource Impact

   A. Provide impact statements in the four areas listed below:
   (1) Library impact statement (attach statement if provided by LTS)
   None.

Graduate & Research Committee: Course Changes (7/06/04 rev)
[This form not used to propose new courses, programs, or certificates. Each of those has its own form]
(2) Computer impact statement (attach statement. If provided by LTS)
None.

(3) Faculty impact statement (how proposed program affects load on existing faculty or requires new faculty)
None.

(4) Facilities impact statement (how proposed program affects load on existing facilities or requires new facilities)
None.

B. Provide a statement indicating who will assume financial responsibility for any new resources required:
Proposed Course Changes

1. Current course number, title, course description, and credits (from present course catalogue):

English 445 Nineteenth-Century British Literature (3). Course may be repeated as title varies. Possible offerings: The Victorian Novel and Poststructural Theory: Intensive study of three or four Victorian novels, by writers such as Dickens, Eliot, Bronye, and Thackeray, through the lens of Feminist, Marxist, Psychoanalytical, Deconstructive and Cultural theory.

The Problem of Knowledge in the Victorian Age: Given the new kinds of knowledge emerging in their time, such writers as Dickens, Carlyle, Mill, Marx, Eliot, Tennyson, Browning, Arnold, Ruskin, and Newman had to ponder the question: What notions – religious doctrines, for example, or scientific observations – should be considered "knowledge"?

2. Proposed course number, title, course description, and credits (as it will appear in course catalogue):

English 443, British Romantic Literature (3). Course may be repeated for credit as title varies. Possible offerings: Romanticism and the Cult of Childhood. Investigation of the gender, class, and race issues raised by idealizing particular kinds of childhood in the Romantic era, through works that feature children by Rousseau, Wordsworth, Coleridge, Robinson, and Blake, and children's literature by Edgeworth, Smith, Trimmer, Barbauld, the Lamb's, etc.

Romantic Era Women Writers. Reading a range of women's literature from the Romantic period – including Barbauld, Heman, Robinson, Mary Shelley, Smith, Helen Maria Williams, and Wollstonecraft – we will reconsider traditional perceptions of Romantic era categories such as: the poet, urban life, solitude, sociability, sensibility, science, nature, and even genre.

3. Nature of proposed change(s)

A. Course title change? If so, provide rationale below:

We are dividing some of the larger historical periods covered by our umbrella course numbers to more clearly indicate the range of our course offerings. This title now indicates a historical period about half as large as the former title did.

B. Course number change? If so, provide rationale below:

C. Change in course credits? If so, provide rationale below:

D. Change in course description? If so, provide rationale below:

The description of the possible offerings has been changed to conform to the newly restricted historical period covered by the course. They have also been updated to describe the offerings most likely in the next four years.

E. Other change(s)? If so, please describe below and provide rationale for each change.

4. Resource Impact

A. Provide impact statements in the four areas listed below:

(1) Library impact statement (attach statement if provided by LTS)

None.

(2) Computer impact statement (attach statement if provided by LTS)

None.

Graduate 3. Research Committee: Course Changes (7/8/04 rev)
[This form not used to propose new courses, programs, or certificates. Each of those has its own form]
(3) Faculty impact statement (how proposed program affects load on existing faculty or requires new faculty)

None.

(4) Facilities impact statement (how proposed program affects load on existing facilities or requires new facilities)

None

B. Provide a statement indicating who will assume financial responsibility for any new resources required:
Proposed Course Changes

1. Current course number, title, course description, and credits (from present course catalogue):

   English 449. Twentieth-Century British Literature (3). Course may be repeated as title varies. Possible offerings:
   James Joyce: Close examination of the works of James Joyce with special attention to style, narrative voices, and
   thematic complexity.
   Modern British Fiction: Concentration on one or more major figures: Joyce, Conrad, Shaw, Forster, Woolf,
   Lawrence, Beckett. Revitalized “New Critical” approaches.

2. Proposed course number, title, course description, and credits (as it will appear in course catalogue):

   English 449. Modern British Literature (3). Course may be repeated for credit as title varies. Possible offerings:
   Virginia Woolf and the Limits of Biography. Reading Woolf’s novels and essays, we will examine the
   achievements and limits of “psychiatric criticism,” interrogate our culture’s desire to “know” a writer, and discuss
   Woolf’s own complex rendering of the biographical impulse in her fiction.
   Topics in British Modernism. Survey course featuring several major British writers between 1900 and 1945. The
   course explores different critical and methodological perspectives on writers like James Joyce, Virginia Woolf, T.S.

3. Nature of proposed change(s)

   A. Course title change? If so, provide rationale below:

   We are dividing some of the larger historical periods covered by our umbrella course numbers to more clearly
   indicate the range of our course offerings. This title now indicates a historical period about half as large as the
   former title did.

   B. Course number change? If so, provide rationale below:

   C. Change in course credits? If so, provide rationale below:

   D. Change in course description? If so, provide rationale below:

   The description of the possible offerings has been changed to conform to the newly restricted historical period
   covered by the course. They have also been updated to describe the offerings most likely in the next four years.

   E. Other change(s)? If so, please describe below and provide rationale for each change.

4. Resource Impact

   A. Provide impact statements in the four areas listed below:

   (1) Library impact statement (attach statement if provided by LTS)

   None.

   (2) Computer impact statement (attach statement, if provided by LTS)

   None.

   (3) Faculty impact statement (how proposed program affects load on existing faculty or requires new
   faculty)

   None.

   (4) Facilities impact statement (how proposed program affects load on existing facilities or requires new
   facilities)

   None.

Graduate & Research Committee: Course Changes (7/6/04 rev)
[This form not used to propose new courses, programs, or certificates. Each of those has its own form.]
B. Provide a statement indicating who will assume financial responsibility for any new resources required:
Proposed Course Changes

1. Current course number, title, course description, and credits (from present course catalogue):

   English 473: Nineteenth-Century American Literature (3) Course may be repeated as title varies. Possible offerings:
   
   Emerson, Dickinson, Frost: Emerson’s philosophy, literary theory, and poetry as the context in which we consider the poetry of Dickinson and Frost.
   
   Literary Watersheds: Close reading, critical reputation, and contemporary approaches to four works that transformed and invented our national literature: *Moby Dick*, *Uncle Tom’s Cabin*, *Walden*, and *Leaves of Grass*.
   
   
   Literary Realism and Naturalism: Selected fiction by one or more of the following pioneers in American literary realism and literary naturalism: Henry James, Mark Twain, Stephen Crane, William Dean Howells, Frank Norris, and Theodore Dreiser.

2. Proposed course number, title, course description, and credits (as it will appear in course catalogue):

   English 473. Antebellum American Literature (3). Course may be repeated for credit as title varies. Possible offerings: Class in Antebellum American Literature. The category “class” has been under-explored, often invisible, within U.S. culture. Reading primarily sentimental and sensational fiction (from Cummins’ *The Lamplighter* to Lippard’s *Quaker City*), the course will ask where and how class is rendered visible.
   
   The Global Nineteenth Century. An exploration of internationalism in antebellum U.S. literature and culture. Readings by recent scholars about the history of globalization and by nineteenth century American authors such as Whitman, Melville, John Rollin Ridge, and Martin Delany, and study of such phenomena as the transatlantic telegraph and the Crystal Palace Exhibition.

3. Nature of proposed change(s)

   Title and description
   
   A. Course title change? If so, provide rationale below:

   We are dividing some of the larger historical periods covered by our umbrella course numbers to more clearly indicate the range of our course offerings. This title now indicates a historical period about half as large as the former title did

   B. Course number change? If so, provide rationale below:

   C. Change in course credits? If so, provide rationale below:

   D. Change in course description? If so, provide rationale below:

   The description of the possible offerings has been changed to conform to the newly restricted historical period covered by the course. They have also been updated to describe the offerings most likely in the next four years.

   E. Other change(s)? If so, please describe below and provide rationale for each change.

4. Resource impact

   A. Provide impact statements in the four areas listed below:

   (1) Library impact statement (attach statement, if provided by LTS)

   None.

   (2) Computer impact statement (attach statement, if provided by LTS)

   None.
(3) Faculty impact statement (how proposed program affects load on existing faculty or requires new faculty)
None

(4) Facilities impact statement (how proposed program affects load on existing facilities or requires new facilities)
None.

B. Provide a statement indicating who will assume financial responsibility for any new resources required:

Course Drops

The Department of English would like to drop the following three courses from the catalog.

English 421. History of the English Language (3)
English 423. Anglo-Saxon Language and Literature (3)
English 485. Teaching English as a Second Language (3)

The rationale is the same for all three. We no longer have faculty proposed to teach these courses and do not foresee giving them in the future.
Proposed New Degree Program

College of Arts & Science

M.S. in Psychology

1. Proposed new program mission statement

The proposed M.S. program in Psychology is a research-oriented degree that is well suited to provide a strong foundation for students who seek entry into Ph.D. programs in most subfields of psychology. In addition, the program serves the needs of students who are unsure of their future professional goals, desire a more gradual transition between undergraduate and Ph.D. level work and/or seek a terminal Master's degree. While the program is not specifically designed to provide terminal training for mental health professionals, some of the graduates may continue on to Ph.D. programs in clinical or counseling psychology as well as other subfields in psychology. Others may accept positions in the private sector as science writers, lab technicians, data analysts, marketing researchers and so on.

2. Rationale for proposed new program

This terminal M.S. program is intended to supplement our existing Ph.D. program. At this moment, all graduate students apply to our Ph.D. program and obtain an M.S. degree in the process of working toward their Ph.D. On rare occasions, when one of our Ph.D. students is deemed by the faculty not to be strong enough to continue in our Ph.D. program, he or she is asked to terminate with an M.S. degree. Thus, currently we do not have a separate M.S. degree program, and we admit students only to our Ph.D. program. The proposed program seeks to establish a terminal M.S. degree program to which students can apply directly. The requirements will be identical to those for the M.S. obtained by our graduate students en route to their Ph.D. degree. Thus, this proposed new M.S. degree will effectively replace the existing M.S. degree.

Increasingly, strong graduating seniors around the country who seek to continue their studies by going into graduate programs do not quite feel ready to commit themselves to a full-scale Ph.D. program. There seem to be various reasons for this. Some of these students need additional coursework and research skills to enter competitive Ph.D. programs (particularly if they have majored in another subject). Others seem to be unsure or even intimidated by the prospect of entering a Ph.D. program directly after their undergraduate degree. Therefore in recent years various psychology departments around the country have been supplementing their existing Ph.D. programs by offering terminal Master's degrees to attract some of these strong students who for one reason or another are not yet ready to enter Ph.D. programs. (Some of the Ph.D. programs we consulted that have supplemented their programs with Master's programs are [in alphabetical order]: Bryn Mawr College, Clark University, Dartmouth College, Indiana University, New York University, Peabody College, University of Missouri-Columbia. There are also an increasing number of schools that offer only Master's degrees or 5-year programs, such as Bucknell University, St. Joseph's University, Villanova University, Wesleyan University - to name just a few.)

