Lehigh University

MINUTES OF THE FACULTY MEETING

24 March 2003

Presiding: Gregory Farrington (University Center 308)

President Farrington called the meeting to order at 4:10 PM.

1. Minutes. The minutes of the February 10, 2003 faculty meeting were
   APPROVED.

2. Committee Motions. Professor Jacob Kazakia, on behalf of the
   Educational Policy Committee, MOVED approval of course and curriculum
   changes for: Applied Life Science; Design Arts, the College of Arts and
   Sciences, the College of Business and Economics; and, the PC Rossin
   College of Engineering and Applied Science (see Attachment 1 in the
   faculty secretary's office, 302 Rauch Business Center). The motion was
   SECONDED. The motion PASSED.

   Professor Kazakia then MOVED approval of a change to the rules on
   scholastic averages and probation (see Attachment 2). The motion was
   SECONDED.

   Professor Emeritus James B. Hobbs asked whether this motion would
   change R&P. It was determined that the motion would amend R&P 3.10.1
   subsection 1...

   Professor Philip Blythe suggested a friendly amendment to change the
   third line of the last paragraph from "at the discretion of" to "by." Friendly
   amendments were also offered to eliminate "however" from the last
   sentence of the third paragraph, and to eliminate the comma after
   "attempted" in the same sentence.

   The motion PASSED.

   Professor George Wilson, on behalf of the Graduate and Research
   Committee, MOVED adoption of a new master's degree program and
   graduate certificate, and course and curriculum changes for the College of
   Education (see Attachment 3 in the faculty secretary's office, 302 Rauch
   Business Center). The motion was SECONDED. The motion PASSED.

   Professor Wilson then MOVED adoption of course and curriculum
changes for the PC Rossin College of Engineering and Applied Science (see Attachment 4 in the faculty secretary's office, 302 Rauch Business Center). The motion was SECONDED. The motion PASSED.

Professor Wilson then MOVED adoption of course and curriculum changes for the College of Arts and Sciences (see Attachment 5 in the faculty secretary's office, 302 Rauch Business Center). The motion was SECONDED. The motion PASSED.

Professor Wilson then MOVED adoption of course and curriculum changes for the College of Business and Economics MBA concentrations (see Attachment 6 in the faculty secretary's office, 302 Rauch Business Center). The motion was SECONDED. The motion PASSED.

Professor Wilson then MOVED a waiver of the 10-day Rule. The motion was SECONDED. The motion PASSED.

Professor Wilson then MOVED adoption of a course change in the College of Education in the area of policy and advocacy studies (see Attachment 7 in the faculty secretary's office, 302 Rauch Business Center). The motion was SECONDED. The motion PASSED.


5. Committee Reports. None.

6. President's Report. President Farrington raised four issues.

First, in the next week or two, there will be campus visits for the candidates for the position of dean of the College of Arts and Sciences.

Second, he reported on the next stage of the partnership with the city including street lighting up Brodhead, Packer and Webster Avenues. The university is in the process of expanding the South Mountain Gold Card to include South Side merchants.

Third, the university is in the middle of the process of thinking about how to insure Greek life in the future is healthier than it is today. Consultants have been hired, the Greek Alumni Council has been revitalized and a series of focus conversations are underway.

The university is dealing with external misconceptions about social policy. A task force has been appointed, chaired by Director of Athletics Joe
Sterrett, consisting of alumni, faculty and staff to rethink and focus standards for Greek houses.

Greek life will be a major topic for the Executive Committee of the Board of Trustees April meeting and the Board of Trustees June meeting. By January of February of 2004, a final set of proposed procedures will be presented. The president will be visiting many Greek houses during April. The president takes a positive view.

As it is almost April, admissions are at the forefront. There has been a substantial growth in applications and quality is up. There is the possibility of securing the highest quality and most selective class in history.

The university budget is balanced.


8. Professor Sudhakar Neti asked whether the Greek life problems were social, physical or academic. President Farrington said the fraternities are in dire shape while the sororities are OK. Living conditions in Greek houses have deteriorated. The university must design a mechanism to fund the renovation of houses.

Professor Rich Aronson asked why junior and senior Greek members are moving out of their houses. President Farrington said it was a combination of poor living conditions and the negative impact on academic performance.

Professor Blythe noted that the campus social regulations drive students off campus.

The meeting stood adjourned at 5:00 PM

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MOST RECENT UNIVERSITY CATALOG Corrected 2/26/03

Scholastic Averages and Probation

Scholastic requirements for undergraduate students are expressed in terms of the cumulative grade point average (GPA)—the weighted average of all grades received in residence or at institutions specifically approved for grade transfer. The cumulative GPA is computed at the end of each semester and the second summer session. Following are the cumulative GPA requirements for good standing:

<table>
<thead>
<tr>
<th>Class</th>
<th>Courses Earned</th>
<th>GPA</th>
</tr>
</thead>
<tbody>
<tr>
<td>freshmen 1st semester</td>
<td>9 to 22 credits earned</td>
<td>1.70</td>
</tr>
<tr>
<td>sophomores</td>
<td>23 to 52</td>
<td>1.80</td>
</tr>
<tr>
<td>juniors and seniors</td>
<td>more than 52</td>
<td>2.00</td>
</tr>
</tbody>
</table>

For computational purposes students who have completed 22 or fewer earned hours at the end of the most recent graded term shall be required to achieve a 1.70 cumulative grade point average. Students who have completed 23 but fewer than 53 earned hours at the end of the most recent graded term shall be required to achieve a 1.80 cumulative grade point average. Students who have completed 53 earned hours at the end of the most recent graded term shall be required to achieve a 2.00 cumulative grade point average.

Other undergraduates including all General College Division, Lehigh Valley Association of Independent College cross registered students, high school Scholars, and R.O.T.C. students will be required to achieve a 2.0 cumulative grade point average—the minimum average required for graduation—to remain in good academic standing. Non-degree students with less than 12 credits attempted however, will not have their progress evaluated until they earn at least 7 credits total.

Students who do not meet the above requirements will be placed on scholastic probation. Students who, regardless of their cumulative average, have failed more than eight hours of course work in any semester are also placed on scholastic probation.

Any undergraduate student who achieves a 1.69 or lower cumulative grade point average in a given term is eligible to be reviewed by and may be placed on probation at the discretion of the Committee on the Standing of Students (SOS). A non-degree student with two or more F grades is eligible to be reviewed by and may be placed on probation or dropped for poor scholarship at the discretion of the SOS committee.
MOST RECENT UNIVERSITY CATALOG Corrected 2/26/03

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Scholastic requirements for undergraduate students are expressed in terms of the cumulative grade point average (GPA)—the weighted average of all grades received in residence or at institutions specifically approved for grade transfer. The cumulative GPA is computed at the end of each semester and the second summer session. Following are the cumulative GPA requirements for good standing:

- Freshmen 1st semester: 0 to 22 credits earned = 1.70
- Sophomores: 23 to 52 credits = 1.80
- Juniors and Seniors: more than 52 credits = 2.00

For computational purposes students who have completed 22 or fewer earned hours at the end of the most recent graded term shall be required to achieve a 1.70 cumulative grade point average. Students who have completed 23 but fewer than 53 earned hours at the end of the most recent graded term shall be required to achieve a 1.80 cumulative grade point average. Students who have completed 53 earned hours at the end of the most recent graded term shall be required to achieve a 2.00 cumulative grade point average.

Other undergraduates including all General College Division, Lehigh Valley Association of Independent College cross registered students, high school Scholars, and R.O.T.C. students will be required to achieve a 2.9 cumulative grade point average—the minimum average required for graduation—to remain in good academic standing. Non degree students with less than 12 credits attempted however, will not have their progress evaluated until they earn at least 7 credits total.

Students who do not meet the above requirements will be placed on scholastic probation. Students who, regardless of their cumulative average, have failed more than eight hours of course work in any semester are also placed on scholastic probation.

Any undergraduate student who achieves a 1.69 or lower cumulative grade point average in a given term is eligible to be reviewed by and may be placed on probation at the discretion of the Committee on the Standing of Students (SOS). A non degree student with two or more F grades is eligible to be reviewed by and may be placed on probation or dropped for poor scholarship at the discretion of the SOS committee.
While there is no specific credit hour requirement for good standing, certain categories of students (e.g., those on financial aid and those playing intercollegiate athletics) will be expected to maintain whatever hours are required for eligibility.
New curriculum: Applied Life Science (BA and BS)

University faculty meeting: 24 Mar 03
Educational Policy Committee meeting: 5 Mar 03

Rationale and Discussion

The Applied Life Science (ALS) curriculum implements the College of Arts and Sciences portion of the undergraduate curriculum envisioned by the Biosciences and Biotechnology Initiative proposed to the 2002 Fund. ALS is the counterpart of the Bioengineering curriculum which was implemented in AY 2002–03 in the College of Engineering and Applied Science. Faculty, hire and facility developments funded by the Biosciences and Biotechnology Initiative support ALS. A partnership consisting of the departments of Biological Sciences, Chemistry, Mathematics, and Physics will provide the faculty advisory committee that directs the ALS curriculum and guides students who elect a major in ALS. The advisory committee will be an integral element of the administrative structure that directs the Bioscience and Biotechnology program.

The central vision of the Applied Life Science program is to develop a liberal arts perspective of biotechnology in which history, theory, criticism, and practice merge to produce a cadre of technically literate graduates who are prepared for a range of post-Lehigh careers, including graduate and professional school, communication, policy, and business. The educational goals include the development of critical thinking and effective communication skills, the mastery of a body of biotechnology knowledge and skills, and integration of multidisciplinary approaches to analyzing biotechnology issues.

In ALS students will find:
- access to a scientific/technical education in a liberal arts context with breadth of knowledge and understanding and the curricular flexibility characteristic of the liberal arts
- multiple entry points and curricular foci to satisfy a range of interests
- advising for graduate or professional school preparation
- opportunities for experiential learning

The participating departments and their faculty will have:
- multiple entry points and flexible curricula that draw students into their courses
- unique multidisciplinary foci that attract outstanding students to Lehigh
- a partnership that contributes to building a coordinated life–science effort at Lehigh that is ultimately necessary to attract substantial industry and government funding to support undergraduate curriculum, graduate programs, and research development
- an undergraduate curriculum, linked to a complementary curriculum in CEAS, both of which will grow into integrated programs developing graduate degrees

The BA in Applied Life Science requires at least 52 credits of mathematics, science, and engineering coursework. Students in the BA will have sufficient flexibility to acquire additional credentials (e.g., minors, second major) or to prepare for graduate or professional study in life science or another field. The BS program requires at least 83 credits in mathematics, science, and engineering coursework except for students in the Decision-Making concentration, which uniquely juxtaposes hard science with decision-making models based on economic and moral principles and requires at least 59 credits of mathematics, science, and engineering. In both the BA and BS, the ALS curriculum includes collateral mathematics and science courses, a biotechnology core, a breadth of options for a variety of concentration paths, and an advanced seminar that serves to reintegrate the biotechnology core across the breadth of concentration experiences. The amount of Biological Sciences (BioS) coursework is limited, ensuring that students' programs are distinct from existing programs in Biological Sciences.

The only new courses required for the ALS program, other than those that are being rostered for the Bioengineering curriculum (BioE courses), are the advanced ALS seminars, which will be rostered as BioS 379, Chem 379, Math 379, and Phy 379. Each year, the Applied Life Science advisory committee will meet to decide which course or courses will be rostered in a given spring term to meet the needs of the students in the program. If more than one course is rostered in a particular term, they can be scheduled to meet at the same time and place.
**BA program**

The BA in Applied Life Science is intended to provide a technical concentration in a liberal arts context. It is well-suited for students who are interested in, for example, health professions, medical device or pharmaceutical marketing or manufacturing management, public health, law (particularly intellectual property), policy, journalism, economics, or ethics. The program provides sufficient flexibility for the student to explore a range of interests and to pursue a double major or a minor. With careful planning, the student can prepare for graduate school but is advised to seek guidance early.

**University and College requirements** *(21 to 27 credits)*

- Engl 001 and 002 *(6 credits)*
- Choices and Decisions *(1 credit)*
- College seminar *(1 to 4 credits)*
- Social Sciences *(at least 8 credits)*
- Humanities *(at least 8 credits)*

A junior writing-intensive course (selected from the major requirements or free electives)

**Collateral requirements** *(16 to 17 credits)*

- Math 021 *(4 credits)*
- Chm 021 and 022 or Chm 075 *(4 or 5 credits)*
- BioS 031, 032, 101, and 102 *(8 credits)*

**Major requirements** *(at least 36 credits)*

**Core**

- BioE 110 *(3 credits)*
- BioE 2xx *(Applied Bioscience)* or BioE 2yy *(Bioengineering Physiology)* or
  - Math/ChE 207 *(3 credits)*

**Concentration**

- At the time of declaring the major, the student will meet with an adviser in the Applied Life Science program and design a group of courses to suit the student's interests. The courses selected must form a cogent grouping to the adviser's satisfaction. The student's individualized program must be drawn up and approved by the adviser before the 10th day of classes in the student's fifth college semester (i.e., with at least three semesters remaining to be used).

- The concentration must include at least 30 credits of natural science, mathematics, and engineering beyond the 6 credits required for the core. At least 20 credits of the concentration must be at the 100 level or above, and at least 8 credits of the concentration must be at the 300 level.

- BioS 181 may not be used for the major, and no more than 3 BioS courses after 101/102 may be included in the major.

- Chm 031 *(or Chm 075)* is strongly recommended.

- The concentration must also include at least one of the designated Advanced Applied Life Science seminar courses, which counts toward the credits required at the 300 level.

- Up to 4 credits of adviser-preapproved independent work may be included.