We believe that the availability of a terminal M.S. program would be valuable both to students and to our graduate program in a number of ways. For example, one of our concerns has been that some of our strong graduating seniors, including those who become Presidential Scholars and would like to do further work in Psychology, choose not to do that because we do not have a terminal M.S. available. Instead, some go to other departments which do offer terminal Master's degrees, and some apply to Master's programs at other schools. Those who do take Psychology courses and work in someone's lab are not able to apply these efforts toward a graduate degree. The proposed terminal M.S. degree would expand the options of these students.

At the same time, a terminal M.S. program would be advantageous to our graduate program by expanding the available pool of good, energetic, and committed graduate students who can contribute to faculty research and further invigorate our graduate courses. Also the presence of good graduate students from Lehigh, who are closer to the undergraduates, will provide good models for the undergraduate students who work with them in our labs and who might be interested in pursuing further study in the field.
3. Description of proposed new program

This is a 30-credit-hour research-oriented program that will usually be accomplished in two years. The requirements are identical to those for the regular pre-Ph.D. Master's degree (see below). These requirements include an M.S. thesis that builds on a first-year paper or project. Two graduate-level research methods courses and two graduate core courses are required. Two other required courses may be either graduate-level courses or 300-level advanced seminars in Psychology. (This entails an overall increase from 5 courses currently required for the M.S. to 6 courses.) In addition to course work, students will be engaged in research-oriented activities every semester.

A. Admissions criteria (required for graduate programs only)

(1) minimum requirements

In accord with University regulations for regular post-bachelor's degree admissions, applicants must have at least one of the following in addition to a B.A., B.S. or equivalent:

1. Undergraduate GPA of at least 3.00 out of 4.0.
2. GPA of at least 3.25 for the last two semesters of undergraduate study.
3. Scores at or above the 75th percentile on the GRE.
4. GPA of at least 3.50 on a minimum of 12 hours of graduate work at other institutions.

These conditions are necessary but not sufficient (see Graduate Handbook). Admission is competitive from the pool of applicants. In addition, applicants must supply other admissions materials, as described by university admission requirements.

(2) background courses required

(3) required examinations (for example, GRE, GMAT, and the like)

GRE

(4) language requirements for foreign students

TOEFL (Test of English as a Foreign Language); minimum score of 600/225 (paper-based/computer-based test) is required for admission

(5) application process for interdisciplinary programs

(6) admission deadline

Standard University Admission dates: July 15 for fall semester and December 30 for spring semester. For financial aid consideration for the following year: January 15

B. Specific degree requirements

Master's Degree (as this is the proposed new degree program):

(1) New and/or existing course/credit requirements (attach new course proposal for each new graduate course)

Requirements: 6 courses + research + thesis (total = 30 credits)

Courses (19 credits):
2 statistics courses (6 credits)
  *Psy 421: Statistical Analysis of Psychological Data I (offered at the department every fall semester)*
  *Psy 422: Statistical Analysis of Psychological Data II (or other equivalent courses such as EDUC 410 or 411)*
4 other courses (12 credits)
  2 core courses from 3 offered over each 2-year period (Psy 402, 403, 406)
  2 other courses (any of the following: 3 core courses of graduate psychology seminars, or 300-level advanced psychology seminar courses)

Psy 409 Professional Seminar (1 credit)

*To avoid overspecialization at this level, we require students to take courses from at least two areas (i.e., cognition, social cognition, and/or development). This requirement increases the number of courses by one from our previous pre-Ph.D. master's degree and will apply to both.*

Research & Thesis credits (11 credits)
  *During 1st year: 5 research credits culminating in first year paper or project*
  *During 2nd year: M.S. thesis (6 credits)*

➢ No new courses are proposed.

(2) Thesis requirement

M.S. thesis is required (6 credits over a 2-semester period). It builds on first year paper or project.

(3) Comprehensive examination requirement

Doctoral Degree (if that is the proposed new degree program):

(1) Language requirement

(2) Qualifying and/or general examination requirements (if both required, describe each below)

(3) Course/credit requirements (attach new course proposal for each new graduate course)

(4) Master's degree requirements (if student fails to complete doctorate)

(5) Faculty available to direct dissertations

(6) Expected time to complete the degree

C. Details of the Proposed Program (any information not supplied elsewhere on this form but important to the consideration of the proposed program)

D. Implementation Plan (how the degree will be put into place including initial admissions)
4. Academic Impact

A. Is the proposed new program interdisciplinary?
   No

B. Identify any known effects of the proposed new program on other programs at the University.
   None

C. If there are known effects, individuals in charge of the affected programs must be consulted about the proposed new program and the following information provided:

   (1) Who was consulted?

   (2) Is the proposed new program acceptable to all other programs affected?

   (3) Will any changes be required in the affected programs? If so, please describe below:

D. Does the proposed new program affect the University's commitment to diversity in any way? If so, please describe below.

5. Resource Impact

A. Provide impact statements in the four areas listed below:

   (1) Library impact statement (attach statement if provided by LTS)

       Adding this program does not increase demand on library resources beyond our current capacity.

   (2) Computer impact statement (attach statement if provided by LTS)

       Adding this program does not increase demand on computer resources beyond our current capacity.

   (3) Faculty impact statement (how proposed program affects load on existing faculty or requires new faculty)

       The new program will not require adding new faculty resources. All the courses required for this M.S. program are currently offered in our department over the period of two years that students would need to complete the program. At this moment our graduate courses tend not to be large, so that they can readily accommodate a few more students. The only impact is that faculty will need to spend time guiding the students in their M.S. research projects. However, students will be matched carefully with faculty so that they can work in the faculty members' areas of expertise and possibly help with the faculty's research projects. Applicants whose areas of interest are not synergistic with department members' will not be accepted into the program. We anticipate admitting only a small number of students per year, and this number will take into account the number of continuing and newly admitted Ph.D. students in the program.

   (4) Facilities impact statement (how proposed program affects load on existing facilities or requires new facilities)

       This program should place no new demands that are not met by existing facilities.
B. Provide a statement indicating who will assume financial responsibility for any new resources required:

As noted above, the handful of students added by this new program will not require adding new faculty resources. At the same time, we do not plan to go beyond existing lines of student support. When our current lines of normal student support are exhausted, we will then admit only students who can pay the tuition.

1. Title of new certificate program: BioOrganic Principles of Pharmaceutical Science

2. Mission statement: This certificate will enhance the applicability of technical knowledge from core courses in bioorganic principles related to pharmaceutical science.

3. Identify the proposed market and/or clients this proposed certificate program is designed to address: The full set of courses may be taken by independent enrollees in fulfillment of a free-standing graduate certificate in bioorganic principles of pharmaceutical science OR a course or two might be taken as electives by enrollees in other chemistry and/or pharmaceutical chemistry degree tracks.

4. Rationale for proposed certificate program: Certificates of technical competency have become accepted as instruments of professional accomplishment especially within the elitist, status-conscious pharmaceutical industry. That industry has two main foci for its Research & Development: (1) drug discovery/evaluation and (2) drug characterization and purity. This certificate would group courses to fit into the first of these foci.

5. Description of proposed new certificate program

A. Admissions criteria: The same admission requirements for the distance graduate programs in chemistry will be applied to applicants interested in the certificate program.

B. Specific program requirements, including specific required and elective courses:
The certificate covers the basic biochemical molecular principles governing drug design, synthesis, mode of action at biological targets, formulation, and metabolism. The certificate candidate shall select any 12 credits from existing graduate courses in the BioOrganic Chemistry area. Relevant substitutions may be allowed upon petition. No course may be applied to more than one certificate.
The following lists approved courses:
- Bios/CHM 371 - Elements of Biochemistry
- Bios/CHM 372 - Elements of Biochemistry II
- CHM 358 - Advanced Organic Chemistry
- CHM 423 - BioOrganic Chemistry
- CHM 424 - Medicinal & Pharmaceutical Chemistry
- CHM 444 - Process Chemistry (this course has been taught several times as CHM 497 (experimental course). Approval is pending for inclusion in catalog as a regular course)
- CHM 455 - Organic Reactions
- *CHM 458 - Topics in Organic Chemistry
- *CHM 475 - Advanced Topics in Chemistry
- *CHM 477 - Topics in Biochemistry
*NOTE: Any special topics course which is created at some future date under the various topic numbers 458, 475, and 477 which comprises the subject of this certificate can be applied towards the 12 credit requirement. Permission from the certificate program
administrator, Dr. Sam Niedbala or the chemistry graduate administrator, Dr. Rebecca Miller is necessary before students take special topics courses for certificate credit.

6. Academic Impact

A. Is the proposed new program interdisciplinary? It is a certificate program of the Department of Chemistry.

B. Identify any known effects of the proposed new program on other programs at the University. This certificate activity will likely enhance enrollment in Distance Education courses. It will also increase visibility of our graduate degree programs offered through Distance Education. No other impacts are anticipated.

C. If there are known effects, individuals in charge of the affected programs must be consulted about the proposed new program and the following information provided:

   (1) Who was consulted? Letter of support for this certificate program from the chair of Chemistry is attached to this proposal.

   (2) Is the proposed new program acceptable to all other programs affected? Yes.

   (3) Will any changes be required in the affected programs? If so, please describe below: No.

D. Does the proposed new program affect the University's commitment to diversity in any way? If so, please describe below: This certificate program will increase diversity. Currently on campus, graduate students in Chemistry are 35% female and 20% minority. Distance Ed students are currently 67% female and 9% minority. In addition, about 15% of the Distance Ed students are "working mothers".

7. Resource Impact

A. Provide impact statements in the four areas listed below:

   (1) Library impact statement. This certificate program is proposed almost exclusively for the Distance Education audience and has little discernable potential impact on campus facilities. The Science Librarian may see a slight increase in help requests from students in the certificate program.

   (2) Computer impact statement. This certificate program is proposed almost exclusively for the Distance Education audience and has little discernable potential impact on campus facilities.
(3) Faculty impact statement. This certificate program isn't a new program, but is a grouping of courses which are part of our existing Distance Education offerings – no impact on existing faculty is anticipated.

(4) Facilities impact statement. This certificate program is proposed almost exclusively for the Distance Education audience and has little discernable potential impact on campus facilities.

B. Provide a statement indicating who will assume financial responsibility for any new resources required: Under the current, operating Lehigh financial model, it is assumed that the Department will assume full responsibility for any new resources required for this certificate program.
College of Arts and Sciences: Department of Chemistry

Proposed New Certificate Program in Analytical Principles of Pharmaceutical Science

1. Title of new certificate program: Analytical Principles of Pharmaceutical Science

2. Mission statement: This certificate will enhance the applicability of technical knowledge from core courses in analytical principles related to pharmaceutical science.

3. Identify the proposed market and/or clients this proposed certificate program is designed to address: The full set of courses may be taken by independent enrollees in fulfillment of a free-standing graduate certificate in analytical principles of pharmaceutical science OR a course or two might be taken as electives by enrollees in other chemistry and/or pharmaceutical chemistry degree tracks.

4. Rationale for proposed certificate program: Certificates of technical competency have become accepted as instruments of professional accomplishment especially within the elitist, status-conscious pharmaceutical industry. That industry has two main foci for its Research & Development: (1) drug discovery/evaluation and (2) drug characterization and purity. This certificate would group courses to fit into the second of these foci.

5. Description of proposed new certificate program

A. Admissions criteria: The same admission requirements for the distance graduate programs in chemistry will be applied to applicants interested in the certificate program.

B. Specific program requirements, including specific required and elective courses:
The certificate covers the analytical and physical chemistry needed to understand purity and composition issues in pharmaceutical substances. These courses cover the principles behind the common kinds of analytical methods and how these are applied in practical settings. The certificate candidate shall select any 12 credits from existing graduate courses in the analytical chemistry area (a maximum of 6 credits may be taken at the 300 level). Relevant substitutions may be allowed upon petition. No course may be applied to more than one certificate.
The following lists approved courses:
BIOS/GHM 371 – Elements of Biochemistry
BIOS/GHM 372 – Elements of Biochemistry II
CHM 332 – Analytical Chemistry
CHM 336 – Clinical Chemistry
*CHM 431 – Contemporary Topics in Analytical Chemistry
CHM 432 – Chemometrics
CHM 433 – Electroanalytical Chemistry
*CHM 436 – Special Topics in Analytical Chemistry
CHM 456 – Spectral Analysis
*CHM 475 – Advanced Topics in Chemistry
*NOTE: Any special topics course which is created at some future date under the various topic numbers 431, 436, and 475 which comprises the subject of this certificate can be applied towards the 12 credit requirement. Permission from the certificate program...
GRC: New Graduate Certificate Proposal: CAS Department of Chemistry /5

administrator, Dr. Sam Niedbala or the chemistry graduate administrator, Dr. Rebecca Miller is necessary before students take special topics courses for certificate credit.

6. Academic Impact

A. Is the proposed new program interdisciplinary? It is a certificate program of the Department of Chemistry.

B. Identify any known effects of the proposed new program on other programs at the University. This certificate activity will likely enhance enrollment in Distance Education courses. It will also increase visibility of our graduate degree programs offered through Distance Education. No other impacts are anticipated.

C. If there are known effects, individuals in charge of the affected programs must be consulted about the proposed new program and the following information provided:

(1) Who was consulted? Letter of support for this certificate program from the chair of Chemistry is attached to this proposal.

(2) Is the proposed new program acceptable to all other programs affected? Yes.

(3) Will any changes be required in the affected programs? If so, please describe below: No.

D. Does the proposed new program affect the University's commitment to diversity in any way? If so, please describe below: This certificate program will increase diversity. Currently on campus, graduate students in Chemistry are 35% female and 20% minority. Distance Ed students are currently 67% female and 9% minority. In addition, about 15% of the Distance Ed students are “working mothers”.

7. Resource Impact

A. Provide impact statements in the four areas listed below:

(1) Library impact statement This certificate program is proposed almost exclusively for the Distance Education audience and has little discernable potential impact on campus facilities. The Science Librarian may see a slight increase in help requests from students in the certificate program.

(2) Computer impact statement This certificate program is proposed almost exclusively for the Distance Education audience and has little discernable potential impact on campus facilities.
(3) Faculty impact statement This certificate program isn't a new program, but is a grouping of courses which are part of our existing Distance Education offerings – no impact on existing faculty is anticipated.

(4) Facilities impact statement This certificate program is proposed almost exclusively for the Distance Education audience and has little discernable potential impact on campus facilities.

B. Provide a statement indicating who will assume financial responsibility for any new resources required: Under the current, operating Lehigh financial model, it is assumed that the Department will assume full responsibility for any new resources required for this certificate program.
College of Arts and Sciences: Department of Chemistry

Proposed New Certificate Program in Regulatory Affairs in a Technical Environment

1. Title of new certificate program: Regulatory Affairs in a Technical Environment

2. Mission statement: This certificate will enhance the applicability of technical knowledge from core courses in regulatory affairs.

3. Identify the proposed market and/or clients this proposed certificate program is designed to address: The full set of courses may be taken by independent enrollees in fulfillment of a free-standing graduate certificate in project management and regulatory affairs or a course or two might be taken as electives by enrollees in other chemistry and/or pharmaceutical chemistry degree tracks.

4. Rationale for proposed certificate program: It is important to note that while legal principles and a highly detailed federal code do underpin the field, Regulatory Affairs is ultimately a technical subject. One must understand chemistry and chemical engineering in order to write the FDA-required protocols on pilot plant operations, on quality control assays, or on impurity profiles of the drug substances. As the number of personnel participating in obtaining and maintaining FDA approval for drug marketing has increased, professional education for such individuals has similarly increased. Trade associations (DIA, AAPS, APhA, etc.) and universities (Temple, Wisconsin, Arizona and others) provide both entry level and continuing education in the quality assurance and regulatory affairs (QA-RA) fields. Virtually all of the existing education programs in regulatory affairs require travel to a conference or to the site of information delivery. The convenience of live interactive, real time distance education has a bright future in the QA-RA area.

5. Description of proposed new certificate program

A. Admissions criteria: The same admission requirements for the distance graduate programs in pharmaceutical chemistry will be applied to applicants interested in the certificate program.

B. Specific program requirements, including specific required and elective courses:
   Students choose four out of the following 3-credit courses:
   CHM 425 Pharmaceutical Regulatory Affairs (new course offered Fall, 2004 as CHM 496) – “Discovery to Approval”
   CHM 426 Pharmaceutical Regulatory Affairs (new course offered Spring, 2005 as CHM 496) – “Medical Devices and Combination Technologies: Concept to Commercialization”
   CHM 442 Pharmaceutical Regulatory Affairs (new course) – “Analytical Methods Validation and Data Analysis”
   CHM 463 Pharmaceutical Regulatory Affairs (new course) – “Commercial Production, Validation, and Process Qualification”
   CHM 477 Topics in Biochemistry: Introduction to Pharmaceutics (3 credits)
6. Academic Impact

A. Is the proposed new program interdisciplinary? It is a certificate program of the Department of Chemistry.

B. Identify any known effects of the proposed new program on other programs at the University. This certificate will enhance the applicability of technical knowledge from core courses.

C. If there are known effects, individuals in charge of the affected programs must be consulted about the proposed new program and the following information provided:

   (1) Who was consulted? The following people/groups were consulted: six alumni who work in the regulatory area, Dr. Marvin Charles, Emeritus Professor of Chemical Engineering at Lehigh University, Human Resource administrators at Merck-West Point and Rahway, Chair of Chemical Engineering. Letter of support for this certificate program from the chair of Chemistry is attached to this proposal.

   (2) Is the proposed new program acceptable to all other programs affected? Yes.

   (3) Will any changes be required in the affected programs? If so, please describe below: No.

D. Does the proposed new program affect the University’s commitment to diversity in any way? If so, please describe below: This certificate program will increase diversity. Currently on campus, graduate students in Chemistry are 35% female and 20% minority. Distance Ed students are currently 67% female and 9% minority. In addition, about 15% of the Distance Ed students are “working mothers”.

7. Resource Impact

A. Provide impact statements in the four areas listed below:

   (1) Library impact statement: This certificate program is proposed almost exclusively for the Distance Education audience and has little discernable potential impact on campus facilities. The Science Librarian may see a slight increase in help requests from students in the certificate program.

   (2) Computer impact statement: This certificate program is proposed almost exclusively for the Distance Education audience and has little discernable potential impact on campus facilities.

   (3) Faculty impact statement: The Department of Chemistry has identified one associate professor and one professor of practice (CV attached) in addition to several “guest” lecturers. (see appendix)
(4) Facilities impact statement: This certificate program is proposed almost exclusively for the Distance Education audience and has little discernable potential impact on campus facilities.

B. Provide a statement indicating who will assume financial responsibility for any new resources required: Under the current, operating Lehigh financial model, it is assumed that the Department will assume full responsibility for any new resources required for this certificate program.

APPENDIX

The faculty members designing and teaching courses in the proposed Regulatory Affairs Certificate Program include Dr. James Roberts and Dr. R. Sam Niedbala (CV attached). It is clear that we will need the instructional services of active professionals for this certificate program. These individuals are alumni with extensive experience in regulatory affairs. We have spoken to a number of them and they have indicated a willingness to teach in the certificate program. The alumni are:

Ms. Tara Barney – clinical trial management (Merck)
Dr. Nancy Brenner – clinical trial management (Merck)
Dr. Richard Conley – kilo-lab GMP, GLP (ex Johnson & Johnson)
Ms. Stephanie Kardos – regulatory affairs (OraSure)
Ms. Sally Macaluso – raw materials validation (Merck)
Mr. George Marchesini – analytical standards (Johnson & Johnson)
Dr. Marsha Miller – regulatory affairs (AstraZeneca)
Dr. Robert Oufit – analytical standards (Novartis)
Dr. Peter Socane – imaging, contrast enhancement (ex-Kodak)
Dr. Tibor Sipos – regulatory affairs (Digestive Care)
Ms. Lisa Murphy Vale – polymeric implant registry (Gore)
Ms. Valerie Weiss – therapeutic product registry (Merck)

Others with experience:
Ms. Eve Damiano (OraSure)
Mr. James Rittenberg (Advantix)
Proposed New Course

1. Proposed new course number and course description (as it will appear in course catalogue):

   CHM 425. PHARMACEUTICAL REGULATORY AFFAIRS: Discovery to Approval
   Description: Coverage includes the stages of the drug approval process and how these relate to the laboratory activities that provide the scientific basis for the New Drug Application (NDA). Lectures treat drug discovery, chemical process development of the active pharmaceutical ingredient (API) and pharmaceutical process development of the drug product. Regulatory issues in screening and testing, the management of the preclinical trials and the management of clinical trials will be covered. (3 credits)

2. Instructional mode (lecture, recitation, laboratory, seminar, independent study, or other) and number of contact hours per week: lecture (150 minutes/week)

3. Rationale for proposed new course: This course is acceptable in partial fulfillment of the requirements for the new certificate program in Regulatory Affairs in a Technical Environment. It is anticipated that current distance ed students will also roster the course as part of their MS requirements in Chemistry and/or Pharmaceutical Chemistry.

4. Academic impact on programs affected by new course:

   A. Is the proposed course to be cross-listed? No.

   B. Identify any known effects of the proposed new program on other programs at the University. None.

   C. If there are known effects, individuals in charge of the affected programs must be consulted about the proposed new program and the following information provided: Not applicable.

      (1) Who was consulted? Not applicable.

      (2) Is the proposed new program acceptable to all other programs affected? Not applicable.

      (3) Will any changes be required in the affected programs? If so, please describe below: Not applicable.

   D. Does the proposed new program affect the University's commitment to diversity in any way? If so, please describe below: This certificate program will increase diversity. Currently on campus, graduate students in Chemistry are 35% female and 28% minority. Distance Ed students are currently 57% female and 9% minority. In addition, about 18% of the Distance Ed students are “working mothers”. 
5. Resource Impact

A. Provide impact statements in the four areas listed below:

(1) Library impact statement: This certificate program is proposed almost exclusively for the Distance Education audience and has little discernable potential impact on campus facilities. The Science Librarian may see a slight increase in help requests from students enrolled in the course.