**Free electives**

- Sufficient coursework to bring the total to at least 121 credits
- Students are advised to include courses in ethics, history and philosophy of science, and economics among their electives.
Examples of concentration groupings for BA students

I. This student is interested in issues related to biomedical instrumentation
   Math 022 (4 credits)
   Phy 010/012 (5)
   Phy 013/014 (4)
   Phy 190 (3)
   BioS 177 (3)
   BioS 254 (3)
   BioE 2xx (Biomedical instrumentation and sensors) (3)
   BioE 3xx (Medical electronics) (3)
   BioS 314 (3) BioS 328 (3), or BioS 367 (3)
   Advanced ALS Seminar (300-level) (3)
   Total (34)
   >100 (21)
   >300 (9)

II. This student is interested in issues related to clinical and forensic services.
    Chm 51/53 (4)
    Chm 52/58 (4)
    BioS 328 (3)
    BioS 371 (3)
    BioS 381 (3)
    BioE 2xx (Biotechnology practice) (3)
    Chm 332 (3)
    Chm 356 (3)
    Chm 338/339 (4)
    Chm 353 (2)
    Advanced ALS Seminar (300-level) (3)
    Total (35)
    >100 (27)
    >300 (15)

III. This student is interested in issues related to computational biology.
     Engr 001 (3) or CSE 010/014 (4)
     Math 022 (4)
     Math 023 (4)
     Math 205 (3)
     Math 230 (3)
     Math 231 (3)
     Math 261 (3)
     BioS 317 (3)
     BioS 345 (3) or BioS 356 (3)
     Advanced ALS Seminar (300-level) (3)
     Total (32 or 33)
     >100 (21)
     >300 (9)
IV. This student likes the decision-making concentration in the BS but prefers the flexibility of the BA. Because the BA program must include only mathematics, natural science, and engineering courses, the student must use free electives for the other types of courses and uses the major to provide the life-science and mathematical basis for decision-making. This student earns a minor in Economics and is prepared for an MS in Economics. By substituting Math 231 for Math 205 and Math 309 for Math 341, the student could also earn a minor in Probability and Statistics.

Engr 001 (3) or CSE 010/014 (4)
Math 022 (4)
Math 023 (4)
Math 205 (3)
Math 312 (4)
Math 338 (4)
Math 341 (3)
BioS 328 (3)
BioS 345 (3) or BioS 356 (3)
Advanced ALS Seminar (300-level) (3)
Total (34 or 35)
>100 (23)
>300 (20)

Free electives:
Eco 001 (4)
Eco 105 or 146 (3)
Eco 119 (3) or 129 (4)
Eco 335 (3)
Eco 357 (3)
Phil/Rel 116 (4)
STS 011 (4)
**BS program**

The BS in Applied Life Science is intended to provide an education similar to that of the BA, but substitutes stronger collateral preparation and greater focus in the major requirements for the flexibility of the BA. Even so, there is still scope for a student to complete a minor, participate in a faculty research project, or prepare for graduate study in a different field (e.g., economics, journalism).

**University and College requirements (24 to 27 credits)**

- Engl 001 and 002 (6 credits)
- Choices and Decisions (1 credit)
- College seminar (1 to 4 credits)
- Social Sciences (at least 8 credits)
- Humanities (at least 8 credits)

A junior writing-intensive course (selected from the major requirements or free electives)

**Collateral requirements (41 credits)**

- Math 012, 021, and 022 (12 credits)
- Phy 011, 012 (5 credits)
- Chm 075 and 076 (or 021, 022, and 031) (8 credits)
- Chm 051, 053, 052, and 058 (8 credits)
- BioS 031, 032, 101, 102 (8 credits)

**Major requirements (at least 42 credits)**

**Core**

- BioE 110 (3 credits)
- BioE 2xx (Applied Bioscience) or BioE 2yy (Bioengineering Physiology) or Math/ChE 207 (3 credits)

**Concentration**

- 3 courses from A (life science specialization; see below) (at least 9 credits)
- 5 courses from B (complementary specialization; see below) (at least 15 credits)
- 3 courses selected from A and B (selection must be approved by the adviser and constitute a cogent grouping) (at least 9 credits)
- 1 senior seminar (at least 3 credits)

Up to 4 credits of adviser-approved independent work may be included and count towards either A or B.

- BioS 131 may not be used for the major, and no more than 3 BioS courses after 101/102 may be included in the major.

- The concentration must also include at least one of the designated advanced Applied Life Science seminar courses which counts toward the credits required at the 300 level.

**Practicum**

The student must complete an experience preapproved by the adviser and relating to the practical application of methods in applied life science. Laboratory or independent work courses or an internship or other work experience may satisfy all or part of the practicum. The practicum need not entail academic credit but must be the equivalent of at least 4 credits of effort (at least 8 weeks of full-time employment in a suitable activity). Detailed information is available from the adviser.

**Free electives**

At least 12 credits to bring the total to at least 121 credits

**The concentration**

**A. Life Science specialization**

The biological basis for the student's concentration, provided by advanced courses in Bioengineering, Biological Sciences, or kindred disciplines (e.g., ecology, biochemistry).
B. Complementary specialization

The complementary coursework for the student’s concentration, provided by courses outside the life sciences.

Example Concentrations (* denotes required course)

Biophysics (biophysical phenomena, systems modeling)

Life Science specialization A


Complementary specialization B


Mathematical and Computational Life Science (modeling, informatics)

Life Science specialization A


Complementary specialization B


Chemical Biology (discovery technologies, clinical/forensic services)

Life Science specialization A


Complementary specialization B


Decision-Making in Applied Life Science (decision-making in life science context)

Life Science specialization A


Complementary specialization B

Eco 001, Eco 105 or 146, Eco 145 or Math 012, Eco 231*, Eco 234, Eco 246, Eco 315, Eco 322, Eco 333, Eco 357, Eco/EE 358, Eco 368, Phil 105, Phil/Rel 116, Phil 126, Phil 128, Phil 137, SSP 160, SSP 162, SSP 341, SSP 367, STS 011*, STS/Jour 124, STS/Hist 145
Library Impact statement for Applied Life Science (ALS) Program

Definition of Program

This is the College of Arts and Sciences analogue of the Bioengineering curriculum that began in 2002-03 in the College of Engineering and Applied Science. The program provides a liberal arts focus on biotechnology.

ALS makes available two paths:

- **BA Program**: This program provides a technical background in applied life sciences within a liberal arts framework that allows for maximal flexibility in pursuing various interests.
- **BS Program**: Similar to the BA program in emphasis, but course requirements in collateral fields (i.e., technical fields allied to biology) are more extensive.

New courses in the program are advanced seminars, Bio8 379, Chem 379, Math 379, and Phy 379. These are all listed as “Advanced Applied Life Science Seminar”. These all have the same course description; they involve “multidisciplinary integration of bioscience and biotechnology concepts and methods” Concerning the “Advanced Applied Life Science Seminar”, Carl Moses mentioned that it “will rely heavily on student presentations, some of which may entail library research, and guest speakers”.

There are new bioengineering courses as well listed These are not addressed in this document, which focuses on College of Arts and Sciences offerings.

Purpose of this Document

To assess what library materials are needed to provide adequate support for the advanced seminars listed above.

Databases

Lehigh’s engineering and science librarians are available to help with online searching of the following databases (see http://www.lehigh.edu/library/databases/main.html), which collectively should meet the biotechnology searching needs of students in ALS.

- Agricola
- Basic BIOSIS
- Chemical Abstracts Student Edition
- Compendex
- Current Index to Statistics
- Ecology Abstracts
- INSPEC
- Kirk-Othmer Encyclopedia of Chemical Technology
- MathSciNet
- McGraw-Hill Encyclopedia of Science and Technology
- Medline (PubMed)
- Science Citation Index
- Scifinder Scholar

Also:

Multi-purpose databases offered by the library such as Infotrac and Proquest are available for lower-level undergraduates to search.
The Web of Science at http://www.isinet.com/si/products/citation/wos/index.html would be a valuable addition to Lehigh’s databases. It would provide web-based access to the Science Citation Index and the Social Sciences Citation Index, now only available on CD-ROM in the Fairchild-Martindale Library. Price has been the significant barrier to adopting the Web-based version.

The publicly available new resource science.gov has coverage of relevant areas. No other additional library databases are required at this time to support the program.

Books

Very recent coverage of biotechnology at a basic or semi-technical level of coverage is not extensive, so path forward we will need to buy some more books of this type. Given that the needs of this program are not at a research depth, we can accommodate these future needs within the current library budget.

Journals

We have good coverage at the undergraduate level.

Two additional general journals that are widely indexed and with good ISI impact factors that would strengthen our support of this program are:

- **Current Opinion in Biotechnology**: Institutional print only is $1458. Electronic access via subscription to BioMedNet Reviews, for which pricing is based on number of life science research users across a defined IP range of the institution.
- **Trends in Biotechnology**: Institutional print only is $1015. Online access is again via BioMedNet Reviews.

Should faculty research and curricular needs require it, and if funding is available, we can add these or other journals to our journals request list. This request list is reviewed and ranked annually by librarians, in concert with faculty, with new subscriptions initiated as funds permit.

Notes:

The proposal refers to "new courses in genomics, bioinformatics" (see p.6). I assume these are under development and so are not addressed in this document.

Please contact Brian Simboli (bts4) if there are questions about the methodology used to arrive at the judgments in this impact statement.
New curriculum: Design Arts (BA)

University faculty meeting: 24 Mar 03
Educational Policy Committee meeting: 5 Mar 03

Introduction

The Design Arts program engages the undergraduate liberal arts student in creative work that focuses on visual communication design with an emphasis on digital media. The program emphasizes the creation of art and design using digital technology instead of a pottery wheel or an easel.

Design Arts is a multidisciplinary major emphasizing the intersection of design with the fields of art, architecture, applied art, industrial art, and all their related fields. Design affects all of our lives, and design is an aspect of all creative human endeavors. Hence, the programmatic emphasis is on establishing a broad spectrum of inter-related courses within the major so as to address the myriad issues confronting the modern designer.

The program is designed to provide a firm foundation in traditional studio work. The foundation courses enhance all areas of the design concentration and provide a common background of experience and knowledge. The program also contains a wide range of intellectual bases in theory and history, in order to afford each individual student a broad perspective. This will equip design students to develop their personal interests in design. Indeed, design relies on the same skill set and knowledge base that the fine artist must have, but as practical art, design applies those skills and knowledge to the creation of objects that are primarily useful.

The courses will introduce students to the fields of design (graphic, product, and computer generated). Those students interested in pursuing a major will be prepared to advance to graduate training or entry level positions in design. In addition to a General Studies option, which offers a broad topical approach to the expansive field of design, students may choose one of three more focused concentrations.

- Graphic Design will prepare students for entry-level positions in designing for advertising, logos, multimedia applications, web packages, publications, and illustration. Graphic designers work in a wide range of fields. They produce for the printing industry, web-based media, exhibition design, publishing advertising, posters, and more. Or, they may enter graduate programs and pursue MFA degrees. This title of this concentration reflects our proposal to rename the existing Graphic Communication concentration to better reflect the expansive content these courses already encompass.

- Product Design students will engage in the study and application of creating objects for use in industrial application, art objects, furniture, toy design, exhibit and trade design, electronic products, household items, recreational equipment etc. The industrial designer works closely with engineers, marketers, and ergonomists to create products.

- Students studying Digital Imaging will learn the production of computer-generated imagery for the information and entertainment fields. It produces animation, special effects, and interactive media. Digital imaging is created for film, games, special effects, motion graphics and other fields.

Program notes

- Art/Des 3 and Art/Des 4 are fundamental courses required for all majors in Art, Architecture, and Design. This proposal seeks to regularize the content and pedagogy of the foundation courses and considers these two courses fundamental for all students seeking an education in the visual arts fields (including theatre design students).

- The courses listed for History and intellectual context reflect the wide impact of design and the multidisciplinary program Design Arts must be. The courses listed below that are
not required for Art and Architecture majors could be cross-listed with Design and carry the Des designation. The proposal offers a wide range of possible courses in theory and history to choose from to fulfill the requirements in this sequence. We believe that the Design Arts student will best benefit from broad exposure to multi-disciplinary theory and history. The major is structured to encourage the design student to continue to explore the various fields of study that impinge on design or that design directly influences. This list should not be considered exhaustive, but should be seen as a first pass at developing the course listings the faculty would consider suitable to provide a solid liberal education for the design student. These courses will be taken during the process of completing the major. These courses need not necessarily be placed at a particular juncture in the student's overall sequence of courses (e.g., prior to the concentration). The courses listed represent a wide range of levels and might appropriately be sequenced in such a way as to continue challenging the student.

- The student is not required to complete the entire foundation sequence until the final semester.
- The student is not required to begin or complete the theory/history sequence prior to beginning the concentration.
- The Design Sequences in the three concentrations provide a more concentrated focus to the requirements such as additional courses in graphics and specific groups of courses in areas such as furniture design. Courses in Theatre and Computer Science may be cross-listed with Des designation as a means of highlighting the suitability of courses for Design students. For example, Arch/CE 10 could be cross-listed as Arch/CE/DES 10.
- Numerous new courses and course changes are proposed in order to accomplish the objectives of this new program (see the Art and Architecture entry in the separate CAS Course and Curriculum Changes for 2003-4).
- Other courses that may be proposed as desirable future additions to the major.
  
  Des 3xx. Manufacturing Technology (3) materials and manufacturing techniques and the relation between materials fabrication, and design. (cross-listed with engineering and business.)
  Des 2xx. Computer Modeling (3) two-dimensional and three-dimensional animation, interactive and motion graphics. SGI Indigo 2 and Rhine 3-D modeling packages.
  Des 1xx. Electronic Illustration (3) advertising and product packaging materials, methods and techniques. Macromedia, Adobe and other graphics packages.
  Des 2xx. Typography (3) Study and practice of typography in the graphics industry.
  Des 3xx. Interior Design (3) Introduction to practice of interior design. Presentation techniques. Materials, finish, lighting, etc.
Design Arts Major

1. Media Skills Sequence (12-13 credit hours)
   Des/Art 3 Foundation Design I (3)
   Des/Art 4 Foundation Design II (3)
   Des Art Digital Foundation (3)
   Choose one of the following (in consultation with the major advisor):
   Art 11 Drawing I (3)
   Art 35 Painting I (3)
   Art 13 Sculpture I (3)
   Art 15 Figure (3)
   Thr 87 Design for the Theatre (4)

2. Theory Sequence (minimum 6 credits)
   Des 60 Design Process (3)
   Choose one from the following (in consultation with the major advisor):
   Des/Art 68 Color Theory (3)
   Des 164 Ergonomics (3)

3. History and Intellectual Context Sequence (9 credits, minimum)
   Choose at least one of the following Design courses:
   Des 66 Design History (3)
   Des 2xx History of Contemporary Design (3)
   Des 3xx Case Studies in Design History (3)

   Other courses that may be used in addition to at least one of the above:
   Anth 376 Culture and the Individual (4)
   Art 1 Art History: Ancient and Medieval (3)
   Art 2 Art History: Renaissance to Present (3)
   Arch 1 Architectural History I (3)
   Arch 2 Architectural History II (3)
   Hum 126 Professional Ethics (4)
   IR 23 Alternative World Views (4)
   Art 179 History of Photography (1)
   Art/Arch 206 Medieval Art and Architecture (3)
   Art/Arch 207 Renaissance Art and Architecture (3)
   Arch 209 Architecture and Ideas (3)
   Arch 210 20th-Century Architecture (3)
   Art 220 20th-Century Art (3)
   CSE 252 Computers, the Internet, and Society (3)
   Phil 250 The Minds of Robots and Other People (4)
   Phil 123 Aesthetics (4)
   Psy 140 Introduction to Linguistics (4)
   SSP 135 Human Communication (4)
   SSP 227 Mass Communication and Society (4)
   Mkt 313 Marketing Communication (3)
   Arts 250 Communication: Cultures, Behaviors, Attitudes (3)
   Thr 129 History of Fashion and Style (4)
4 Design Sequences for Major Concentrations (21 Credits, minimum)

The student must complete Foundation Design I, Foundation Design II, and Digital Foundation prior to completing the Design Sequence. It is strongly recommended that these three courses be completed prior to beginning the major concentration.