(2) Computer impact statement: This certificate program is proposed almost exclusively for the Distance Education audience and has little discernable potential impact on campus facilities.

(3) Faculty impact statement: The Department of Chemistry has one Professor of Practice for the program and several "guest" lecturers. (see appendix)

(4) Facilities impact statement: This certificate program is proposed almost exclusively for the Distance Education audience and has little discernable potential impact on campus facilities.

B. Provide a statement indicating who will assume financial responsibility for any new resources required: Under the current, operating Lehigh financial model, it is assumed that the Department will assume full responsibility for any new resources required for this certificate program.
APPENDIX

The faculty member designing and teaching this course will be Dr. R. Sam Niedbala, Professor of Practice at Lehigh University. Dr. Niedbala's CV is attached.

Guest Lecturers:
It is clear that we will need the instructional services of active professionals for this certificate program. These individuals are alumni with extensive experience in regulatory affairs. We have spoken to a number of them and they have indicated a willingness to teach in the certificate program. The alumni are:

Ms. Tara Baney – clinical trial management (Merck)
Dr. Nancy Brenner – clinical trial management (Merck)
Dr. Richard Conley – kilo-lab GMP, GLP (ex Johnson & Johnson)
Ms. Stephanie Kardos – regulatory affairs (OraSure)
Ms. Sally Macaluso – raw materials validation (Merck)
Mr. George Marchesini – analytical standards (Johnson & Johnson)
Dr. Marsha Miller – regulatory affairs (AstraZeneca)
Dr. Robert Oaten – analytical standards (Novartis)
Dr. Peter Secane – imaging, contrast enhancement (ex-Kodak)
Dr. Tibor Sipos – regulatory affairs (Digestive Care)
Ms. Lisa Murphy Vale – polymeric implant registry (Gore)
Ms. Valerie Weiss – therapeutic product registry (Merck)

Others with experience:
Ms. Eve Damiano (OraSure)
Mr. James Rittenberg (Advantix)
College of Arts and Sciences: Department of Chemistry

Proposed New Course

2. Proposed new course number and course description (as it will appear in course catalogue):
CHM 428. PHARMACEUTICAL REGULATORY AFFAIRS: Medical Devices and Combination Technologies; Concept to Commercialization
Description: This course will review the history of medical device law and regulations in the United States. It will also define current requirements of science needed to allow technologies to be developed according to regulations. Case studies will be used to educate participants on Design Controls, Quality System Regulations, Manufacturing Requirements, and International Harmonization. Specifics may include Nucleic Acid Diagnostics, Cardiovascular Stents, Drug Delivery, Cancer Diagnostics, and Consumer Self-Testing. (3 credits)

2. Instructional mode (lecture, recitation, laboratory, seminar, independent study or other) and number of contact hours per week: lecture (150 minutes/week)

3. Rationale for proposed new course: This course is acceptable in partial fulfillment of the requirements for the new certificate program in Regulatory Affairs in a Technical Environment. It is anticipated that current distance education students will also roster the course as part of their M.S. requirements in Chemistry and/or Pharmaceutical Chemistry.

4. Academic Impact on programs affected by new course:

A. Is the proposed course to be cross-listed? No.

B. Identify any known effects of the proposed new program on other programs at the University. None.

C. If there are known effects, individuals in charge of the affected programs must be consulted about the proposed new program and the following information provided: Not applicable.

(1) Who was consulted? Not applicable.

(2) Is the proposed new program acceptable to all other programs affected? Not applicable.

(3) Will any changes be required in the affected programs? If so, please describe below: Not applicable.
D. Does the proposed new program affect the University's commitment to diversity in any way? If so, please describe below: This certificate program will increase diversity. Currently on campus, graduate students in Chemistry are 35% female and 20% minority. Distance Ed students are currently 87% female and 9% minority. In addition, about 15% of the Distance Ed students are "working mothers".

5. Resource Impact

A. Provide impact statements in the four areas listed below:

(1) Library impact statement: This certificate program is proposed almost exclusively for the Distance Education audience and has little discernable potential impact on campus facilities. The Science Librarian may see a slight increase in help requests from students enrolled in the course.

(2) Computer impact statement: This certificate program is proposed almost exclusively for the Distance Education audience and has little discernable potential impact on campus facilities.

(3) Faculty impact statement: The Department of Chemistry has one Professor of Practice for the program and several "guest" lecturers. (see appendix)

(4) Facilities impact statement: This certificate program is proposed almost exclusively for the Distance Education audience and has little discernable potential impact on campus facilities.

B. Provide a statement indicating who will assume financial responsibility for any new resources required: Under the current, operating Lehigh financial model, it is assumed that the Department will assume full responsibility for any new resources required for this certificate program.
APPENDIX

The faculty member designing and teaching this course will be Dr. R. Sam Niedbala, Professor of Practice at Lehigh University. Dr. Niedbala's CV is attached.

Guest Lecturers:
It is clear that we will need the instructional services of active professionals for this certificate program. These individuals are alumni with extensive experience in regulatory affairs. We have spoken to a number of them and they have indicated a willingness to teach in the certificate program. The alumni are:

Ms. Tara Bane - clinical trial management (Merck)
Dr. Nancy Brenner - clinical trial management (Merck)
Dr. Richard Conley - kilo-lab GMP, GLP (ex-Johnson & Johnson)
Ms. Stephanie Kardos - regulatory affairs (OraSure)
Ms. Sally Macaluso - raw materials validation (Merck)
Mr. George Marchesini - analytical standards (Johnson & Johnson)
Dr. Marsha Miller - regulatory affairs (AstraZeneca)
Dr. Robert Outen - analytical standards (Novartis)
Dr. Peter Secane - imaging, contrast enhancement (ex-Kodak)
Dr. Tibor Sipos - regulatory affairs (Digestive Care)
Ms. Lisa Murphy Vale - polymeric implant registry (Gore)
Ms. Valerie Weiss - therapeutic product registry (Merck)

Others with experience:
Ms. Eve Damiano (OraSure)
Mr. James Rittenberg (Advantrix)
College of Arts and Sciences: Department of Chemistry

Proposed New Course

3. Proposed new course number and course description (as it will appear in course catalogue):
   CHM 442. PHARMACEUTICAL REGULATORY AFFAIRS: Analytical Methods Validation, and Data Manipulation
   A review of the FDA guidance and common industry practices. A presentation of the more user-friendly and higher accuracy analytical methods which are supplanting traditional analyses. Lectures will cover the eight fundamentals of analytical method validation: accuracy, linearity, precision, limits of detection, selectivity, limits of quantification, specificity, and ruggedness of method. In addition, the student will be taught what to do when the results do not meet the Acceptance Criteria. Lectures also cover valuation of data streams for supporting conclusions. (3 credits)

2. Instructional mode (lecture, recitation, laboratory, seminar, independent study, or other) and number of contact hours per week; lecture (150 minutes/week)

3. Rationale for proposed new course: This course is acceptable in partial fulfillment of the requirements for the new certificate program in Regulatory Affairs in a Technical Environment. It is anticipated that current distance ed students may also roster the course as part of their MS requirements in Chemistry and/or Pharmaceutical Chemistry.

4. Academic impact on programs affected by new course:

   A. Is the proposed course to be cross-listed? No.

   B. Identify any known effects of the proposed new program on other programs at the University. None.

   C. If there are known effects, individuals in charge of the affected programs must be consulted about the proposed new program and the following information provided: Not applicable.
      (1) Who was consulted? Not applicable.

      (2) Is the proposed new program acceptable to all other programs affected? Not applicable.

      (3) Will any changes be required in the affected programs? If so, please describe below: Not applicable.
D. Does the proposed new program affect the University's commitment to diversity in any way? If so, please describe below: This certificate program will increase diversity. Currently on campus, graduate students in Chemistry are 35% female and 20% minority. Distance Ed students are currently 67% female and 6% minority. In addition, about 15% of the Distance Ed students are "working mothers".

5. Resource Impact

A. Provide impact statements in the four areas listed below:

(1) Library impact statement: This certificate program is proposed almost exclusively for the Distance Education audience and has little discernable potential impact on campus facilities. The Science Librarian may see a slight increase in help requests from students enrolled in the course.

(2) Computer impact statement: This certificate program is proposed almost exclusively for the Distance Education audience and has little discernable potential impact on campus facilities.

(3) Faculty impact statement: The Department of Chemistry has identified one associate professor of chemistry to develop and teach this course. (see appendix)

(4) Facilities impact statement: This certificate program is proposed almost exclusively for the Distance Education audience and has little discernable potential impact on campus facilities.

B. Provide a statement indicating who will assume financial responsibility for any new resources required: Under the current, operating Lehigh financial model, it is assumed that the Department will assume full responsibility for any new resources required for this certificate program.
APPENDIX

The faculty member designing and teaching this course will be Dr. James Roberts, Associate Professor Chemistry at Lehigh University.

Guest Lecturers:
It is clear that we will need the instructional services of active professionals for this certificate program. These individuals are alumni with extensive experience in regulatory affairs. We have spoken to a number of them and they have indicated a willingness to teach in the certificate program. The alumni are:

Ms. Tara Baney – clinical trial management (Merck)
Dr. Nancy Brenner – clinical trial management (Merck)
Dr. Richard Conley – kilo-lab GMP, GLP (ex Johnson & Johnson)
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Ms. Sally Macaluso – raw materials validation (Merck)
Mr. George Marchesini – analytical standards (Johnson & Johnson)
Dr. Marsha Miller – regulatory affairs (AstraZeneca)
Dr. R. Sam Niedbala – diagnostic registry (OraSure) & Professor of Practice
Dr. Robert Outten – analytical standards (Novartis)
Dr. Peter Seoane – imaging, contrast enhancement (ex-Kodak)
Dr. Tibor Sipos – regulatory affairs (Digestive Care)
Ms. Lisa Murphy Vale – polymeric implant registry (Gore)
Ms. Valerie Weiss – therapeutic product registry (Merck)

Others with experience:
Ms. Eve Demiano (OraSure)
Mr. James Rittenberg (Advantrix)
4. Proposed new course number and course description (as it will appear in course catalogue):
   CHM 453. PHARMACEUTICAL REGULATORY AFFAIRS: Commercial Production, Validation, and Process Qualification. This course covers the scientific principles and the registry requirements for polymeric implants, controlled-release drug depot units, pumps, point-of-care testing kits, contrast media for MRI, x-ray, and ultrasound and all FDA controlled products not defined as therapeutic pharmaceuticals. (3 credits)

2. Instructional mode (lecture, recitation, laboratory, seminar, independent study or other) and number of contact hours per week: lecture (150 minutes/week)

3. Rationale for proposed new course: This course is acceptable in partial fulfillment of the requirements for the new certificate program in Regulatory Affairs in a Technical Environment. It is anticipated that current distance ed students may also roster the course as part of their MS requirements in Chemistry and/or Pharmaceutical Chemistry.