General Studies

Select at least 21 credits of coursework from the available courses in Design Arts and Art, Architecture and Design in consultation with the Design Arts major advisor.

Graphic Design

Required (12 credits)

Des/Art 53 Graphic Design I (3)
Des/Art 153 Graphic Design II (3)
Des/Art 253 Graphic Design III (3)
Art 77 Photography I (3)

Select at least 9 credits from the following:

Des 77 Web Design I (3)
Des 177 Web Design II (3)
Des 277 Digital Imaging I (3)
Des 377 Product Design I (3)
Des 211 IPD Capstone I (3)
Des 212 IPD Capstone II (2)
Des 260 Exhibit Design (3)
Des 375 Design Internship (1-4)
Arch/CE 10 (3)
Art 11 Drawing I (3)
Art 35 Painting I (3)
Art 275 Museography and Museology (3)
Des 268 Advanced Design Project (1-4)
Des 370 Special Topics in Design (1-4)
Thtr 250 Lighting Design (4)
Thtr 251 Scene Design (4)
CSE 10/13 Introduction to Computing and Multimedia Computing Lab (3)
CSE 332 Multimedia Design and Development (3)

Product Design

Required (12 credits)

Des xx Product Design I (3)
Des 1xx Product Design II (3)
Des 2xx Product Design III (3)
Des/Art 1xx Furniture Design I (3)

Select at least 9 credits from the following:

Des 277 Digital Imaging I (3)
Des 77 Web Design I (3)
Des/Art 53 Graphic Design I (3)
Des 260 Exhibit Design (3)
Des 211 IPD Capstone I (3)
Des 212 IPD Capstone II (2)
Des 375 Design Internship (1-4)
Des/Art 2xx Furniture Design II (3)
Art 11 Drawing I (3)
Art 35 Painting I (3)
Arch/CE 10 (3)
Art 77 Photography I (3)
Art 175 Museum Work (3)
Art 275 Museography and Museology (3)
Des 258 Advanced Design Project (1-4)
Des 370 Special Topics in Design (1-4)
Thr 251 Scene Design (4)
Thr 252 Costume Design (4)
Thr 250 Lighting Design (4)

_Digital Imaging_

_Restricted (12 credits)_
- Des 2yy Computer Imaging I (3)
- Des 1yy Computer Imaging II (3)
- Des 2yy Computer Imaging III (3)
- Des 53 (Art 53) Graphic Design I (3)

_Select at least 9 credits from the following:_
- Des 2zz Web Design I (3)
- Des 1zz Web Design II (3)
- Des/Art 1xx Furniture Design I (3)
- Des 211 IFD Capstone I (3)
- Des 212 IPD Capstone II (2)
- Des 375 Design Internship (1-4)
- Art 11 Drawing I (3)
- Art 35 Painting I (3)
- Art 77 Photography I (3)
- Art 175 Museum Work (3)
- Arch/CE 10 (3)
- Des 268 Advanced Design Project (1-4)
- Des 370 Special Topics in Design (1-4)
- Thr 251 Scene Design (4)
- Thr 252 Costume Design (4)
- CSE 101 Introduction to Computing and Multimedia Computing Lab (3)
- CSE 332 Multimedia Design and Development (3)
Minors

**Graphic Design Total 18 to 20 credits**

Foundation (6 credits); Choose two from the following:
- Des/Art 3 Foundation Design I (3)
- Des/Art 4 Foundation Design II (3)
- Des 111 Digital Foundation (3)

Theory and History (3 to 4 credits); Choose one of the following:
- Des 60 Design Process (3)
- Des/Art 68 Color Theory (3)
- Des 211 History of Contemporary Design (3)
- Des 164 Ergonomics (3)
- Des 360 Case Studies in Design History (3)

Concentration:
- Des 53 (Art 53) Graphic Design I (3)
- Des 153 (Art 153) Graphic Design II (3)
- Elective in Des (to be chosen in consultation with advisor)

**Product Design Total 18 to 20 credits**

Foundation (6 credits); Choose two from the following:
- Des/Art 3 Foundation Design I (3)
- Des/Art 4 Foundation Design II (3)
- Des 111 Digital Foundation (3)

Theory and History (3 to 4 credits); Choose one of the following:
- Des 60 Design Process (3)
- Des (Art 68 Color Theory (3)
- Des 211 History of Contemporary Design (3)
- Des 164 Ergonomics (3)
- Des 360 Case Studies in Design History (3)

Concentration:
- Des 160 Prototyping (3)
- Des 116 Product Design I (3)
- Elective in Des (to be chosen in consultation with advisor)

**Digital Imaging Total 18 to 20 credits**

Foundation (6 credits); Choose two from the following:
- Des/Art 3 Foundation Design I (3)
- Des/Art 4 Foundation Design II (3)
- Des 111 Digital Foundation (3)

Theory and History (3 to 4 credits); Choose one of the following:
- Des 60 Design Process (3)
- Des/Art 68 Color Theory (3)
- Des 211 History of Contemporary Design (3)
- Des 164 Ergonomics (3)
- Des 360 Case Studies in Design History (3)

Concentration:
- Des 116 Digital Imaging I (3)
- Des 117 Digital Imaging II (3)
- Elective in Des (to be chosen in consultation with advisor)
Web Design: Total 18 to 20 credits

Foundation (6 credits): Choose two from the following:
- Des/Art 3 Foundation Design I (3)
- Des/Art 4 Foundation Design II (3)
- Des xx: Digital Foundation (3)

Theory and History (3 to 4 credits): Choose one of the following:
- Des 60 Design Process (3)
- Des/Art 68 Color Theory (3)
- Des 299 History of Contemporary Design (3)
- Des 164 Ergonomics (3)
- Des 360 Case Studies in Design History (3)

Concentration:
- Des 227 Web Design I (3)
- Des 122 Web Design II (3)
- Elective in Des (to be chosen in consultation with advisor)
Sample Curriculum for Design Arts Major

One example of a pathway a student might pursue in majoring in Design Arts with a concentration in Product Design:

<table>
<thead>
<tr>
<th>First Year</th>
<th>Fall Semester</th>
<th>Spring Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foundation I</td>
<td>3 credits</td>
<td>Foundation II</td>
</tr>
<tr>
<td>(345d.)</td>
<td></td>
<td>(345d.)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Des 60 (3HI)</td>
</tr>
<tr>
<td></td>
<td>3 credits</td>
<td>9 credits</td>
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</table>

<table>
<thead>
<tr>
<th>Second Year</th>
<th>Digital</th>
<th>Sculpture I</th>
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</thead>
<tbody>
<tr>
<td>Foundation</td>
<td>15 credits</td>
<td>(345d.)</td>
</tr>
<tr>
<td>(345d.) Digital</td>
<td></td>
<td>Product Design</td>
</tr>
<tr>
<td>Imaging I (3Con)</td>
<td></td>
<td>I (3Con)</td>
</tr>
<tr>
<td></td>
<td>24 credits</td>
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</table>

<table>
<thead>
<tr>
<th>Third Year</th>
<th>Furniture</th>
<th>Product Design</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design I (3Con)</td>
<td>31 credits</td>
<td>II (3Con)</td>
</tr>
<tr>
<td>Phil 250 (4HI)</td>
<td></td>
<td>CSC 252 (3HI)</td>
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<td></td>
<td>37 credits</td>
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</table>

<table>
<thead>
<tr>
<th>Fourth Year</th>
<th>Amth 376 (4HI)</th>
<th>Product Design</th>
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</thead>
<tbody>
<tr>
<td>IPD Capstone</td>
<td>44 credits</td>
<td>III (3Con)</td>
</tr>
<tr>
<td>(3Con)</td>
<td></td>
<td>Scene Design</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(4Con)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>51 credits</td>
</tr>
<tr>
<td></td>
<td></td>
<td>minimum 48</td>
</tr>
<tr>
<td></td>
<td></td>
<td>credits achieved</td>
</tr>
</tbody>
</table>
Collection assessment for support of a Design Arts Major
By Kathe Morrow, Humanities Librarian
October 2002

Our current holdings have been analyzed to ascertain the areas that need to be further developed to support the proposed Design Arts major. The library holding of institutions that offer programs in some ways similar to the new Design Arts program have been reviewed as comparisons to our collection. These schools include RIT, RISD, University of Minnesota and the consortium of NY Art schools that includes Parsons, Cooper Union and NYU. The new program will cover a wide range of subjects and will require the addition of new materials in areas including print, journals, software, multimedia and online databases. Having said this we are happy to report that our current collection already contains a good collection of resources in many of the areas of emphasis within the fields of art, business, applied art, industrial art and design covered in this program. Areas in which we already have strong collections include:

- Industrial Design
- Printing and Typography
- Image Processing—Digital Technology
- Furniture, History and Design
- Business

Areas that contain good basic material but which need improvement include:

- Graphic Arts
- Product Design
- Models and Model making

An area in need of improvement is our Journal collection. We have some titles in the area of Industrial Design and the important journal Print, a graphic design magazine, but we should consider adding some core titles in design such as:

- Eye $112.00
- Émigré $16.00
- How $29.95
- I.D. $30.00
- Innovation $50.00

We have also never collected annual publications in Design or Graphic Arts, such the American Institute of Arts Annuals and others. Some of the titles, which we will consider adding include:

- Art Directors Annual $52.50
- 365: AIGA Year in Design $42.00
- Typography $41.97
Logo Design $42.00
Packaging Design $49.00
Design Annual $49.00
The 100 Show $35.00

We currently have a good selection of online research databases in Art, Business, Engineering and Technology as well as general magazine and newspaper resources that should support the research needs of this program. The schools that were researched all offered the online Grove Dictionary of Art as a resource for their Design Arts programs. Lehigh has the print version of this dictionary but it would be more useful to our students to add this database as an online resource.

To summarize what the library needs to do to support the new Design Arts program, we need to add a selection of core journals in relevant areas of Design, with input and further suggestions of titles from the faculty. We will need to begin to purchase Annuals in the areas of Industrial Design, Advertising, Package Design, Graphic and Digital Arts. We will also need to allocate funds for the purchase of Design Arts books through our approval plan with Yankee Book Peddler to receive books from Academic and specialty presses such as Taschen in a timely fashion. We should also purchase a small collection of older core books to fill in any gaps in our current collection and we should be begin to subscribe to Grove Dictionary of Art Online. The yearly costs for these proposals at the current time would be:

New Journal Subscriptions: $300.00
Annuals in Design Arts: $300.00
Approval Plan for Books $500.00

The addition of the Grove Dictionary would be seen as a resource for all Arts programs as well as a general resource for the University community and would incur the following yearly expense:

Grove Dictionary of Art Online $1200.00

The addition of retrospective core titles would be a one-time expense:

Addition of core titles: $500.00
Design Arts Major - Computing and Technology support impact statement

Prepared by Library and Technology Services, College of Arts and Science Team Leader Roseana Bowerman in consultation with LTS Director Christine Roysdon; Team Leader for Scientific and Desktop Computing, Gale Fritsch; Computing Consultant, Brad Price; Instructional Technology Support Service Team Leader Elia Schooner.

November 5, 2002

The proposed development of a multidisciplinary Design Arts major will have the following impact on the computing and technical support services offered by Lehigh University’s Library and Technology Services organization.

1. Software acquisition – It appears there will be little impact on the ability of LTS to provide software for the courses that will be offered in the short term. It is our understanding that a separate annual software budget is being supplied to the Wilbur Design Center (of which this program will be a part.) This being the case, the only impact in this area that we expect would be if it is felt that LTS should expand the number of Adobe Illustrator, Bryce software and Photoshop licenses which are floated to public sites. This might be a consideration, as it would enable students to work on their projects outside of the Wilbur laboratory spaces.

2. Computing operating support personnel – A full time computing support staff member (Jason Stanford) with the ability to set up and run a Macintosh Network will be employed by the Wilbur Center to maintain the 55 Macintosh computers in the classroom and laboratory. LTS support for initial Macintosh network architecture will be confined to collaborating on networking design aspects, employing the skills of LTS staff Brad Price and Steve Lidic. The LTS College of Arts and Sciences team Computing Consultants may have a limited role in the initial set-up of the lab but will not have any day to day support functions. One area of concern might be identifying a back-up person should the full-time Wilbur staff member not be available. It may also be necessary for LTS to examine and clarify the support policies for Macintosh computing on campus.

3. Hardware repair – At the present time LTS does not have a certified Macintosh repair technician although there are staff members who can deal with certain aspects of their repair. Presently hardware problems for these computers are outsourced to DoubleClick. With the increase of Macintosh hardware on campus LTS may need to address the need to send one of its technicians for Macintosh certification. (This has been in the planning stages, but has not as yet been implemented.)

4. Media production impact – The increased number of students working on a Design Arts major, as opposed to the minor program that exists at present, will have its greatest impact on the LTS Media Production area. It is expected that the major will significantly increase student usage of the Media Production facilities and
staff. Considerable LTS media production staff time is spent assisting students with computer-generated animation production "finishing" as well as video editing. It is also expected that there will be increased demand for large format color printing which brings with it additional costs for supplies and equipment. The still and video camera resources presently owned by Media Production may be inadequate to address the needs of additional student projects. Finally it is felt that there may potentially be a need for more space in our media production area to house the equipment and staff needed to assist Design Majors.
Memorandum

To: Educational Policy Committee
From: Bobb Carson

Date: 6 January 2003

Re: Design Arts program

The Department of Art and Architecture and the Integrated Product Design (IPD) program are jointly proposing a new undergraduate curriculum in Design Arts. The new Design Arts program will provide a coordinating focus for design elements in Art and Architecture, Theatre, and IPD.

The Design Arts program necessitates a number of new courses because it represents a substantial overhaul of previous efforts in design. Adjunct faculty staffed the previous Design roster, but as we move into a full-fledged Design Arts program, the staffing will be regularized to include tenure-track and professor-of-practice faculty. Dean Mohamed El-Aasser and I have committed substantial funding to both Design Arts and IPD, and the two programs have received 2020 funding to bridge the ramp-up of our regular budgets. Although some staffing details remain, the available budget will meet the staffing needs for both courses and facilities management.
College of Arts and Sciences  
Course and Curriculum Changes for 2003–04 (03Feb03)

Applied Life Science

1. Course changes
   a. Courses dropped
      None.

   b. Courses added
      Bios 379, Chem 379, Math 379, and Phy 379 are proposed to support this new program (see descriptions with the individual departments).

   c. Other changes (number, title, credit, or distribution designation)
      None.

   d. Changes in description
      None.

   e. Impacts of course changes
      See attached description for the Applied Life Science program.

2. Curriculum changes
   See attached.

Art and Architecture

1. Course changes
   a. Courses dropped
      Des 3, Freshman Design Experience  
      Des 62, Sketching and Rendering  
      Des 64, Presentation  
      Des 160, Prototyping  
      Des 162, Advanced Sketching and Rendering  
      Des 166, Design for Business  
      Des 262, Furniture Design

      Rationale: Restructuring of curriculum to support Design Arts program (see below).

   b. Courses added
      Art (Des) 1xx: Furniture Design I (3)
      Design methodology, fabrication techniques and methods of design presentation. Prerequisite: Art 4 Foundation Design II. (HU).

      Art (Des) 2xx: Furniture Design II (3)

      Art (Des) 68 Color Theory (3)
      Application of color in design. Color in graphics, product, digital imaging, and all related fields of design. (HU).
Rationale: These courses are part of the Design Arts program (see separate program description and note Des cross-list).

Des xx Digital Foundation (3)
Introduction to a variety of 2-D and 3-D software applications for digital design. Students will acquire a basic understanding of digital image manipulation, graphic layout tools, 2-D CAD techniques, and 3-D rendering. (ND)

Des xx Product Design I (3)
Introduction to the field of Industrial Design. Through the reverse engineering of existing products and analysis of these artifacts with drawing and modeling, students will acquire an understanding of the various aesthetic, technological, and business issues a designer must consider when creating a product. Computer modeling milling to rapid prototype: three-dimensional design projects. Prerequisite: Des 3 (HU)

Des yy Computer Imaging I (3)
Introduction to 3-D computer modeling, animation, and rendering commonly used in the entertainment industry. Students create and edit an original 3-D animated movie. Students will also learn about 2-D and 3-D visualization techniques, used in the creation of storyboards and the narrative of the movie. Prerequisite: Des 3

Des zz Web Design I (3)
Introduction to the design and fabrication of web pages. Students will learn how to create pages using HTML and web fabrication software, with an emphasis on aesthetic and structure. Prerequisite: Des 53 (ND)

Des 1xx Product Design II (3)
Introduction to manufacturing and materials for the industrial/product designer. Model-making and investigating the interaction of the product and the application. The emphasis is on user-centered design. Students will create original product designs, developing proficiency in various traditional and virtual visualization techniques and learn about product styling. Prerequisite: Des 1xx. (ND)

Des 1yy Computer Imaging II (3)
Creation of original 3-D models, renderings, and animations, while learning advanced modeling techniques, character animation, particles, and compositing. Prerequisite: Des 1yy. (ND)

Des 1zz Web Design II (3)
Creation of dynamic content in web design. Various 2-D animation software applications and simple scripting will be explored. Prerequisite: Des 1zz. (ND)

Des 2ww History of Contemporary Design (3)
History of modern design from mid-19th century to the present. Studies and discussion of contemporary issues and technology in Design Arts
Topics will include green design, digital technology, current legal and ethical principles, and other issues. (HU).

Des 2xx Product Design III (3)
Development of products with emphasis on innovative ways of understanding the role of the object in people's lives. Prerequisite: Des 1xx. (ND)

Des 2yy Computer Imaging III (3)
Advanced animation with emphasis on experimental techniques and new technologies in animation and motion graphics. Emphasis on effects, compositing, and the use of digital technology in the post-production process. Students will work on various assignments to gain a first-hand understanding of how various tools and techniques are used to create realistic effects. Prerequisite: Des 1yy. (ND).

Des 3ww Case Studies in Design History (3)
History of design. Study of specific products in context with regard to their impact on art, culture, and technology. (HU).

Rationale: See design arts curriculum proposal.

c. Other changes (number, title, credits, or distribution designation)
Art 3 (Des 3) Change title from 'Two-dimensional design' to 'Foundation Design I' and add cross list with Design.
Art 4 (Des 4) Change title from 'Three-dimensional design' to 'Foundation Design II' and add cross list with Design.

Rationale: Art/Des 3 and 4 are the introductory courses that are the basis for all department majors, and both two- and three-dimensional design are incorporated in each course. The cross-listing coordinates the Art and Design offerings.

Art/WS 121 Change credits from 3 to 4.

Rationale: Four credit hours more accurately represents the amount of work currently required in the course and brings the course in line with the majority of other WS offerings.

Art 253 Change title from 'Graphic Communication III' to 'Graphic Design III,' add cross list with Design, and change prerequisite to Art/Des 153.

Rationale: Support new Design Arts program

Art 275 Change credits from 3 to 4.

Rationale: This is an umbrella course for intermediate to advanced Museum Studies students, an individually designed course which covers the theory and practice of the entire museum field. The students are
like intern in the LUAG. It is a true practicum course that can be repeated and the workload warrants 4 credits.

Des 24 Change number to 211.

Rationale: This course (IPD Projects I) is cross-listed with Engr/Bus 211, so this change establishes consistency in numbering.

Des 212 Add cross-listing with Engr/Bus 212.

Rationale: This adds Des to the subject headings for IPD Projects II, which highlights this course as being suitable for Design majors.

d. Changes in description

Art 53 (Des 53) Change title from ‘Graphic Communication I’ to ‘Graphic Design I’ and add cross list with Design (3)

New description:
Design principles are explored with emphasis on visual communication. Students learn basic concepts for design and typography including the vocabulary and historical precedence of graphic design and computer graphics. Prerequisite: Art/Des 3. (HU)

Art 153 (Des 153) Change title from ‘Graphic Communication II’ to ‘Graphic Design II’ and add cross list with Design (3)

New description:
Aspects of design are inter-related in function, concept or planning processes. Students focus on a variety of contemporary design problems. Team exercises include a series of informative posters, identify systems, publication, and advertising design. Computer graphics and Macintosh lab are employed as integral design tools in graphic design. Prerequisite: Art/Des 53. (HU).

Rationale: support new Design Arts program.

e. Impacts of course changes

None of these changes entail impacts except for the new courses which are supported by the new Design Arts program.

2. Curriculum changes
Design Arts program (see attached)

Asian Studies

1. Course changes
a. Courses dropped
   None

b. Courses added
   None
c. **Other changes (number, title, credits, or distribution designation)**
   Rel/Asia 169. Add: Prerequisite: One prior course in Religion or Asian Studies.

   **Rationale:** See Religion Studies.

d. **Changes in description**
   None.

e. **Impacts of course changes**
   None.

2. **Curriculum changes**
   None

**Biological Sciences**

1. **Course changes**

   a. **Courses dropped**
      
      **BioS 221. Human Histology**
      
      **Rationale:** This course has been taught exclusively by Professor Jack Abel who is retiring. The department still has a course that includes Histology - BioS 313 Vertebrate Histology. This course has not been taught for some time, but it is anticipated that the course will be taught again since Human Histology will no longer be available.

   b. **Courses added**
      
      **BioS 1xx (prefer 120). Introduction to Integrative and Comparative Biology (4 credits)**
      
      Experimental and historical approaches to the analysis of structural and functional properties in organisms. Use of the scientific method to study species diversity. Introduction to the analysis of organismal attributes that explain behavioral repertoire and ecological relationships. Prerequisites: BioS 101 102 (NS)

      **BioS 3xx (prefer 369). Comparative Physiology of Vertebrate Systems (4 credits)**
      

      **Rationale:** BioS 1xx (prefer 120 as it is below most of the other 100 level courses in the department) was designed to provide sophomore biology majors with an introduction to the organization of systems built upon a basic understanding of cellular and molecular biology and genetics. It is not a survey of life, but rather focused on principles behind organismal evolution.
It is designed to insure that all biology students have a basic understanding of how intact organisms function, even if their studies plan on studying primarily molecular or cellular biology. The focus of programs in the Biological Sciences department is on molecular, cellular biology or biochemistry and integrative biology. Now that the department has hired several additional faculty members who fit into the integrative biology area, it seems appropriate to have a course that introduces students to scientific inquiry in this general field of biology. Therefore, we have added this course with the prerequisites of BIOS 31/32 and BIOS 101/102. This course, therefore, can address the issues of integrative biology without having to either ignore or teach the relevant molecular, cellular, and genetic concepts. Many students enter Lehigh with advanced placement credit for EES 31, and others take it when they enter. It is anticipated that students without advanced biology in high school will still take EES 31 during their freshman year as we have recommended in the past, but they will now have access to a course that adequately introduces them to ideas and content in preparation for upper level courses in various areas of biology covered in the Biological Sciences.

BioS 3xx (prefer 369 as it fits best there grouped with courses that have similar content areas) is designed as a standard laboratory physiology course. Together with BioS 234 it serves to provide a year of vertebrate anatomy and physiology. While a physiology course focused on environmental aspects of physiology is available, this course is broader in its coverage and will appeal to students who desire a more general physiology course.

Multidisciplinary integration of bioscience and biotechnology concepts and methods, designed for students majoring in Applied Life Science.
Prerequisites: junior standing (senior standing recommended), major in Applied Life Science, and at least five prior courses in the Applied Life Science curriculum (ND)

Rationale: Support for new Applied Life Science program (see attached proposal).

c. Other changes (number, title, credits, or distribution designation)
- **BioS 133.** Change prerequisite EES 31 or BioS 31 to BioS 31.
- **BioS 177.** Change prerequisite EES 31 or BioS 31 to BioS 31.
- **BioS 313.** Change from 4 credits to 3 credits (one lecture period instead of two per week).

Rationale: Prerequisite changes are appropriate as it makes the background of the students more similar. Currently, the possibility of students taking these courses with only EES 31 as a background puts them at a significant disadvantage. Therefore, to retain that option misrepresents the real situation. It is appropriate to cover the lecture portion of Histology with only one meeting/week. The primary focus of histology is to examine tissues, an activity that occurs in the laboratory.
d. Changes in description

BioS 181. Introduction to Anatomy, Physiology and Behavior (4 credits)
Structure and function of bodily systems including: skeletal, muscle, nervous, sensory, endocrine, circulatory, immune, respiratory, digestive, urinary, and reproductive. Laboratory focus with two laboratory and two lecture meetings per week. Not available to students who have completed BioS 234 or 3xx (Physiology, as above). Prerequisites: BioS 3152 (NS) Cannot be used as a major elective in Biological Sciences major programs.

Rationale: The changes including streamlining the wording and adding the restriction on availability to students who have completed BioS 3xx. The restriction on use of the course in major programs is appropriate as the course is taught at an introductory level and major electives are intended to be advanced level courses.

e. Impacts of course changes

The course changes include not addition of a 100 level course with lab. The course will not have an impact on faculty needs beyond faculty already hired or being searched for. TA availability for this 100 level course should also not be an issue as additional TA slots were allotted to the department along with some of the new faculty slots. The addition of the 3xx course is coupled with the dropping of BioS 221. The change to one laboratory session for BioS 313 will mean no additional TA help in histology as BioS 221 had one laboratory meeting per week. However, since BioS 313 will now be taught more often, it is possible that there will be some slight increase in the number of TA slots used with the addition of 3xx. However, this should not exceed the available TA slots and new faculty noted above. The changes in prerequisites and description should have no effect on resources.

2. Curriculum changes

Biochemistry (BS, CAS)
Currently: 6 credits of approved biological sciences electives
Change to: BioS 101 (3) and 3 credits of approved biological sciences electives

Rationale: Currently all Biochemistry majors take BioS 101 as it is required prerequisite for virtually all upper level biology courses. Therefore, it makes sense to simply list this as a requirement.

Impact: This change is not expected to have any impact on library or technology as it does not require any additional use of these resources. As noted above all Biochemistry majors take this course already so there will be no impact on laboratory classrooms. TA requirements etc.

Behavioral Neuroscience (BA)
Under Required Collateral Courses
Currently: EES 31 (4) Introduction to Environmental and Organismal Biology
Change to BioS 1xx (120) (4) Introduction to Integrative and Comparative Biology; list in the Core section.
Add: BioS 102 (1) Genetics Lab as a required core course in the major

Rationale: Currently students receive credit for EES 31 from AP credit as the first course in the general area of Biology at Lehigh or to finish this program late during their studies as it is not a prerequisite for anything else in their programs. The new BioS 1xx course will provide all students the same background in integrative biology, which will make it easier to teach 200 and 300 level courses, as their background in integrative biology will now be the same. The addition of the BioS 102 requirement will provide consistency with all of the major programs in Biological Sciences.

Impact: This change is not expected to have any impact on library or technology, as it does not require any additional use of these resources. Laboratory space for the BioS 1xx course is available in the Iacocca Hall laboratories. The new course required (BioS 1xx) can be covered by faculty who have been hired, or are being hired this year, in Biological Sciences. This has been addressed in the course addition sector as well. Therefore, there are no additional resources required. The addition of the BioS 102 requirement is expected to add approximately 5 students to the lab course/year as a number of BA BNS majors already take the course as an elective. Therefore, this change is not expected to increase the number of Genetics laboratory sections as we typically have spaces in several of the 8 sections/year.