4. Academic impact on programs affected by new course:
   A. Is the proposed course to be cross-listed? No.

   B. Identify any known effects of the proposed new program on other programs at the University. None.

   C. If there are known effects, individuals in charge of the affected programs must be consulted about the proposed new program and the following information provided: Not applicable.
      
      (1) Who was consulted? Not applicable.

      (2) Is the proposed new program acceptable to all other programs affected? Not applicable.

      (3) Will any changes be required in the affected programs? If so, please describe below: Not applicable.

   D. Does the proposed new program affect the University's commitment to diversity in any way? If so, please describe below: This certificate program will increase diversity. Currently on campus, graduate students in Chemistry are 35% female and 20% minority. Distance Ed students are currently 67% female and 9% minority. In addition, about 15% of the Distance Ed students are “working mothers”.
5. Resource Impact

A. Provide impact statements in the four areas listed below:

(1) Library impact statement: This certificate program is proposed almost exclusively for the Distance Education audience and has little discernable potential impact on campus facilities. The Science Librarian may see a slight increase in help requests from students enrolled in the course.

(2) Computer impact statement: This certificate program is proposed almost exclusively for the Distance Education audience and has little discernable potential impact on campus facilities.

(3) Faculty impact statement: The Department of Chemistry has identified one Professor of Practice for the program and several "guest" lecturers. (see appendix)

(4) Facilities impact statement: This certificate program is proposed almost exclusively for the Distance Education audience and has little discernable potential impact on campus facilities.

B. Provide a statement indicating who will assume financial responsibility for any new resources required: Under the current, operating Lehigh financial model, it is assumed that the Department will assume full responsibility for any new resources required for this certificate program.

APPENDIX

The faculty member designing and teaching this course will be Dr. R. Sam Niedbala, Professor of Practice at Lehigh University. Dr. Niedbala's CV is attached.

Guest Lecturers:
It is clear that we will need the instructional services of active professionals for this certificate program. These individuals are alumni with extensive experience in regulatory affairs. We have spoken to a number of them and they have indicated a willingness to teach in the certificate program. The alumni are:

Ms. Tara Baney – clinical trial management (Merck)
Dr. Nancy Brenner – clinical trial management (Merck)
Dr. Richard Conley – kilo-lab GMP, GLP (ex Johnson & Johnson)
Ms. Stephanie Kardos – regulatory affairs (OraSure)
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Dr. Marsha Miller – regulatory affairs (AstraZeneca)
Dr. Robert Outten – analytical standards (Novartis)
Dr. Peter Szecsenyi – imaging, contrast enhancement (ex-Kodak)
Dr. Tibor Sipos – regulatory affairs (Digestive Care)
Ms. Lisa Murphy Vale – polymeric implant registry (Gore)
Ms. Valerie Weiss – therapeutic product registry (Merck)

Others with experience:
Ms. Eve Damiano (OraSure)
Mr. James Rittenberg (Advantix)
GRADUATE & RESEARCH COMMITTEE

COURSE AND CURRICULUM CHANGES

UNIVERSITY FACULTY MEETING
March 21, 2005

CBE & RCEAS MOTIONS
Proposal:
Master of Science in Analytical Finance
Co-sponsored by the Perella Department of Finance, the Department of Industrial & Systems Engineering and the Department of Mathematics

A Proposal to the College/Academic Policy Committee

1. Proposed new program mission statement:
The program's academic objective is to provide students with a strong education in advanced finance and quantitative financial analysis tools, grounded in a common series of courses. This sequence will provide key concepts from financial theory, applied mathematics, and engineering. With these building blocks, program graduates will become instrumental in the creation of innovative solutions for real financial problems, using state-of-the-art analytical techniques and computing technology.

2. Rationale for proposed new program:
This program will be a joint venture, sponsored by departments from each of the three colleges: the Perella Department of Finance, the Department of Industrial & Systems Engineering and the Department of Mathematics. Also, the Department of Economics will provide additional courses. The proposed program is designed for students who already have strong quantitative backgrounds. In particular, this would include students with undergraduate degrees in computer science, economics, engineering, finance, mathematics, and the hard sciences (physics/chemistry). The program is intended to enhance the career prospects of such individuals.

We envision our targeted market of prospective students to come from two backgrounds. The main and initially largest group of students should likely come straight from mathematically rigorous undergraduate programs in one of the disciplines listed above. These students will need exposure to graduate topics that prepare them for entry into a first job in financial services and to be upwardly mobile within their firms or industry faster than other entrants without this degree. The second group of potential students would be early-to-mid-career professionals from industry, either to hone and further skills already learned on the job or to retool their quantitative skills, developing into financial services specialists.

Also, we have surveyed LU alumni and other professionals with engineering or technical undergraduate degrees who work in the financial industry. They have encouraged us to create a program for students who already have a strong quantitative education and interests but need advanced courses focused specifically on the financial market environment. This program will fulfill a market demand for specialists in financial firms who can bridge the gap between financial analysts and programmers.
3. Description of proposed new program:

Program Structure
All students enrolled in this Master of Science Program must successfully complete at least 33 graduate credit hours in a common set of analytical, financial, and computational courses. A capstone project with an industrial firm will draw key elements of the program for a final academic experience. The program design allows students to complete the course requirements in one calendar year provided the set of prerequisites are met. Such a feature will enhance the marketability of the program.

Timing
We anticipate that, if approved in early 2004, the first students will enter in the Fall ’04 semester.

Program Learning Objectives
Analytical finance involves the application of financial modeling, mathematics and engineering in order to solve actual financial problems and make better financial decisions. The curriculum is intended for career opportunities in areas such as portfolio management, securities trading investment banking, risk management and financial information systems.

Upon completing this MS program, a graduate will be able to add value to his/her firm’s pricing hedging, trading and portfolio management decisions by being able to:

1. Conceptualize real world problems with both mathematical tools/models and theories of investment instruments and financial portfolio management;
2. Demonstrate proficiency in locating/creating, managing and analyzing large scale data sets with advanced computing tools;
3. Integrate tools in probability/statistics, optimization, simulation and information technology, to design financial instruments, transactional systems, and technology-enabled solutions;
4. Bridge the knowledge and skill gaps between financial professionals (e.g., asset managers) and computing/execution professionals (e.g., IT specialists);
5. Communicate key empirical results within the context of the financial marketplace and macroeconomic environment to non-quantitative financial specialists.

a. Admission criteria:
   (1) minimum requirements
   An applicant must have an undergraduate degree from a mathematically rigorous program such as computer science, economics, engineering, finance, operations research, mathematics, or the sciences (physics/chemistry)

   (2) background courses required
   Some of these background courses will be available via the Web, such as Eco 1, 401; Fin 225. Also, Acc 108 and 151, Eco 129 401, Math 21, 22, 23, 205 and 231 are usually offered every summer, though not on the Web.
Entrance Prerequisites (Examples given from Lehigh Courses)

Must show basic competency in the following areas:

(Does not count towards the 33 credit minimum degree requirement)

Finance: (Fin 225 or IE 226) or an equivalent introductory course including investment and capital budgeting.

Corporate Finance: Fin 328 or GBUS 419 or an equivalent course.

Investment & Portfolio Management: Fin 323 or GBUS 420 or an equivalent course.

Financial Accounting: Acct 151 (and Fin 225); or, Acct 108 (and IE 226); GBUS 401 could replace Acct 151 or 108 or an equivalent accounting course.

Economics: Micro and macro principles (Eco 1).

Money, banking, and financial markets (Eco 129) or an equivalent course.

Statistics: Math 231 or an equivalent statistics course including regression analysis.

Mathematics: Calculus (Math 21, 22, 23) or an equivalent calculus series; linear algebra (Math 43 or 205 or 242) or equivalent course.

(3) Examination(s) (e.g., GRE, GMAT, etc.) required

Admission standards: An applicant must meet the minimum CBE, ISE, or CAS graduate entrance standards. CBE requires an acceptable GMAT score (current mean score is 615) and 3.0 undergraduate GPA; ISE requires GRE quantitative and analytical scores no less than 75% and 3.0 senior year GPA. CAS requires 2.75 GPA, or 3.00 senior year GPA, or 3.00 GPA on at least 12 credits of graduate work, or 75% GRE. Any exceptions will be reviewed and approved by the co-directors.

(4) Language requirement for international students

International students will have their English skills evaluated through the TOEFL and GMAT/GRE scores upon admission. If the TOEFL and GMAT/GRE scores do not meet our requirements, students may be required to take the summer English Immersion program offered by ESL and to submit new TOEFL and SPEAK scores. If the scores do not meet our requirements, the students must continue with ESL and may not take graduate level courses until they have met our English requirements. The TOEFL minimum score is 250 and the SPEAK minimum score is 230.

(5) Application process for interdisciplinary programs

Application review committee: The three college co-directors will meet as a joint program admissions committee to review and evaluate applications in a timely manner. The Associate Deans for Graduate Programs in each college will serve as ex officio members.

(6) Admission deadline: Applications are due by July 15. When an application is received within two weeks before the start of fall classes, the student may be admitted on an associate student basis.

Presidential Scholars: Applications that will entail the use of a Presidential Scholarship should be submitted by April 1 of the prior spring semester to start in the summer or fall. A Presidential Scholar could be denied admission to the program due to space limitations.

Students will be encouraged to apply by May 1 so that they can enroll in Fin 422 – Derivatives in the first Summer Session.
b. Specific degree requirements: Master’s Degree

(1) course requirements (new or existing)

<table>
<thead>
<tr>
<th>Master of Science in Analytical Finance* ***</th>
<th>Course Requirements (33 credits minimum)*</th>
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<tbody>
<tr>
<td><strong>Analytical Core</strong></td>
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<tr>
<td>Math 467 (3 credits)</td>
<td>Stat 410 (3 credits)</td>
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<tr>
<td>Financial Calculus I</td>
<td>Random Processes and Applications</td>
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<tr>
<td>Math 468 (3 credits)</td>
<td>Eco 415 (3 credits)</td>
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<tr>
<td>Financial Calculus II</td>
<td>Econometrics</td>
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<tr>
<td>IE 316 (3 credits)</td>
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<td><strong>Optimization Models and Applications</strong></td>
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<td><strong>Finance Core</strong></td>
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<tr>
<td>GBUS 422 (3 credits)</td>
<td>GBUS 473 (3 credits)</td>
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<tr>
<td>Derivatives</td>
<td>International Finance</td>
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<td>GBUS 421 (3 credits)</td>
<td>Advanced Investments</td>
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<tr>
<td><strong>Computing Core</strong></td>
<td></td>
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<tr>
<td>Eco 424 (3 credits)</td>
<td>IE 4xx (3 credits)</td>
</tr>
<tr>
<td>Advanced Numerical Methods</td>
<td>Stochastic Programming and Portfolio Analysis</td>
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<tr>
<td><strong>Capstone Practicum</strong></td>
<td></td>
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<tr>
<td>IE 4yy (3 credits)</td>
<td></td>
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<tr>
<td>Financial Engineering Projects</td>
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</table>

* Students with equivalent courses from an undergraduate degree program will be given credit for fulfilling the field requirement and will be permitted to replace the credits from the list of approved electives (see Appendix). The program director(s) must approve courses for each student’s choice of electives.