Behavioral Neuroscience (BS)

Under Math and Science courses for the B.S.
Currently: There is no catalog listing for Psyc 1 or EES 31 due to a mistake in fixing the catalog – the courses were not actually removed from the program.
Change to: BioS 1xx (120) (4) in the core course section as in the BA degree and list Psyc 1 in the Math and science requirements for the B.S. as should have been done last year when the change was made in the B.A. program. EES 31 is being removed from the program.

Rationale: Currently students receive credit for EES 31 from AP credit as the first course in the general area of Biology at Lehigh or to finish this program late during their studies as it is not a prerequisite for anything else in their programs. The new BioS 1xx course will provide all students the same background in integrative biology, which will make it easier to teach 200 and 300 level courses, as their background in integrative biology will now be the same.

Impact: This change is not expected to have any impact on library or technology as it does not require any additional use of these resources. Laboratory space for the BioS 1xx course is available in the Iacocca Hall laboratories. The new course required (BioS 1xx) can be covered by faculty who have been hired, or are being hired this year, in Biological Sciences.
Sciences. This has been addressed in the course additions section as well. Therefore, there are no additional resources required.

**Biology (BA)**
Currently: EES 31 (4) Introduction to Environmental and Organismal Biology
Change to: BioS 1xx (120) (4) Introduction to Integrative and Comparative Biology

**Rationale:** Currently students receive credit for EE3 31 from AP credit, as the first course in the general area of Biology at Lehigh or to finish this program late during their studies, as it is not a prerequisite for anything else in their programs. The new BioS 1xx course will provide all students the same background in integrative biology, which will make it easier to teach 200 and 300 level courses as their background in integrative biology will now be the same.

**Impact:** This change is not expected to have any impact on library or technology, as it does not require any additional use of these resources. Laboratory space for the BioS 1xx course is available in the Iacocca Hall laboratories. The new course (BioS 1xx) can be covered by faculty who have been hired, or are being hired this year, in Biological Sciences. This has been addressed in the course additions section as well. Therefore, there are no additional resources required.

**Biology (BS)**
Currently: 26 credits of approved Biology electives (as described)
Change to: BioS 1xx (120) (4) and 22 credits of approved Biology electives (same description)

**Rationale:** Currently students receive credit for EE3 31 from AP credit, as the first course in the general area of Biology at Lehigh or late in their courses if needed for medical school requirements as it is not a requirement for this degree or prerequisite for any required courses in their programs. The new BioS 1xx course will provide all students the same background in integrative biology which will make it easier to teach 200 and 300 level courses as their background in integrative biology will now be the same. 4 credits of electives are being replaced. Therefore the total required credits in the program is the same.

**Impact:** This change is not expected to have any impact on library or technology as it does not require any additional use of these resources. Laboratory space for the BioS 1xx course is available in the Iacocca Hall laboratories. The new course (BioS 1xx) can be covered by faculty who have been hired, or are being hired this year, in Biological Sciences. This has been addressed in the course additions section as well. Therefore there are no additional resources required.

**Molecular Biology (BA)**
Currently: Chm 31 (3) or 194 (3) or Phys 13,14 (4)
Change to: Chm 31 and Phys 13,14
Currently: BioS 324 (3) Bacteriology
Change to: BioS 324 (3) or 328 Immunology (3) or 353 Virology (3)

Currently: BioS 325 (2) Bacteriology Lab
Change to: BioS 325 (2) or 368 Cell Biology Lab (2) or 377 Biochemistry Lab (3)

Currently: Natural Science, mathematics, or computing science (3)
Change to: BioS 1xx (120) Introduction to Integrative and Comparative Biology (4)

Currently: Philosophy 128 (4) – can be used as part of the humanities requirement
Change to: Eliminate the requirement.

Rationale: Chm 31 is aqueous chemistry and as such is an important course for students who wish to work in biology. Chm 194 has not been available for several years and, in any case, the physical chemistry is less useful for most biologists than the aqueous chemistry. The addition of a second semester of physics, rather than using it as an alternate, is that the full year is appropriate for students using this degree for almost any purpose and almost all students have taken both semesters in the past. Most Molecular Biology majors used Natural Science electives for additional courses in Biology. The BioS 1xx course simply insures some exposure to the entire organism rather than allowing all biology to be at the molecular and cellular level.

Impact: These changes are not expected to have any impact on library or technology as they do not require any additional use of these resources. The changes in laboratory courses provide additional flexibility in the upper level laboratory. All of these courses are currently taught and it doesn’t seem likely that the number of sections will change based on the increased flexibility. Laboratory space for the BioS 1xx course is available in the lacocca Hall laboratories. The new course required (BioS 1xx) can be covered by faculty who have been hired, or are being hired this year, in Biological Sciences. This has been addressed in the course additions section as well. Therefore, there are no additional resources required.

Molecular Biology (ES)
Math/Chm/Physics
Currently: Chm 194 (3)
Change to: BioS 381 (3)

Currently: BioS 324 (3) Bacteriology
Change to: BioS 324 (3) or 328 Immunology (3) or 353 Virology (3)

Currently: BioS 325 (2) Bacteriology Lab
Change to: BioS 325 (2) or 368 Cell Biology Lab (2) or 377 Biochemistry Lab (3)
Currently: Natural Science mathematics, or computing science (6)
Change to: BioS 1xx (10)
Introduction to Integrative and Comparative Biology (4) and Molecular Biology elective credits - below.

Currently: Molecular Biology electives (10-12 cr)
Change to: Molecular Biology electives (12 cr. 2 cr from the decreased natural science credits above)

Rationale: Chem 194 has not been available for several years and in any case, the physical chemistry is less useful for most biologists than are additional credits in molecular and cellular biology. The best alternative is Physical Biochemistry, which covers much of the more useful material originally available in Chem 194. Most Molecular Biology majors used Natural Science electives for additional courses in Biology. The BioS 1xx course simply insures some exposure to the entire organism rather than allowing all biology to be at the molecular and cellular level.

Impact: These changes are not expected to have any impact on library or technology as they do not require any additional use of these resources. The changes in laboratory courses provide additional flexibility in the upper level laboratory. All of these courses are currently taught and it doesn’t seem likely that the number of sections will change based on the increased flexibility. Laboratory space for the BioS 1xx course is available in the Iacocca Hall laboratories. The new course required (BioS 1xx) can be covered by faculty who have been hired recently, or are being hired this year, in Biological Sciences. This has been addressed in the course additions section as well. Therefore, there are no additional resources required.

Chemistry

1. Course changes
   a. Courses dropped
      None.

   b. Courses added
      
      **Chm 379. Advanced Applied Life Science Seminar** (3 credits)
      Multidisciplinary integration of bioscience and biotechnology concepts and methods, designed for students majoring in Applied Life Science.
      Prerequisites: junior standing (senior standing recommended), major in Applied Life Science, and at least five prior courses in the Applied Life Science curriculum. (ND)

      Rationale: Support Applied Life Science program (see attached).

   c. Other changes (number, title, credits, or distribution designation)
      None

   d. Changes in description
      None.
c. **Impacts of course changes**

   See Applied Life Science program proposal. attached.

2. **Curriculum changes**

   None.

**Classics**

1. **Course changes**

   a. **Courses dropped**

      None.

   b. **Courses added**

      **Clas 91. Independent Study (1-3)**

         Independent work on Greek or Roman literature in translation, history, archaeology or other aspects of classical culture. By arrangement only. (ND)

      **Clas 171. Independent Study (1-3)**

         Independent work on Greek or Roman literature in translation, history, archaeology or other aspects of classical culture. By arrangement only. (ND)

      **Clas 291. Independent Study (1-3)**

         Independent work on Greek or Roman literature in translation, history, archaeology or other aspects of classical culture. By arrangement only. (ND)

      **Grk 91. Independent Study (1-3)**

         Independent work in ancient Greek. By arrangement only. (ND)

      **Grk 171. Independent Study (1-3)**

         Independent work in ancient Greek. By arrangement only. (ND)

      **Grk 291. Independent Study (1-3)**

         Independent work in ancient Greek. By arrangement only. (ND)

      **Lat 91. Independent Study (1-3)**

         Independent work in Latin. By arrangement only. (ND)

      **Lat 171. Independent Study (1-3)**

         Independent work in Latin. By arrangement only. (ND)

      **Lat 291. Independent Study (1-3)**

         Independent work in Latin. By arrangement only. (ND)

         **Rationale:** These courses are needed to provide flexibility in making appropriate coursework available to well-motivated students majoring or minorin in Classics.

   c. **Other changes (number title, credits, or distribution designation)**

      None
d. Changes in description
   None.

e. Impacts of course changes
   No resource demands for these courses

2. Curriculum changes
   None

Cognitive Science
1. Course changes
   None.

2. Curriculum changes
   To the major, add Psy 369 (Memory) to the Cognitive Psychology options and Psy 3xx (Atypical Language) to the Neuroscience options.

Rationale: These additions—new Psychology offerings—flesh out the major options more fully for Cognitive Science students

College Scholar program
1. Course changes
   a. Courses dropped
      None.

   b. Courses added
      None.

c. Other changes (number, title, credits, or distribution designation)
   CS 281: Change from 3 credits to 4 credits.

Rationale: In this course, College Scholars are obliged to read a book each week, write a series of papers, and lead class discussions. The effort involved and the standard of the work are equivalent to those of other upper-level, four-credit courses.

d. Changes in description
   None

e. Impacts of course changes
   None.

2. Curriculum changes
   None.

Earth and Environmental Sciences
1. Course changes
   a. Courses dropped
      EES 203 (Phy 203), Geophysical Field Methods, Gravity, Magnetics, and Electrical Resistivity (4)
Rationale: Geophysics courses are reconfigured with some dropped, others added, and others revised. Some of the material covered by 221 will be covered at a higher level in the geodynamics course. Low enrollments are the primary reason for dropping this course. Much of the material covered in 203 will be covered in the new Environmental Geophysics course specifically; gravity field methods, magnetics field methods, and electrical field methods. Other material from this course will be covered in the new Geodynamics course, specifically: isostasy, solid Earth aspects of gravity and magnetics, and heat flow.

b. Courses added

EES 7 Introduction to Environmental Science (3-4)
Natural science course awarded to students who scored a 4 or 5 on the environmental science advanced placement exam. 4th credit and laboratory experience awarded to students who demonstrate sufficient laboratory experience in their high school AP class. (NS)

Rationale: Currently credit is given for EES 3 whose content does not overlap significantly with the prescription for AP environmental science courses. Students often seek science distribution credit for success on the AP exam which is not possible using EES 3. Awarding EES credit may help in recruiting good student majors and may encourage students to enroll in additional EES courses. EES 7 will not be offered at Lehigh. The course is appropriate for natural science distribution credit and would count towards the EES minor. It is restricted for use as a free elective for EES majors.

EES 204 (PHY 204), Environmental Geophysics (4)
A field-based survey course reviewing the major geophysical techniques as applied to subsurface environmental problems including seismic, ground penetrating radar, gravity, magnetics, and electrical resistivity. Course includes review of theory, experiment design, data collection, data reduction, data analysis, and technical report writing. Lectures and laboratory. Prerequisites: EES 21, Metzger, and Kodama. (NS)

EES 305 Geodynamics (4)
An introduction to the basic physics of important geological processes including: plate tectonics, plate tectonic driving mechanisms, flexure of the lithosphere, heat flow from the Earth, cooling of the oceanic lithosphere, subsidence of sedimentary basins, the global gravity field, isostasy, the geoid, the Earth's moments of inertia, rock rheology, mantle convection and cooling of the Earth, and the mechanics of faulting. Geodynamic modeling will also be covered. Prerequisite: one year of calculus. Kodama. (NS)

Rationale: See comments for courses dropped (above).

c. Other changes (number, title, credits, or distribution designation)

EES 105 (PHY 105). Drop prerequisites for EES 105 (ASTR 105)
Rationale: The Physics department initiated the change; we cross list the course, which can count for an EES minor. Instructor asserts that the prerequisites were unnecessary.

2. Changes in description

EES 201. Seismology: Images and dynamics of the Earth's interior (4)
An examination of how earthquakes and active source seismology are used to image subsurface structure and stratigraphy and to understand tectonic processes. Fundamentals of seismic wave propagation in the Earth. Study of earthquakes, reflection, and refraction techniques at crustal, lithospheric, and whole Earth scales. Practical applications: experiment design, data collection, processing, analysis, and interpretation. Field and laboratory projects. Prerequisites: EES 21. Metzer (NS)

Rationale: Changes reflect addition of a new course in Environmental Geophysics to better serve EES BS in Environmental Science and CEE BS in Environmental Engineering. Environmental material previously included in EES 201 will now be covered in EES 204. EES 201 will focus on geologic examples and tectonic processes supporting the dynamic Earth focus of the 2020 Environmental Initiative.

EES 316 (CE 316). Hydrogeology (4)
Water plays a critical role in the physical, chemical, and biological processes that occur at the Earth's surface. This course is an introduction to surface and groundwater hydrology in natural systems, providing fundamental concepts and a process-level understanding using the hydrologic cycle as a framework. Geochemistry will be integrated to address natural variations and the human impact on the environment. Topics covered include: watershed hydrology, regional and local groundwater flow, water chemistry, and management of water resources. Lectures and recitation/laboratory. Prerequisite: EES 21. Peters (NS)

Rationale: Peters is a new faculty member, and the description change reflects his preferences and is in agreement with CEE department which cross lists the course.

2. Impacts of course changes

None

2. Curriculum changes

a. The geophysics requirement in the Geological Sciences BS should be changed to include: EES 201 Seismology, EES 309 Mineral Magnetism and Earth Processes and EES 305 Geodynamics.

b. EES 201 and EES 203 should be dropped and 204 Environmental Geophysics should be added to the Environmental Methods and Systems requirement for the BS in Environmental Science.
c. Add EES 265 (BioS265) Environmental Animal Physiology to the Environmental Biology requirement group of the Environmental Sciences BS program.

d. EES 204 and 305 should be added to the list of major electives and EES 203 and EES 221 should be removed from the list of approved major electives for the BS Geological Sciences program.