***The sequence of courses is shown in the Appendix.

(2) thesis requirement: None

(3) comprehensive examination requirement: None

[Doctoral Degree: Does not apply, Masters degree only.]

4. Academic Impact Statement:

a. Is this proposed new program interdisciplinary?

Yes, this program will be a joint venture between the Perella Department of Finance, the Department of Industrial & Systems Engineering, and the Department of Mathematics. Courses from the Department of Economics are also required for program participants.

b. Identify any known effects of the proposed new program on other programs at the University.

The Financial Services Laboratory, for which we envision especially heavy usage by courses in this program, will be available to students from across the campus, creating a new learning resource for the whole University. Also, IE 4yy, Financial Engineering Projects (3), will be initiated into the course approval process by the IS&E department as the capstone experience-based course.
Relationship with Other Current Financial Services Initiatives
The mission of Lehigh University’s Financial Services Studies Center is to promote the study of the array of financial services encountered in domestic and global settings. Financial services are the activities conducted in the fields of finance, accounting, economics, and frequently involves the allied disciplines of business strategy, computer science, law, mathematics, operations research, and real estate. Therefore, the Center and this newly created Master’s program should complement one another in the advancement of the study of financial services. All of the participating departments in the MS program can use and benefit from the Financial Services Lab for both teaching and research. All three, the Center, Lab and this academic MS program form a major thrust in the current CBE strategic plan.

c. If there are known effects, individuals in charge of the affected programs must be consulted about the proposed new program and the following information provided:

   (1) Who was consulted?
The following individuals have participated in our discussions: Deans from the CBE, RCEAS and CAS; Chairs and participating faculty of Economics, Finance, Industrial and Systems Engineering and Mathematics; the Director of the Rauch Center for Business Communications has been involved in the detailed planning of the Financial Services Laboratory and its operations. For the management and maintenance of the additional information resources, the Library and Technology Services personnel have been included. We consulted an informal advisory group, “Lehigh Wall Street,” of alumni: George Kledaras (CEO - Kledaras Technologies), David Bartges (CTO - NYSE), Jeff Byrne (VP - Goldman Sachs), and Andrew Fife (Bear) for the design of the program. Finally, we surveyed a number of Lehigh alumni and financial specialists who know the employment needs of the industry. Both the advisory group and a number of the people surveyed have volunteered to help with internships, externships and course projects.

   (2) Is the proposed new program acceptable to the affected programs?
Yes, all departments who have courses included in this proposal have agreed.

Program Management
Following current models of cross college joint programs, there would be one director from the Perella Department of Finance (CBE), from the Department of IS&E (RCEAS), and from the Department of Mathematics (CAS). A small oversight group of faculty could join the directors in the strategic management of the program. (For example, the IBE directors are Steve Buell and Bob Storer, and the IBE steering committee includes the two directors and Art King, Rick Weisman and David Wu). This group will report to the deans of the participating colleges. The participating colleges will jointly confer the degree. Thus, the registrar could classify this program as an "Intercollegiate Program," (IC) similar to the CSB program.

Daily Operations (including but not limited to budget monitoring)
These would be located in the CBE in the Graduate Programs Office similar to IBE (daily ops in the CBE) and CSB (daily ops in RCEAS), but with all directors having access to services, budgets, records.

Revenue Model
The deans have already set the precedent for the revenue streams for previous courses and programs. The tuition revenue follows the faculty member and department offering the course.

(3) Will any changes be required in the affected programs? If so, describe.
See #2 above. Also, for course staffing the participating department chairs and deans have committed the faculty teaching resources required to operate the program. Because this program is designed to use existing courses as much as possible to achieve efficiency and economies of scale across multiple departments' graduate programs, we expect the enrollment in the courses listed in this proposal to increase. This may result in offering other courses less frequently

d. Identify any known effects of the proposed new program on the University's commitment to diversity.
Insofar as many of the students who gravitate towards mathematically rigorous programs have an international origin, the participants in this new program may improve Lehigh's cultural diversity. Moreover, because the program design is cross disciplinary, this should improve scholarly diversity. Students will have the opportunity to learn from multiple viewpoints, which will help them communicate with differing constituencies within a firm once employed.

5. Resource Impact Statement:
a. Provide each of the following:
(1) Library impact statement:
None expected beyond the Financial Services Lab data sets that are in the process of being acquired.

(2) Computer impact statement:
The Financial Services Lab will provide new facilities, information resources and statistical analysis software. (See 4b, above)

(3) Faculty impact statement:
Existing faculty will staff courses. The chairs and the deans agree that they will support this new program. A cap of 15-20 students is imposed for the academic year 2004-2005. This constrain is being implemented on the number of student entering into the program due to the impact on our other program offerings. For example, the other finance courses are also electives/requirements within the MBA, MS Accounting and Information Analysis, MS Economics, and the PhD in Economics.

(4) Facilities impact statement:
The CBE Dean is in the fundraising stage for the Financial Services Laboratory to be constructed in Rauch. The Perella Department of Finance has committed to provide the CBE program co-director the secretarial services and the initial physical record keeping space for the program.

b. Provide a statement indicating who will assume financial responsibility for any new resources required:
The sets of course and faculty resources will come from the CBE (Finance and Economics Departments), the RCEAS (Department of Industrial and Systems Engineering), and CAS (Department of Mathematics). Each dean and chair has agreed to take financial responsibility. Furthermore, the CBE Dean has taken responsibility for the Financial Services Laboratory.
Expenses for promotional material, student recruiting and other miscellaneous expenses will be approved by the Directors and the costs will be shared equally by the CBE, RCEAS, and CAS.
### APPENDIX

#### Approved Electives

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Course</th>
<th>Credits</th>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GBUS 424</td>
<td>3</td>
<td>Econ 460</td>
<td>3</td>
<td>IE 239</td>
<td>3</td>
</tr>
<tr>
<td>Adv. Topics in Financial Mgt</td>
<td></td>
<td>Time Series Analysis</td>
<td></td>
<td>Stochastic Models</td>
<td></td>
</tr>
<tr>
<td>GBUS 425</td>
<td>3</td>
<td>Econ 461</td>
<td>3</td>
<td>IE 404</td>
<td>3</td>
</tr>
<tr>
<td>Real Estate Finance &amp; Investing</td>
<td></td>
<td>Forecasting</td>
<td></td>
<td>Simulation</td>
<td></td>
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<tr>
<td>GBUS 426</td>
<td>3</td>
<td>Econ 463/IE 458</td>
<td>3</td>
<td>IE 409</td>
<td>3</td>
</tr>
<tr>
<td>Economic Institutions</td>
<td></td>
<td>Topics in Game Theory</td>
<td></td>
<td>Time Series Analysis</td>
<td></td>
</tr>
<tr>
<td>GBUS 431</td>
<td>3</td>
<td>Math 463</td>
<td>3</td>
<td>IE 410</td>
<td>3</td>
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<tr>
<td>Quantitative Finance</td>
<td></td>
<td>Advanced Probability</td>
<td></td>
<td>Design of Experiments</td>
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<tr>
<td>Eco 416</td>
<td></td>
<td>Stat 434</td>
<td>3</td>
<td>IE 411</td>
<td>3</td>
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<tr>
<td>Econometric Theory</td>
<td></td>
<td>Mathematical Statistics</td>
<td></td>
<td>Networks and Graphs</td>
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<tr>
<td>Eco 423</td>
<td>3</td>
<td>Stat 438</td>
<td>3</td>
<td>IE 413</td>
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<tr>
<td>Real Options</td>
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<td>Regression Analysis</td>
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<td>Advanced Engineering Economy</td>
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<td></td>
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<td>and Replacement Analysis</td>
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*Not currently offered.*

#### Sequence of courses

<table>
<thead>
<tr>
<th>Summer (pre or post)</th>
<th>Fall</th>
<th>Spring</th>
</tr>
</thead>
<tbody>
<tr>
<td>GBUS 422 (3 credits)</td>
<td>Math 467 (3 credits)</td>
<td>Math 468 (3 credits)</td>
</tr>
<tr>
<td>Derivatives</td>
<td>Financial Calculus I</td>
<td>Financial Calculus II</td>
</tr>
<tr>
<td>GBUS 473 (3 credits)</td>
<td>Advanced Finance</td>
<td>GBUS 421 (3 credits)</td>
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<tr>
<td>Adv. International Finance</td>
<td></td>
<td>Advanced Investments</td>
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<tr>
<td>IE 316 (3 credits)</td>
<td>Optimization Models and Applications</td>
<td>IE 4xx (3 credits)</td>
</tr>
<tr>
<td>Eco 415 (3 credits)</td>
<td>Econometrics</td>
<td>Stochastic Programming and Portfolio Analysis</td>
</tr>
<tr>
<td>IE 4yy (3 credits)</td>
<td>Financial Engineering Projects</td>
<td>Eco 424 (3 credits)</td>
</tr>
<tr>
<td></td>
<td>This course will begin in Fall and conclude in the Spring semester.</td>
<td>Advanced Numerical Methods</td>
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<tr>
<td></td>
<td>Stat 410 (3 credits)</td>
<td>Random Processes and Applications</td>
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GRADUATE & RESEARCH COMMITTEE

COURSE AND CURRICULUM CHANGES

UNIVERSITY FACULTY MEETING
March 21, 2005

CCE & CAG MOTIONS
LEHIGH UNIVERSITY – INTERNATIONAL PROGRAMS
New Certificate Program in TESOL for the Global School Community

1. Title of new certificate program
TESOL for the Global Community

2. Mission statement:
This certificate program will become an integrated certificate program offered by both COE and CAS.

3. Identify the proposed market and/or clients this proposed certificate program is designed to address:

- Personnel working in PA schools wishing to develop expertise in the specialized area of TESOL.
- Personnel working in the International School community around the world who want to develop expertise in specialized areas within education.
- Students pursuing a Master's Degree in Global Leadership.
- Lehigh University undergraduate students who want to pursue an additional specialized area of language teaching.

4. Rationale for proposed certificate program
It has long been recognized that students must develop broad experience in a global context. This program is designed to help candidates develop an understanding of the power of language in immigrant (within the United States) and international communities, and provide them with the skills to assist individuals in learning English as their second language. The program will benefit not only international students, but also Lehigh undergraduates and educators from Pennsylvania and other states.

Lehigh University has moved aggressively into the international arena by providing opportunities for educators to continue their professional development, regardless of geographic location or national origin. Lehigh has established its presence as a leader in global education and has the expertise and resources to support a program to meet the growing need worldwide for English teaching.

The demand for English language learning throughout the world and locally has increased dramatically in recent years. Increasing numbers of educators are seeking to complete programs in TESOL (Teaching English as a Second Language) education or add credentials to existing ones. Therefore, it is expected that this program will be profitable from a financial standpoint.

Faculty in the MLL department and College of Education faculty, in addition to the deans of both CAS and COE, were consulted and have indicated strong support for the program.

It is anticipated that, as a result of this new program, there will be an increased interest in students wishing to pursue the B.A./M.Ed. in undergraduate foreign language programs, as well as new interest in pursuing the TESOL certificate. The program involves courses from both
Modern Languages and Literature and the College of Education, and the program may become a useful recruiting tool to attract students into the language education programs.

5. Description of proposed new certificate program

A. Admissions criteria

Students must fulfill the same admissions requirements as in the existing Master’s degree for international students:

- All students must have an undergraduate GPA of 3.0 (on a 4.0) scale OR a graduate GPA of 3.00 on at least 12 graduate credits. Students who do not have a GPA of 3.0 may submit results of the GRE examination (with a score in the 75%-ile) as a supplement to their academic records.
- Language requirements for foreign students consistent with admissions in COE, which include a TOEFL. Minimum scores are as follows: 600 paper-based, 250 computer; reading (56 paper, 22 computer), listening (56 paper, 22 computer), structure/writing (55 paper, 22 writing).
- TSE (must attain scores of at least 50 within one year of starting program).

B. Specific program requirements, including specific required and elective courses

Proposed new course number and description: The following four courses involved are offered jointly by COE and CAS. Although the two M.I. courses are available at the undergraduate level, certificate candidates should register for all four courses at the graduate level.

**MLL 3XX/4XX, Second Language Acquisition (SLA) Theory (3-4 credits: undergraduates taking the 3XX course receive 4 credits; graduate students taking the 4XX receive 3 credits.)**  
This course will introduce theories of second language acquisition, including issues of acquisition of English as a second language as well as other languages. Various theories of communication and language acquisition will be covered.

**MLL 3XX/4XX, Intercultural Communication (3-4 credits: undergraduates taking the 3XX course receive 4 credits; graduate students taking the 4XX receive 3 credits.)**  
Language is ambiguous by nature, and discourse is interpreted in cultural and linguistic contexts. This course covers different cultural and linguistic strategies individuals use to communicate, essential concepts for interacting with individuals from other cultural and linguistic backgrounds, and different strategies of communication as defined by specific cultures. Covering the theory and practice of intercultural interaction, the course examines assumptions about language and culture and includes practical advice to help students develop the cultural sensitivity essential for communication today.

**EDU/ESL XXX, Theory and Practice for Second Language Learning (3 Credits)**
This course presents the application of second language acquisition (SLA) theories in relationship to teaching, and reviews methods and materials needed for ESL instruction in a regular classroom and in a pullout program. This course will demonstrate the knowledge of fundamental concepts and practices of English as a second language (ESL) instruction with an emphasis on instructional materials and strategies. Participants will be able to identify appropriate materials and resources to be used with students at each level of English proficiency.

**EDU/ESL XXX - Second Language Assessment - 3 Credits**

This is a broad-spectrum course around the use of assessment tools, and other evaluation measurements for diagnosis, prescription, and evaluation of students in ESL programs. This course will address part three: English Language Learners (ELLs) Language Support Services Knowledge. Participants will learn the effective assessment practices and support services available to ELL students. Participants will examine, explore and understand the purposes for assessment, multiple assessment models, use of evaluation techniques, scaffolding of assessments, and formal/informal assessment tools. Finally, participants will gain hands-on experience in test administration, interpretation and reporting.

As per the Master’s in Global Leadership program approved in Spring 2003 by the GRC, specific courses in each approved certificate may be replaced with an equivalent course approved by the program faculty.

### 6. Academic Impact

**A. Is the proposed new program interdisciplinary?**

This program is an interdisciplinary certificate program. The objectives are two-fold: to provide opportunities for international educators to obtain specific expertise in a sub-area within the field of Education and to provide more options for on-campus students who wish to teach in the field of second language education.

**B. Identify any known effects of the proposed new program on other programs at the University.**

None known

**C. If there are known effects, individuals in charge of the affected programs must be consulted about the proposed new program and the following information provided:**

1. **Who was consulted?**

   N/A

2. **Is the proposed new program acceptable to all other programs affected?**

   N/A

3. **Will any changes be required in the affected programs? If so, please describe below:**
N/A

D. Does the proposed new program affect the University's commitment to diversity in any way? If so, please describe below.

The program has a clear and distinct impact on the institutional commitment to diversity. As a program that will attract students who are working across the global community, opportunities to substantially improve the University's reach to many parts of the world are evident. In addition, faculty teaching in the program, and who travel to various world sites, will have the opportunity to have an enriched educational experience that they can bring back and share with campus-based students. Overall, the combination of online instruction mixed with face-to-face instruction on sites in various locations across the world will have an impact on cultural awareness in all aspects of the program.

The proposed certificate concentrates on issues of language learning within school communities. The emphasis throughout the TESOL program, as will be the case with this certificate, is for students to understand students within a cultural context. As such, the program will have a strong link to developing deep and rich understanding of diversity across culture, language, and race across the world.

7. Resource Impact

A. Provide impact statements in the four areas listed below:

(1) Library impact statement

In consultation with the Librarian for Education, it was established that no significant new library resources are required for the Master's in Global Leadership program, which was approved in Spring 2003 by the GRC along with the first two post graduate certificates to support that new Master's. The first two certificates---in Counseling in the Global School Community and in Adapting Instruction for the Diverse Learner---will be complemented by this third certificate in TESOL and by additional certificates planned for the future. Given the existence of the current international program in Educational Leadership, given that no new courses are planned for the Master's and given that collection building in global education areas is already underway, the library collections are sufficient to support student research. The remote location of students and the online delivery of instruction necessitate maintaining our current virtual library. Maximizing online access to our library collections remains an ongoing concern. The virtual library challenge is one that will have an impact on any remote program.

(2) Computer impact statement

This statement was developed in consultation with the LIS support group from the COE. The addition of several new online courses will require additional development and technical support. This support will be provided in three ways: First, the program will draw on the expertise available to the COE and CAS from the Library and Technology Services Team consultants for instructional technology and computer support. Second, the University's new "Lehigh Lab" will offer opportunities for instructors to receive the needed support to bring...
course online. A license for two-way audio with archiving will also be required; this cost is routinely covered by course tuition.

(3) Faculty impact statement

The nature of the proposed program requires that some courses be taught by individuals with extensive experience teaching in schools throughout the world. These individuals are currently on the COE and CAS faculty. In addition, some adjunct faculty may be employed to support the proposed program. Departments will provide adjunct faculty replacement on an as-needed basis. This course will not have an immediate effect on faculty resources. The entire faculty of the program in the COE has expertise in cross-cultural education, and many also have international teaching experience. CAS courses will be taught on a rotating basis by Professor Marie-Helene Chabut, professor of French, Professor Kiri Lee, associate professor of Japanese, and/or other MLL faculty, all of whom have participated in course development this year as part of a planning grant from the Council of Graduate Schools and the Ford Foundation and expect to offer the course during the summer or as part of their regular teaching load during the normal academic year. This is a promising area for development in both CAS and COE, and the deans of those two schools have indicated an interest in supporting developments in this area further if student demand justifies.

(4) Facilities impact statement

This proposal has no anticipated impact on facilities.

B. Provide a statement indicating who will assume financial responsibility for any new resources required:

Primary financial support for the proposed program has been given through the recent approval of a 20/20 proposal. The 20/20 project provides funds for the hiring and support of several faculty and staff that will specifically support the proposed certificate program. Specifically, the proposal calls for the hiring of two tenure-track faculty within the Educational Leadership program who have extensive expertise in global leadership, especially in the teaching of second language acquisition. Additional financial support will be provided through support for hiring adjunct faculty as needed within the College of Education budget.

The proposed program, however, can be implemented using existing faculty resources during the 05-06 academic year. Costs associated with additional adjunct faculty in the College of Education will be needed to offset faculty teaching dedicated to this program, and those resources would be provided through the College of Education.

Revenues generated by the program will be apportioned to the individual colleges based on the academic unit paying the instructor.
MODERN LANGUAGE AND LITERATURE

Proposed New Course

1. Proposed new course number and course description (as it will appear in course catalogue):

MLL 3XX/4XX, Intercultural Communication – 3-4 credits (Undergraduates taking the 3XX course receive 4 credits; graduate students taking the 4XX receive 3 credits).

Language is ambiguous by nature, and discourse is interpreted in cultural and linguistic contexts. This course covers different cultural and linguistic strategies individuals use to communicate, essential concepts for interacting with individuals from other cultural and linguistic backgrounds, and different strategies of communication as defined by specific cultures. Covering the theory and practice of intercultural interaction, the course examines assumptions about language and culture and includes practical advice to help students develop the cultural sensitivity essential for communication today.

2. Instructional mode (lecture, recitation, laboratory, seminar, independent study, or other) and number of contact hours per week:

Online or face-to-face; 3 contact hours

3. Rationale for proposed new course:

This new course is offered at both the 300- and the 400-level. At the 400-level, it is part of a new graduate-level certificate in Teaching English as a Second Language (TESOL) to be jointly offered by the College of Education (COE) and the Department of Modern Languages and Literature (MLL). It may also be available to undergraduate students in the MLL department as a 300-level course.

Today's students must develop broad experience in a global context. This course is designed to help them do so by providing them with the skills to interact with individuals from other cultural and linguistic backgrounds, using different strategies of communication as defined by specific cultures. The course examines assumptions about language and culture, and it is anticipated that the course will appeal to students pursuing the B.A./M.Ed. in undergraduate foreign language programs and the TESOL certificate.

4. Academic impact on programs affected by new course:

A. Is the proposed course to be cross-listed?

No.

B. Identify any known effects of the proposed new course on other programs at the University.

This course will be part of a new interdisciplinary certificate program in COE. It will help provide opportunities for international educators to obtain specific expertise in a sub-area within the field of Education and provide more options for on-campus students who wish to teach in the field of second language education.
C. If there are known effects, individuals in charge of the affected programs must be consulted about the proposed new course and the following information provided:

(1) Who was consulted?

Faculty in MLL and COE, in addition to the deans of both CAS and COE, were consulted and have indicated strong support for the program.

(2) Is the proposed new course acceptable to all other programs affected?

YES

(3) Will any changes be required in the affected programs? If so, please describe below:

NEW COURSE

D. Does the proposed new course affect the University’s commitment to diversity in any way? If so, please describe below:

The course has a positive impact on the institutional commitment to diversity. As part of a program that will attract students who are working across the global community, opportunities to substantially improve the University’s reach to many parts of the world are evident. In addition, faculty teaching in the program will have the opportunity to have an enriched educational experience that they can share with students. The combination of online instruction mixed with face-to-face instruction on sites in various locations across the world will have an impact on cultural awareness in all aspects of the program.

5. Resource Impact

A. Provide impact statements in the four areas listed below:

(1) Library impact statement

No significant library impact is anticipated for this course.

(2) Computer impact statement

The addition of several new online courses will require additional development and technical support. This support will be provided in three ways: First, the program will draw on the expertise available to the COE and CAS from the Library and Technology Services’ consultants for instructional technology and computer support. Second, the University’s new “Lehigh Lab” will offer opportunities for instructors to receive the needed support to bring courses online. A license for two-way audio with archiving will also be required; this cost is routinely covered by course tuition.