Rationale. The above programmatic changes are necessary as a result of reconfiguring the packaging of geophysics material in the curriculum. Addition of EES 265 to the Environmental Science program corrects an oversight.

Economics

1. Course changes

a. Courses dropped

   Eco 361. Senior Seminar (3)

   Rationale: Haven’t offered it recently, it’s not required, and 371 (see p. 3) serves the same purpose.

   Eco 372. Special Topics in Economics (1-3)

   Rationale: With 371 this course is not needed. Only one special topics course should be included in the economics major or minor program and the regular course offerings cover a fairly wide range of economics topics.

   Eco 389. Honors Project in Economics (3)

   Rationale: Not needed with the new honors program description, a student looking to do a major research project for submission to the honors program could do so in 371.

b. Courses added

   None.

c. Other changes (number, title, credits, or distribution designation)

   Eco 115. Change number to 146 (Also, since Eco 105 or 115 are prerequisites for many 300-level Eco classes, these prerequisites must be changed as well.) (NB—the catalog already reflects this change, but the status of the change with respect to approvals is unclear, hence we include it in this package to confirm its approval. Note added by Moses.)

   Rationale: Eco 145 is a new prerequisite for Eco 115; this new number reflects the required sequencing of these classes.

   Eco 129. Change from 4 credits to 3 credits.

   Rationale: Eco 129 had the fourth credit added a number of years ago in order to include international topics that will now be handled in other courses. The course will return to 3 credits.

   Eco 145. Change from 4 credits to 3 credits.
Rationale: Eco 145 has had a fourth credit primarily for the lab. Optional regular help sessions with a TA will replace the required lab. Also, with Eco 115 (now 146) linked carefully to Eco 145 as a strong strategic decision making sequence (145 and 146), students will see statistics and calculus concepts reinforced with applied microeconomics business applications. Furthermore, Excel skills will carry over as students use them for solving problems in both classes.

**Eco 238.** Change number to Eco 138

**Rationale:** While this course provides the student with a very valuable experiential learning opportunity, it is best regarded as a complement to the economics major program rather than a substitute for a 200 or 300 level economics courses in the major program. By renumbering the course we remove it as a course that can be used to satisfy the major requirements.

**Eco 258.** Change number to Eco 158 and title from LUCORPS Regional Economics Development Practicum to LUCORPS Projects

**Rationale:** Same as for Eco 238 above

**Eco 340. (Fin 340)** Change prerequisite from Eco 129 to Eco 119 or 129

**Rationale:** Currently Eco 129 is the only prerequisite; however, Eco 119 also covers the topics that are needed for Eco 340. In addition, economics minors choose either 119 or 129, so as the prerequisite currently stands it excludes those minors who choose 119.

**d. Changes in description**

**Eco 145.** Statistical Methods (proposed 3 credits)

**Current description:** Descriptive statistics, probability and probability distributions, sampling, estimation, hypothesis testing, regression and correlation analysis of variance nonparametric tests, and index numbers. (ND)

**Proposed description:** Descriptive statistics, probability and probability distributions, sampling, estimation, hypothesis testing, chi-squared tests simple regression and correlation. (ND)

**Rationale:** The proposed omitted topics are no longer taught in this class. It is also necessary to reduce the topics covered because this course will be 3 rather than 4 credit hours in the future.

**Eco 371. Special Topics in Economics (3) [new text in italics]**

Study in various fields of economics designed for the student who has a special interest in a subject not included in the regular course schedule or for the student interested in pursuing a significant supervised research project in economics. Students interested in enrolling in this course must
submit a written proposal to a member of the faculty with expertise in the proposed subject area and to the department chair prior to the registration period for the relevant semester. Prerequisites: Eco 105 or 145 or 119. This course may count towards the Eco major only once; it does not count towards the Eco minor. (ND)

Rationale: Establishes a student-initiated procedure for adding the course to the student's roster and allows for individual research course or individual/group course on a subject not included in the regular course schedule. This class cannot count towards the minor because Eco minors are required to take only two upper-level classes in total.

e. Impacts of course changes
   None.

2. Curriculum changes
   a. Remove the formal track requirements found on pp. 161-162 of the 2002-03 catalog. Henceforth, rather than being requirements of the major programs, the tracks will be recommended.

   Rationale: Elimination of the tracks will give students much more flexibility in selecting courses and combining their Eco major with other majors or minors. It also gives the Eco department more flexibility in offering courses and lets it quickly modify recommended “bundles” of classes to take advantage of new hires or visiting faculty, for example. The advisor can see to it that students choose classes that have a “concentration” or theme. The elimination of the tracks also means that all CAS Economics majors will have their major GPAs calculated based on the same classes; currently all required collateral classes (e.g., in Track 3, a non-US history and a non-US political science class) count in the major GPA calculation.

   Impacts: Provides students with more flexibility in choosing both the Economics elective classes they take as well as classes in other fields. There is also more flexibility for faculty course offerings.

   b. Change the Mathematics requirement from Math 51 to
      Math 51 and 52: These are terminal math classes for students planning on careers in fields that are primarily non-quantitative
      or
      Math 21 and 22: For students considering careers or graduate programs that require a stronger math background.

   Rationale: Economics is a quantitative subject and calculus is often the best way to explain many important Economic ideas. Many of our students are capable of doing one full year of calculus at the university level and yet choose to do only what is required—currently Math 51 or its equivalent. Many of our students plan on careers in consulting, business or applied economics (e.g., finance), which is highly quantitative. Many students will eventually pursue graduate study in business or economics—these programs also require strong quantitative skills.
Impacts: The math department will have some increase in its demand for Math 21, 22, and 52.

English

1. Course changes
   a. Courses dropped
      None
   b. Courses added

   **English 170: Amaranth (1).**
   Amaranth editorial staff. Students can earn one credit by serving as editors (literary, production, or art) of Lehigh’s literary magazine. Work includes soliciting and reviewing manuscripts, planning a winter supplement and spring issue, and guiding the magazine through all phases of production. Editors attend weekly meetings with the faculty advisor. Pre-requisites: consent of department chairperson. May be repeated for credit. (ND)

   **Rationale:** Students on the editorial staff of Amaranth are required to meet with a faculty advisor and judge manuscripts. The kind and amount of work done and the benefit to students is comparable to “The Lehigh Review” for which students receive credit.

   **English 312: Studies in Literary and Cultural Theory (4).**
   Study of a particular contemporary theoretical approach to literature, film, or other cultural texts. May be repeated for credit as the topic changes. (HU)

   **Rationale:** Addition of English 312 will allow for in-depth study of a particular type of contemporary theory, such as gender theory or psychoanalytic theory. Students who desire or need an introductory survey may still roster English 309. English 312 is an alternative to English 309 and will not require any additional staff.

   c. Other changes (number, title, credits, or distribution designation)

   **English 307: Thesis Proposal (1).**

   **Rationale:** sec department honors rationale

   d. Changes in description

   **English 307: Thesis Proposal (1)**
   Course to be enrolled by senior honors students preparing to write honors thesis. Course requirements include conducting preliminary research for the thesis and writing a detailed thesis proposal and bibliography. May not be rostered concurrently with English 308. (HU)

   **Rationale:** see department honors rationale
English 122,123,124,125,126,155,157,163,175,177,187,189,191
add to the catalog description of all these 100-level courses, staffed by
different members of the department each year, the phrase “Cannot be
taken pass/fail.”

Rationale: Any course listed at the 100-level is introductory: it requires no
prior knowledge of the subject and is designed to appeal to a wide range of
audiences, from beginning majors to students from other Colleges who have
taken no college-level English courses after first-year English. Lehigh
designed the pass-fail option to enable curious students to sample subjects
outside their major area of interest without compromising their GPA; since
taking a 100-level class in the English department does not place at risk the
GPA of any student willing to do the work assigned, the pass-fail option will
discourage only those students—typically, second-semester seniors—who
aim to do as little work as possible. Any serious student can enroll in our
100-level classes and expect a grade that will not damage his or her GPA.
Also, some students wind up liking and doing very well in the 100-level
courses they take and eventually wish to add a minor in English or do a
second major in English. If they have taken the course pass-fail, they cannot
count it toward the major so having taking it pass-fail harms them.

English 387: Film History, Theory, and Criticism (4)
Study of film with the focus on particular genres, directors, theories,
periods, or topics. Weekly film screenings. May be repeated for credit
as title varies. This course cannot be taken pass/fail. (HU)

Rationale: In the fifteen or so years that senior undergraduate film courses
have been taught (at the 300-level) there has been a trend: students from
across the university sign up for these film courses as a way to easily fulfill
humanities distribution requirements, as they think a film course is a “get
course.” They usually take the course on a Pass/Fail basis, and proceed to do
the minimum amount of work to pass the course. In this department, 300-
level courses are geared toward our senior majors. All it takes is a handful of
students in these courses who are not conscientious about doing the work
thoroughly, and who are not motivated to participate in class (both of which
Pass/Fail encourages, unfortunately) to bring down the tone of the class,
making it a less rewarding and a frustrating experience for our senior English
majors. While we do not want to discourage non-English majors from taking
these 300-level film courses, we want them to take them for a grade, so they
are encouraged to put their full energies and efforts into contributing to the
course. (No other 300-level course experiences this problem currently or
historically; we are therefore requesting this change only for this particular
course.)

e. Impacts of course changes
Changes will not affect staffing.

2. Curriculum changes
a. Major Program: B.A. in English
The major will require 36 credits, not 34. This change entails no other changes
to the description of the major in the catalog.
Rationale: Our former requirement of 34 credits or nine courses reflected our ability to offer a few 2-credit courses each year; students could thus roster eight 4-credit courses and one 2-credit course to complete the major. We no longer have the capability to offer 2-credit courses, so this change to nine courses: 36 credits, reflects what students can actually roster in our department.

b. Minor programs
Minor programs dropped: Minor in American Literature
Minor in British Literature

Minor program added: Minor in English
requirements: 4 courses in literature or in film, 1 at the 300 level.

These changes will require a further change in the catalog description: The English department offers two [not three] minors.

Rationale: The new minor in English allows students to take a wider variety of courses. Moreover, literature in English now includes texts other than British and American ones.

c. Department Honors program:
Requirements dropped:

English 387 can no longer be taken to fulfill the theory requirement for the program.
a graduate seminar may not be rostered to fulfill the thesis requirement

Requirements changed:
grade point average 3.5 (was 3.3)
English 312 can now be taken to fulfill the theory requirement (see above addition); students can still elect English 309 to fulfill the requirements as well.
students must write an honors thesis, rostering English 307 (1 credit) in order to develop a detailed proposal and English 308 (3 credits) to write the thesis.
students must complete 44 credits in English (formerly 41).

Rationale: We propose to raise the required g p a. for Honors in English to 3.5 in order to make Honors a greater achievement. The rise in required credit hours to 44 follows from the proposed rise to 36 hours for the major. Honors students will, as before, take one course beyond those required for the major (4 credits) and will write a thesis. To encourage more critical thinking and improved research skills, all honors students will now write a thesis (English 308, 3 credits) preceded by a detailed formal thesis proposal with bibliography (English 307, 1 credit). The total credits required will rise to 44 rather than 43 because students no longer can obtain honors by writing a 3-credit honors thesis (or taking a 3-credit graduate course); that is, they will be required to take four credits for the thesis, composed of English 307 and 308. The former option of rostering English 387 as a way to fulfill the theory requirement for Honors is being eliminated because the course no longer strictly focuses on film theory. It will be replaced in the honors program with English 312, which will allow in-depth study of a particular type of contemporary theory.

CAS course and curriculum changes for 2003–04 21
History

1. Course changes
   a. Courses dropped
      None.

   b. Courses added
      Hist 339. Managing Nonprofit Organizations (3-4)
      Addresses the effective management of nonprofit organizations, focusing
      on operations, administration, legal, marketing, finance and accounting
      issues in the nonprofit environment and emphasizing organizations such
      as museums and preservation organizations. SS

      Rationale: The department has offered this course on two occasions using a
      provisional course number and now will be offering it on a regular basis.

   c. Other changes (number, title, credits, or distribution designation)
      None.

   d. Changes in description
      Hist 338. Techniques in Public History (2)
      Designed to introduce students to a variety of public history techniques.
      Instructor will focus on one of the following topics each term: archives,
      documentary film, exhibit design, historical editing, material culture, oral
      history. May be repeated to a maximum of 8 credits.

      Rationale: The words 'nonprofit administration' have been eliminated from
      the list of topics in the description because we have now created Hist 339
      (see above)

   e. Impacts of course changes
      None.

2. Curriculum changes
   None.

Humanities

1. Course changes
   a. Courses dropped
      None.

   b. Courses added
      Hum 1xx Lehigh Review Production (1-2)
      Students may enroll in one or two modules in a given term. May be
      repeated once for credit. Instructor permission required. Tannenbaum
      (ND)
      Module 1 (Reviewing and evaluating): Responsible for reading
      submissions, writing evaluations of submissions, and participating in the
      editorial review meeting. This module ends after the editorial board
      meeting (about the fourth week of the term). Requires good
      reading/writing/editing skills.
Module 2 (Publicity/Distribution): Responsible for making the Review visible on campus, planning the release party, as well as the distribution plan and actual distribution. Responsibilities begin after spring break. Requires committed people able to work together, plan, and follow through.

Module 3 (Images): Responsible for images, including the filler pictures and article illustrations. Some cover design work. Requires artistic ability as well as the ability to work independently and meet deadlines.

**Hum 2xx Lehigh Review Editorial Board (4)**

Students in this course will oversee the production of the next edition of the Lehigh Review from start to finish. Responsibilities include reading and evaluating submissions, working with authors to revise their submissions, copy editing, proofreading, copy writing, and work with the production teams. Requires serious commitment to the project ability to work independently, meet deadlines. Excellent reading/writing/editing skills a must. No pass/fail grading. Instructor permission required. Tannenbaum (ND)

**Rationale:** The Lehigh Review has been rostered under the Arts subject heading for several years and, in spring 2002, was rostered in a scheme that separated the editorial board and production teams in the manner proposed here. The current proposal is to regularize that approach and to roster the Review under the Humanities subject heading. The Humanities Center is now the physical home of the Lehigh Review.

c. **Other changes (number, title, credits, or distribution designations)**
   None.

d. **Changes in description**
   None.

e. **Impacts of course changes**
   None.

2. **Curriculum changes**
   None.