(3) Faculty impact statement

This course will be taught by Professor Marie-Helene Chabut, Professor Kiri Lee, and/or faculty from the Department of Modern Languages and Literature, all of whom have participated in course development. MLL faculty have been engaged in course development both this year and last as part of a planning grant from the Council of Graduate Schools and the Ford Foundation and expect to offer the course during the summer or as part of their regular teaching load during the normal academic year.
(4) Facilities impact statement
No impact on facilities is expected.

B. Provide a statement indicating who will assume financial responsibility for any new resources required:

This course will not have an immediate effect on faculty resources. The MLL department will provide adjunct faculty replacement on an as-needed basis. This is a promising area for development in both CAS and COE, and the deans of those two schools have indicated an interest in supporting developments in this area further if student demand justifies. Revenues generated by the program will be apportioned to the individual colleges based on the academic unit paying the instructor.
MODERN LANGUAGES AND LITERATURE

Proposed New Course

1. Proposed new course number and course description (as it will appear in course catalogue):

MLL 3XX/4XX. Second Language Acquisition (SLA) Theory---(3-4 credits; undergraduates taking the 3XX course receive 4 credits; graduate students taking the 4XX receive 3 credits.)

This course introduces theories of second-language acquisition, including issues of acquisition of English as a second language as well as other languages. Various theories of communication and language acquisition will be covered.

2. Instructional mode (lecture, recitation, laboratory, seminar, independent study, or other) and number of contact hours per week:

Online or face-to-face; 3 contact hours

3. Rationale for proposed new course:

This new course is offered at both the 300- and the 400-level. At the 400-level, it is part of a new graduate-level certificate in Teaching English as a Second Language (TESOL) to be jointly offered by the College of Education (COE) and the Department of Modern Languages and Literature (MLL). It may also be available to undergraduate students in the MLL department as a 300-level course.

This course is designed to introduce students to theories of second-language acquisition as they relate to acquisition of both English and other languages. The course examines assumptions about communication and language acquisition. It is anticipated that the course will appeal to students pursuing the B.A./M.Ed. in undergraduate foreign language programs as well as the TESOL certificate.

4. Academic impact on programs affected by new course:

A. Is the proposed course to be cross-listed?
No.

B. Identify any known effects of the proposed new course on other programs at the University.
This course will be part of a new interdisciplinary certificate program in COE. It will help provide opportunities for international educators to obtain specific expertise in a sub-area within the field of Education and provide more options for on-campus students who wish to teach in the field of second language education.
C. If there are known effects, individuals in charge of the affected programs must be consulted about the proposed new course and the following information provided:

(1) Who was consulted?
Faculty in MLI and COE, in addition to the deans of both CAS and COE, were consulted and have indicated strong support for the program.

(2) Is the proposed new course acceptable to all other programs affected?
YES

(3) Will any changes be required in the affected programs? If so, please describe below:
NEW COURSE

D. Does the proposed new course affect the University's commitment to diversity in any way?
If so, please describe below:
The course has a positive impact on the institutional commitment to diversity. As part of a program that will attract students who are working across the global community, opportunities to substantially improve the University’s reach to many parts of the world are evident. In addition, faculty teaching in the program will have the opportunity to have an enriched educational experience that they can share with students. The combination of online instruction mixed with face-to-face instruction on sites in various locations across the world will have an impact on cultural awareness in all aspects of the program.

5. Resource Impact

A. Provide impact statements in the four areas listed below:

(1) Library impact statement
No library impact is anticipated for this course

(2) Computer impact statement
The addition of several new online courses will require additional development and technical support. This support will be provided in three ways: First, the program will draw on the expertise available to the COE and CAS from the Library and Technology Services Team consultants for instructional technology and computer support. Second, the University's new "Lehigh Lab" will offer opportunities for instructors to receive the needed support to bring course online. A license for two-way audio with archiving will also be required; this cost is routinely covered by course tuition.

(3) Faculty impact statement
This course will be taught by Professor Kiri Lee, associate professor of Japanese in the MLI department. It is anticipated that the course will be offered primarily during the summer.

(4) Facilities impact statement
No facilities impact is anticipated for this course.
B. Provide a statement indicating who will assume financial responsibility for any new resources required:

This course will not have an immediate effect on faculty resources. The MIL department will provide adjunct faculty replacement on an as-needed basis. This is a promising area for development in both CAS and COE, and the deans of those two schools have indicated an interest in supporting developments in this area further if student demand justifies.

Revenues generated by the program will be apportioned to the individual colleges based on the academic unit paying the instructor.
College of Education – International Programs

Proposed New Course

1. Proposed new course number and course description (as it will appear in course catalogue):

EDU/ESL XXX - Second Language Assessment - 3 Credits
This is a broad-spectrum course around the use of assessment tools, and other evaluation measurements for diagnosis, prescription, and evaluation of students in English as a second language (ESL) programs. This course will address part three: English Language Learners (ELLs) Language Support Services Knowledge. Participants will learn the effective assessment practices and support services available to ELL students. Participants will examine, explore and understand the purposes for assessment, multiple assessment models, use of evaluation techniques, scaffolding of assessments, and formal/informal assessment tools. Finally, participants will gain hands-on experience in test administration, interpretation and reporting.

2. Instructional mode (lecture, recitation, laboratory, seminar, independent study or other) and number of contact hours per week:

Online or face-to-face; 3 contact hours

3. Rationale for proposed new course:

It has long been recognized that students must develop broad experience in a global context. This course is designed to help candidates develop an understanding of the power of language in immigrant (within the United States) and international communities, and provide them with the skills to assist individuals in learning English as their second language. The program will benefit not only international students, but also Lehigh undergraduates and educators from Pennsylvania and other states.

4. Academic impact on programs affected by new course:

A. Is the proposed course to be cross-listed?
No.

B. Identify any known effects of the proposed new course on other programs at the University.

This course is part of an interdisciplinary certificate program offered by COE and MLL. The program will provide opportunities for international educators to obtain specific expertise in a sub-area within the field of Education and more options for on-campus students who wish to teach in the field of second language education.

C. If there are known effects, individuals in charge of the affected programs must be consulted about the proposed new course and the following information provided:

(1) Who was consulted?
Faculty in MLI and COE, in addition to the deans of both CAS and COE, were consulted and have indicated strong support for the program.

(2) Is the proposed new course acceptable to all other programs affected?

YES

(3) Will any changes be required in the affected programs? If so, please describe below:

Both MLI and COE have developed new courses in anticipation of the new program in TESOL.

D. Does the proposed new course affect the University's commitment to diversity in any way? If so, please describe below:

The course has a positive impact on the institutional commitment to diversity. As part of a program that will attract students who are working across the global community, opportunities to substantially improve the University's reach to many parts of the world are evident. In addition, faculty teaching in the program will have the opportunity to have an enriched educational experience that they can share with students. The combination of online instruction mixed with face-to-face instruction on sites in various locations across the world will have an impact on cultural awareness in all aspects of the program.

5. Resource Impact

A. Provide impact statements in the four areas listed below:

(1) Library impact statement

In consultation with the librarian for education, it was established that no significant new library resources are required for the Master's in Global Leadership program, which was approved in Spring 2003 by the GRC along with the first two post-graduate certificates to support that new Master's. The first two certificates—Counseling in the Global School Community and in Adapting Instruction for the Diverse Learner—will now be complemented by this third certificate in TESOL and by additional certificates planned for the future. Given the existence of the current international program in Educational Leadership, given that no new courses are planned for the Master's and given that collection building in global education areas is already underway, the library collections are sufficient to support student research. The remote location of students and the online delivery of instruction necessitate maintaining our current virtual library. Maximizing online access to our library collections remains an on-going concern. The virtual library challenge is one that will have an impact on any remote program.

(2) Computer impact statement

This statement was developed in consultation with the LTS support group from the COE. The addition of several new online courses will require additional development and technical support. This support will be provided in three ways: First, the program will draw on the expertise available to the COE and CAS from the Library and Technology Services Team consultants for instructional technology and computer support. Second, the University's new "Lehigh Lab" will offer opportunities for instructors to receive the needed support to bring
course online. A license for two-way audio with archiving will also be required; this cost is routinely covered by course tuition.

(3) Faculty impact statement

The nature of the proposed program requires that some courses be taught by individuals with extensive experience teaching in schools throughout the world. These individuals are currently on the COE faculty. In addition, some adjunct faculty may be employed to support the proposed program. Adjunct faculty replacement will be provided on an as-needed basis. This course will not have an immediate effect on faculty resources. The entire faculty of the program in the COE has expertise in cross-cultural education, and many also have international teaching experience. This is a promising area for development in both CAS and COE, and the deans of those two schools have indicated an interest in supporting developments in this area further if student demand justifies.

(4) Facilities impact statement

This proposal has no anticipated impact on facilities.

B. Provide a statement indicating who will assume financial responsibility for any new resources required:

The proposed course can be implemented using existing faculty resources during the 05-06 academic year. Costs associated with additional adjunct faculty in the College of Education will be needed to offset faculty teaching dedicated to this program, and those resources would be provided through the College of Education.

Revenues generated by the program will be apportioned to the individual colleges based on the academic unit paying the instructor.
College of Education-International Programs

Proposed New Course

1. Proposed new course number and course description (as it will appear in course catalogue):

   EDU/ESL xxx - Theory and Practice for Second Language Learning (3 credits)
   This course presents the application of second language acquisition (SLA) theories in
   relationship to teaching, and reviews methods and materials needed for ESL instruction in a
   regular classroom and in a pullout program. This course will demonstrate the knowledge of
   fundamental concepts and practices of English as a second language (ESL) instruction with
   an emphasis on instructional materials and strategies. Participants will be able to identify
   appropriate materials and resources to be used with students at each level of English
   proficiency.

2. Instructional mode (lecture, recitation, laboratory, seminar, independent study, or other) and
   number of contact hours per week:

   Online or face-to-face; 3 contact hours

3. Rationale for proposed new course:

   This course is part of an interdisciplinary certificate program offered by the College of Education
   (COE) and the Department of Modern Languages and Literature (MLL). The rationale for the
   program is two-fold: to provide opportunities for international educators to obtain specific
   expertise in a sub-area within the field of Education and to provide more options for on-campus
   students who wish to teach in the field of second language education.

4. Academic impact on programs affected by new course:

   A. Is the proposed course to be cross-listed?

   No.

   B. Identify any known effects of the proposed new course on other programs at the University.

   This course will be part of a new interdisciplinary certificate program in COE with courses from
   COE and MLL.

   C. If there are known effects, individuals in charge of the affected programs must be consulted
   about the proposed new course and the following information provided:

   (1) Who was consulted?

   Faculty in MLL and COE, in addition to the deans of both CAS and COE were consulted and
   have indicated strong support for the program.
(2) Is the proposed new course acceptable to all other programs affected?

YES

(3) Will any changes be required in the affected programs? If so, please describe below:

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