**Journalism and Communication**

1. **Course changes**
   a. **Courses dropped**
      **Rationale:** See detailed explanation below under part d, changes in description.

b. **Courses added**
   *Jour 211. Reporting (4) every semester*
   Principles and practice of news reporting; techniques for gathering, organizing, and writing news; emphasis placed on story conception, interviewing methods, library skills, Internet research, news writing and clear, concise writing. Students will develop report and write numerous
stories. Students will also gain greater understanding of fundamental
reporting concepts in relation to the use of sources, accuracy, fairness
privacy and other issues of professional responsibility. Prerequisites:
Jour 11 or Jour 123 (SS)

Rationale: This writing-intensive course will replace Jour 212, Feature
Writing, as a requirement in our journalism and journalism/science writing
majors. While Feature Writing will remain an elective in our curriculum, we
believe the reporting course will provide a better platform for teaching ethics
interviewing and research.

Jour 242 Web Writing & Design (4)
This course examines the ways in which writing and design are
influenced by online technology. Students will learn principles and
practice of hypertext. Web writing and Web design and will plan and
create Web sites that tell stories using the unique features of online
technology. Prerequisites: Jour 11 or Jour 123 or Jour 228 Olson

Rationale: This course has been offered for two years as an experimental
number and has become an integral part of our curriculum.

c. Other changes (number, title, credits, or distribution designation)
Comm 252. Change in distribution designation from (ND) to (SS)
Jour 102. Change in distribution designation, from (ND) to (SS)

Rationale: These courses meet the criteria for credit as a social science
distribution requirement.

Jour 13. Change prerequisites to drop Jour 228 as an alternate
prerequisite.

Rationale: This is a housekeeping change, since the department no longer
offers a concentration in public relations as part of its major; students in that
concentration took Jour 228 as their entry-level writing course. All majors
now take Jour 11 or Jour 123 Basic Science and Technical Writing

Jour 361. Change in credits, from current 1-4 credits to 4 credits only

Rationale: This is a housekeeping change. As a practical matter, all of our
students take this course for four credits.

d. Changes in description
Jour 2-8. Brown and White (1) every semester
Enrollment constitutes continued membership on the staff of the semi-
weekly undergraduate newspaper. These courses are taken consecutively
after a student has completed Jour 1. For a second semester on the
newspaper, a student registers for Jour 2. For a third semester, Jour 3.
For a fourth semester: Jour 4. And so on. Prerequisites: Jour 1.
Lulo/Trimble (ND)
Jour 10. Brown and White (1-2) every semester
Enrollment constitutes an editorial position on the staff of the semi-weekly undergraduate newspaper. Editors are chosen by the instructors and the newspaper’s editorial board. May be repeated for a maximum of eight credits. Prerequisites: Jour 1 and permission of the department chair Lule/Trimble

Rationale: These changes represent a fine-tuning of how students register as editors for The Brown and White and how they receive instruction for the class. The primary change here is to separate Jour 10 as a course specifically for the 15-20 students per semester who hold editorial positions. These students currently receive two credits for Jour 2-10; in the new system, they will receive one or two credits for Jour 10, which they will take concurrently with Jour 2-8. Jour 9, signifying a ninth semester on The Brown and White, will be eliminated. Jour 2-8 will be offered for one credit, not the previous one or two credits. Having Jour 10 as a separate class will streamline registration, immediately identify editors, and allow the instructors to meet regularly with this select group of editors to provide feedback and instruction in newspaper production.

e. Impacts of course changes
None of these changes has any significant impact on resources within or outside of the department. All the changes except the addition of the new course (Jour 211, Reporting), involve fine-tuning of existing offerings that will not result in increased teaching frequency and will therefore not require more resources. The addition of Jour 211 will not affect resources because it will replace Jour 212, Feature Writing, as a required course in our major. Jour 212 will continue to be offered, perhaps as a summer course and infrequently during the regular academic year as resources permit. Jour 242, Web Writing and Design, will be offered at the same frequency as it has been offered as an experimental class in the past.

2. Curriculum changes
None.

Mathematics
1. Course changes
a. Courses dropped
None.

b. Courses added
Math 379. Advanced Applied Life Science Seminar (3 credits)
Multidisciplinary integration of bioscience and biotechnology concepts and methods, designed for students majoring in Applied Life Science. Prerequisites: Junior standing (senior standing recommended), major in Applied Life Science, and at least five prior courses in the Applied Life Science curriculum. (ND)

Rationale: Support Applied Life Science program (see attached).
c. Other changes (number, title, credits, or distribution designation)
   None.

d. Changes in description
   Math 205. Linear Methods (3) fall-spring
   Linear differential equations and applications; matrices and systems of
   linear equations; vector spaces; eigenvalues and applications to linear
   systems of differential equations. Prerequisite: Math 22 or 32. (MA)

   Rationale: This changes the prerequisites from Math 23 or 33 or 52. Little
   material from 23 or 33 has been used and 205 has been “tweaked” to avoid
   assuming any of this material as background at all to accommodate the CSB
   curriculum which requires 205 but not 23. On the other hand 52 is only
   marginal preparation for 205, and we do not wish to routinely admit students
   with this preparation into 205. The only curriculum this affects is the BA in
   chemistry, which requires 52 (not 22) and 205. We will allow students in
   this curriculum to use 52 as a prerequisite. This change has the approval of
   the chemistry department.

   Math 261. (CSc 261) Discrete Structures (3)
   Topics in discrete mathematics chosen for their applicability to computer
   science and engineering. Sets, propositions, induction, recursion;
   combinatorics; binary relations and functions; ordering, lattices, and
   Boolean algebra; graphs and trees; groups and homomorphisms.
   Prerequisite: Math 21. (MA)

   Rationale: This eliminates CSc 11 or Engr 1 as a prerequisite. This course is
   cross-listed with CSc 261, which is proposing the same change, and for the
   same reason. The material in those courses (programming) is not needed for
   261.

e. Impacts of course changes
   None.

2. Curriculum changes
   None.

Modern Languages and Literature
1. Course changes
   a. Courses dropped
      Chin 1. Elementary Chinese I
      Chin 2. Elementary Chinese II
      Chin 11. Intermediate Chinese I
      Chin 12. Intermediate Chinese II
      Chin 41. Modern Written Chinese I
      Chin 42. Modern Written Chinese II
      Chin 141. Advanced Chinese I
      Chin 142. Advanced Chinese II
      Fren 146. French for Business and Foreign Careers
      Fren 151. From Romance to Romanticism
      Fren 152. From Romanticism to Post-Modernism
**Fren 319. Twentieth Century Novel and Poetry**

**Fren 345. Foreign Careers**

**Germ 303. Nineteenth-Century German Literature**

**MIL 43. German Literature in Translation**

**Span 261. City Lights: The Latin American Urban Experience**

**Rationale:** Chinese courses are replaced with nine new courses to better accommodate students (see below). French 146 and 345 combined into Fren 369; Fren 151 and 152 combined into Fren 252; Fren 319 incorporated into Fren 320 and 321. The content of MIL 43 is covered by MIL 143. Other courses dropped reflect changes in faculty, faculty research interests, and student demands.

### b. Courses added

**Chin 3. Beginning Spoken Chinese I (2)**

Students learn Mandarin Chinese pronunciation, the pinyin transcription system, and modern colloquial Chinese. Emphasis is on oral proficiency. **To be taken in conjunction with Beginning Chinese Grammar 2.** Exceptions only with permission of the instructor. Beginning Written Chinese 2 recommended but not required. Not open to native speakers. *(HU)*

**Chin 4. Beginning Spoken Chinese II (2)**

Continuation of Beginning Spoken Chinese 1. Students learn Mandarin Chinese pronunciation, the pinyin transcription system, and modern colloquial Chinese. Emphasis is on oral proficiency. **To be taken in conjunction with Beginning Chinese Grammar 2.** Exceptions only with permission of the instructor. Beginning Written Chinese 2 recommended but not required. Not open to native speakers. *(HU)*

**Chin 5. Beginning Chinese Grammar I (1)**

Introduction to the basic grammatical patterns of modern spoken Chinese. **To be taken in conjunction with Beginning Spoken Chinese 2.** Exceptions only with permission of the instructor. Not open to native speakers. *(HU)*

**Chin 6. Beginning Chinese Grammar II (1)**

Continuation of Beginning Chinese Grammar I. Introduction to the basic grammatical patterns of modern spoken Chinese. **To be taken in conjunction with Beginning Spoken Chinese 2.** Exceptions only with permission of the instructor. Not open to native speakers. *(HU)*

**Chin 7. Beginning Written Chinese I (1)**

Introduction to the Chinese writing system and beginning character acquisition. Not open to native speakers. *(HU)*

**Chin 8. Beginning Written Chinese II (1)**

Continuation of Beginning Written Chinese 1. Introduction to the Chinese writing system and beginning character acquisition. Not open to native speakers.
Chin 13. Intermediate Spoken Chinese I (2)
Further development of communicative skills in Chinese using topical dialogues and in discussions. To be taken in conjunction with Intermediate Chinese Grammar 2. Exceptions only with permission of the instructor. Intermediate Written Chinese 2 recommended but not required. Not open to native speakers. (HU)

Chin 14. Intermediate Spoken Chinese II (2)
Continuation of Intermediate Spoken Chinese I. Further development of communicative skills in Chinese using topical dialogues and in discussions. To be taken in conjunction with Intermediate Chinese Grammar 2. Exceptions only with permission of the instructor. Intermediate Written Chinese 2 recommended but not required. Not open to native speakers. (HU)

Chin 15. Intermediate Chinese Grammar I (1)
Further practice with complex vernacular patterns in spoken and written Chinese. Exceptions only with permission of the instructor. Not open to native speakers. (HU)

Chin 16. Intermediate Chinese Grammar II (1)
Continuation of Intermediate Chinese Grammar I. Further practice with complex vernacular patterns in spoken and written Chinese. Exceptions only with permission of the instructor. Not open to native speakers. (HU)

Chin 17. Intermediate Written Chinese I (1)
Continued focus on character acquisition and text-based writing exercises. (HU)

Chin 18. Intermediate Written Chinese II (1)
Continuation of Intermediate Written Chinese I. Continued focus on character acquisition and text-based writing exercises. (HU)

Chin 113. Advanced Spoken Chinese I (2)
Students will participate in topical discussions and give presentations in Chinese. (HU)

Chin 114. Advanced Spoken Chinese II (2)
Continuation of Advanced Spoken Chinese I. Students will participate in topical discussions and give presentations in Chinese. (HU)

Chin 115. Advanced Chinese Reading I (1)
Students will read, translate, and comment on Chinese stories, essays, newspaper articles, and other selected materials. (HU)

Chin 116. Advanced Chinese Reading II (1)
Continuation of Advanced Chinese Reading I. Students will read, translate, and comment on Chinese stories, essays, newspaper articles, and other selected materials. (HU)
Chin 117. Advanced Written Chinese I (1)
Composition practice; students acquire advanced writing skills in conjunction with media presentations or readings (HU)

Chin 118. Advanced Written Chinese II (1)
Continuation of Advanced Written Chinese I. Composition practice; students acquire advanced writing skills in conjunction with media presentations or readings (HU)

Fren 252. From Romance to Post-Modernism (4)
Representative works from the Middle Ages to the Twentieth Century. Including Marie de France, Flaubert, Baudelaire, and Proust. Prerequisite: Fren 143, 144, or consent of instructor (HU)

Fren 269. The Culture of Business (4)
Fundamentals of business in France. Students learn about banking, marketing, advertising, the stock market—how to open a bank account, apply for a job, and what life is like in a French company. Students learn about foreign ventures in France such as Disney and McDonald’s. Ideal for someone who wants to intern or work for an international company or a company with a French connection. Taught in English. Prerequisite: Fren 143, 144, or equivalent (HU)

Fren 324. The Outsider in French Fiction (4)
Course focuses on otherness/difference in French fiction from the Eighteenth to the Twentieth century. Reading and discussion of short stories and novels by Gavarni, Diderot, Maupassant, Gide, Camus, Duras, Beauvoir, Le Clézio and others (HU)

MILL 100. International Film and Theory (4)
An introduction to international film traditions and theory. We look at the importance of cinema as both art and entertainment and consider the social, political, and economic role of film in national and global contexts. (HU)

MILL 124. Negotiating Across Cultures (4)
The world is shrinking! Yet as geographical distances between peoples collapse, our misunderstandings seem to expand. Explore difference, erode barriers, and learn tactics for successfully bridging cultural gaps. Learn the ins-and-outs of cross-cultural communication from specialists in all walks of life and from a diverse array of sources. (H/S)

MILL 127. ORIENTations: Approaches to Modern Asia (4)
An introduction to East and Southeast Asia at the turn of the millennium. How do the contemporary societies and traditional cultures of Asian countries differ from the West? What distinguishes our perspectives—on politics, individual liberties, civic responsibility, religious faith, the “pursuit of happiness,” etc.? How are Asians represented (or misrepresented) in the West, and how is the trend toward globalization in the “Pacific Century” likely to be affected by the new assertiveness of Asian nations? Pankertier (team taught). (H/S)
MLL 320. Berlin: 1920s to the Present (4)
Literature, culture, and history of Berlin from the Weimar Republic through reunification (HU)

Rationale: Chinese courses added to accommodate varying proficiency levels for students of Chinese language. Fren 252 combines the former Fren 151 and 152. Fren 269 addresses present-day interests in France. MLL 320 is newly cross-listed with Germ 320. Additional courses reflect interests of students.

c. Other changes (number, title, credits, or distribution designation)
Germ 240 change title from ‘Contemporary German’ to ‘Contemporary Germany’
Germ 301 change title from ‘German Literature through the Eighteenth Century’ to ‘German Literature through the Nineteenth Century’ (see new description below)
Germ 305 change title from ‘Twentieth-Century German Literature’ to ‘Modern German Literature’ (see new description below)
Span 326 change title from ‘Tradition and Resistance: Women Writers of Latin America’ to ‘Women Writers of Latin America’

Rationale: In each case, these changes allow for broadening the material covered in the course.

d. Changes in description
Fren 144. Advanced Oral French (4)
Emphasis on comprehension and oral performance of the French language. Student acquires confidence in speaking French through discussions of current issues, articles, novels, movies, and other topics. Required for French majors. Prerequisite: Fren 12 or equivalent. Staff. (HU)

Germ 301. German Literature through the Nineteenth Century (4)
Readings of selected literary texts from the Middle Ages, Renaissance, Reformation, Baroque, Enlightenment, Classicism, Romanticism, Realism and/or Naturalism. (HU)

Germ 305. Modern German Literature (4)
Topics in German literature of the twentieth and twenty-first century. (HU)

Germ 350. Special Topics (1-4)
Change Prerequisite: consent of instructor.

Germ 370. Internship (1-8)
Change Prerequisite: Germ 167 or consent of instructor.

Hebr 11. Intermediate Modern Hebrew 1 (4)
Change Prerequisite: Hebr 2 or consent of instructor.
Hebr 12. Intermediate Modern Hebrew II (4)
Change Prerequisite: Hebr II or consent of instructor.

Span 199. Special Topics (3-4)
Change Prerequisite: consent of instructor.

Span 290. Special Topics (2-4)
Change Prerequisite: Span 151 or 152 and consent of instructor.

Span 326. Women Writers of Latin America (4)
Delete instructor (Andrade).

Span 390. Special Topics (2-4)
Change Prerequisite: Span 151 or 152 and consent of instructor.

Rationale: Changes to course descriptions reflect response to student demands; prerequisite changes reflect standardization of catalog text.

e. Impacts of course changes
   None.

2. Curriculum changes
   a. Minor in International Communication
      The Minor in International Communication is designed for students who have already reached the intermediate level in their language studies and wish to develop international communication skills from a global perspective.

      The minor consists of 16 credits. Students must take MLL 124 as a core course, and one advanced language course in their language (above 100 level), and two other courses from the list of electives below in consultation with the minor advisor. These two courses must be chosen from a region that is different from their language area in order to broaden their communication skills. (One course may be taken outside of the MLL department with the minor advisor's approval.)

      Courses:
      Required:  
          1) MLL 124 Negotiating across cultures
          2) One advanced language course (above 100 level)

      Electives:  
          MLL 53 (This Hispanic world and its culture)
          MLL 75 (Chinese civilization)
          MLL 76 (Understanding contemporary china)
          MLL 843 (German lit & culture in translation)
          MLL 177 (China enters the modern age)
          MLL 195 (Lehigh in Spain)
          Fren 159 (The French-speaking world and its culture)
          Germ 163 (German Civilization and culture)
          Span 151 (Cultural evolution in Spain)
          Span 152 (Cultural evolution in Latin America)
          *Lehigh in Martinique (MLL/Fren 198) will be offered in Winter of 2003
Rationale: The Minor in International Communication is proposed to promote international/cross-cultural understanding and prepare Lehigh students with second language skills in today's rapidly internationalizing world. It offers students an opportunity to situate the communication skills acquired in their language studies within a more global perspective.

Impact: Since we are slightly modifying our existing courses to accommodate this minor, there will be no need for major acquisition of library or computer materials. It will only require modest expansion to accommodate these modifications. All courses in the minor are already being offered on a regular basis, and we are ready to meet additional need by offering the courses related to this minor in summer and/or winter.

b. Minor in International Film

The minor in International Film affords students the opportunity to examine a wide cross-section of world cinema. It is designed to provide a critical understanding of historical trends and current issues in film across various regions of the world. Covering national cinemas from Asia, Europe, and Latin America, course offerings will allow students to explore diverse approaches to film that are rooted in the history, culture, and society of different countries in each region.

The minor consists of 16 credits. All students must take a required core course (MLL 100) and the remaining courses are to be chosen from the list of electives below, in consultation with the minor advisor. (One course may be taken outside of the MLL department with the minor advisor's approval.)

Core Course

MLL 100 International Film and Theory (4) (new course)

Elective Courses

MLL 28 The East European Film Experience (4).
MLL 73 Film, Fiction and Gender in Modern China (4).
MLL 90 Best Films in the World (4).
Fren 322 Contemporary French Films (4).
Germ/MLL 231 New German Cinema (4).
Span 265 Spanish and Latin American Cinema (4).

Rationale: The minor is designed to provide an avenue, through the medium of film, for language students to expand their interests beyond one national or linguistic domain, and to make connections between courses that are part of the MLL Department's regular offerings. In addition, it will allow English-monolingual students who are not currently enrolled in language courses or lack the required proficiency to gain exposure to aesthetic and cultural traditions otherwise not accessible to them. Finally, the minor should also appeal to students from other colleges in the University who have a full schedule during the regular academic calendar since some courses will be offered during summer sessions.

Impact: There are no library or computer resource issues associated with the minor. Our existing international film collection is adequate and would only
require modest periodic expansion to keep up with new developments. Classroom equipment is not an issue either, as we already have a sufficient number of video-ready facilities. Impact on faculty resources will be moderate. While all courses in the minor are already being offered on a regular basis, a new introductory course will be created to provide intellectual coherence to the minor.

Music

1. Course changes
   a. Courses dropped
      Mus 131. Major Genre
      Rationale: This course has not been offered for some time.

   b. Courses added
      Mus 139. Jazz theory (3) spring
      Study of the music theory that is the foundation of a good jazz solo, composition or arrangement. Study of the modes of the major and melodic minor scale, chord/scale theory using major, melodic minor, diminished, and whole-tone scales. Basic chord progressions, functional analysis of jazz tunes, and ear training are also included. Prerequisites: Mus 82 (HU)
      Rationale: The elements of jazz theory are quite different from those of 'classical' music. Exposure and work with these elements would improve improvisation in performance and give students a vocabulary for composing and arranging jazz. This course would allow us to construct a jazz minor.

      Mus 161. Production and Marketing of Sound Recordings I (3) fall
      A two-semester course providing foundations for organizing a recording project to be carried out by the class which works in teams. The first course will focus especially on artist negotiations, recording techniques, music publishing and manufacturing. Priva (ND)

      Mus 162. Production and Marketing of Sound Recordings II (3) spring
      The second course will include elements of 161 but will focus on distribution and marketing of sound recordings, web design, and accounting. The class works in teams. Priva (ND)

      Rationale: These courses have been offered under provisional numbers for two years and received initial start-up funding from Ventures. There is considerable interest across the colleges in music business and technology. We are currently in discussions with representatives from the other colleges to devise a music industry minor.

   c. Other changes (number, title, credits, or distribution designation)
      Mus 128 and Mus 129. Change prerequisites from "Mus 10 or equivalent" to "Mus 10 or 11." Keep instructor's permission as an option.

      Mus 132. Change prerequisites from "Mus 10 or 80 or equivalent" to "Mus 10 or 11 or 80"
Mus 261. Change prerequisites from "Mus 83, 4 and 8" to "Mus 11." Keep instructor's permission as an option.

Rationale: These changes regularize the role of Mus 11, which has always been acceptable as a prerequisite for these courses.

d. Changes in description
None

e. Impacts of course changes
Mus 159 would be taught by an adjunct, paid out of existing department funds. There would be no measurable impact on library or facility resources. Mus 161, 162 would continue to be taught by an adjunct, paid out of existing department funds. The intention is to recoup the production costs with sales of recordings.

2. Curriculum changes

   Major program
   Performance concentration. Thirteen credits in theory and musicianship skills: Mus 11, 2, 82, 3, 7, 83, 4, 8. Nine credits of music history (any three from Mus 233, 234, 235, 236), eleven credits in lessons, ensembles and recitals, and three credits in music electives. The student must perform a half recital in the junior year, a full recital in the senior year, and juries during the sophomore and junior years 36-credit minimum.

   History concentration. Thirteen credits in theory and musicianship skills: Mus 11, 2, 82, 3, 7, 83, 4, 8. Twelve credits of music history (Mus 233, 234, 235, 236), and eleven credits in electives, lessons, and ensembles, of which at least three must be in performance. The student must produce a major research paper during the senior year and prepare program notes or pre-concert lectures during at least one semester 36-credit minimum.

   Rationale: The additional three credits in the performance and history concentrations would bring those programs into line with the theory and composition concentration as well as with the guidelines of the NASM (National Assoc. of Schools of Music) for percentage of course work in music for a BA program.

   Impact: No measurable impact. Most students have these electives anyway.

Philosophy

   I. Course changes
    a. Courses dropped
       Phil 7. Introduction to Scientific Reasoning (4)

       Rationale: Phil 7 was originally introduced to provide Humanities majors with an introduction to statistical reasoning. We discovered that very few Humanities students signed up but social science majors did in preference to more demanding courses in their own departments. As this was not our intention, and by our lights inappropriate, we are dropping the course.
b. Courses added
None

e. Other changes (number, title, credits, or distribution designation)

Phil 273. Change distribution designation from HU to ND and change credits from 1-4 to 2.

Rationale: The designation did not appear in the catalog, and because there is insufficient Humanities content to warrant displacing other Humanities courses, we want the designation to be listed as ND. We are changing the credit hours from 1-4 credits to 2 credits because the course content does not warrant more than 2 credits.

d. Changes in description
None.

e. Impacts of course changes
None.

2. Curriculum changes
None.

Physics

1. Course changes

a. Courses dropped

Phy 14. General Physics Laboratory II

Rationale: Phy 14 is (and has been) exactly the same as Phy 22. Students who would have previously enrolled in Phy 14 will now enroll in Phy 22, thereby providing students with greater registration flexibility and simplifying our class schedule.

b. Courses added

Phy 379. Advanced Applied Life Science Seminar (3 credits)
Multidisciplinary integration of bioscience and biotechnology concepts and methods, designed for students majoring in Applied Life Science.
Prerequisites: junior standing (senior standing recommended), major in Applied Life Science, and at least five prior courses in the Applied Life Science curriculum (ND)

Rationale: Support Applied Life Science program (see attached).

c. Other changes (number, title, credits, or distribution designation)

Phy 13. Change title from ‘General Physics’ to ‘General Physics II’
Phy 22. Add Phy 13 as co/prerequisite
Phy/Astr/EES 105. Remove prerequisites
Astr 350. Add cross-listing with Phy

Rationale: The title for Phy 13 identifies this course as second in the sequence that begins with General Physics I (Phy 10), and amounts to a correction to the title in the current catalog. With the removal of Phy 14, Phy
22 is now the lab that accompanies Phy 21 or Phy 13; hence, both must be indicated as alternative co/prerequisites. The prerequisites for Phy/Astr/EES 105 have proven unnecessary in practice. All physics and astronomy courses should be mutually cross-listed and adding the cross-listing for Astr 350 corrects an oversight.

d. Changes in description
None

e. Impacts of course changes
None.

2. Curriculum changes
In the Astronomy section of the catalog, replace "Both of these degrees can be profitably combined with physics, mathematics, and other sciences producing excellent double majors or double degrees."

With the following: "Both of these degrees can be profitably combined with other programs producing excellent double majors or double degrees to the extent permitted by College of Arts and Sciences guidelines. Note that although Math 21, 22, 23, and 205 are required for both the BA and BS degree programs, they are excluded from the double-counting restrictions for double majors."

Rationale: The first sentence simply broadens the scope of double-major and double-degree possibilities and calls attention to College restrictions. The second sentence proposes that the foundation/prerequisite courses, Math 21, 22, 23, and 205, not be included as "courses in the major" when counting courses that overlap between two majors. For example, without this provision, it would be inappropriately difficult to obtain a BA degree with majors in Astronomy and Mathematics.

Impacts: None.

Political Science
1. Course changes
a. Courses dropped
   PolS 274. Political Parties and Elections

   Rationale: This course is no longer taught.

b. Courses added
   PolS 2xx. The Vietnam War in Politics, Media, and Memory (4)
   Examines the meaning of the American war in Vietnam as interpreted and disputed in American politics, the mass media, and private and public memory. Reviews the political history and context of the war, personal experiences and critical perspectives on the war, and characterizations of the war in mainstream news media and popular film. Morgan (SS)

   Rationale: Reflects evolving interests of the instructor.

c. Other changes (number, title, credits, or distribution designation)
None
d. Changes in description
   FoS 333: Add Anth 11 or Anth 12 to prerequisites.

   Rationale: This is a cross-listed course, and SSF requests the change.

e. Impacts of course changes
   None.

2. Curriculum changes
   None

Psychology

1. Course changes
   a. Courses dropped
      None.

   b. Courses added
      
      **Psyc 322. Language in Atypical Populations (4)**
      Analysis of language function in atypical populations and circumstances.
      Language deficits throughout the lifespan will be considered, with
      particular emphasis on their relevance to current linguistic and cognitive
      science theory. Topics covered include atypical language development
      (e.g., in Specific Language Impairment, Autism, Down Syndrome,
      Williams Syndrome) as well as language impairment after brain damage
      (e.g., stroke) or as a result of progressive, degenerative disorders (e.g.,
      Alzheimer's Disease). Prerequisites: Psyc 117 or 176 or CogS 7 or CogS
      140. Gonnerman (S8)

      Rationale: New hire teaching in her area of specialization.

      **Psyc 311. The Psychology of Stereotyping, Prejudice, and
Discrimination (4)**
      We will start by examining the basic cognitive processes that make
      stereotyping a functional aspect of everyday cognition, and then we will
      turn toward examining emotional, motivational, and personality
      differences that affect one's level of prejudice. Finally, we will study the
      role of social forces in transmitting prejudice (parents, schools, religion,
      media) and the impact of societal prejudice (discrimination) on those
      who are the targets of prejudice. The changing face through the decades
      of how stereotypes, prejudice, and discrimination are measured,
      expressed, and understood is the focus of the course. Prerequisites:
      Psyc/SSP 153 or Psyc/SSP 121. Moskowitz (S8)

      Rationale: Recent hire developing his roster of offerings

c. Other changes (number, title, credits, or distribution designation)
   Psyc 373. Remove Psyc 177 from prerequisites

   Rationale: Psyc 177 is no longer offered.
d. Changes in description
None.

e. Impacts of course changes
None.

2. Curriculum changes
None.

Religion Studies

1. Course changes
   a. Courses dropped
      None

   b. Courses added
      Rel 1XX. The Spiritual Quest in Contemporary Jewish Life (4)
      What factors explain the current growth of spirituality in American
      Jewish life? How does spirituality differ from conventional religion?
      What are the sources of contemporary synagogue, Jewish meditation
      practices, and Jewish worship? How does the growth of Jewish
      spirituality relate to the broader issues of Jewish identity? What
      accounts for the growing interest in Buddhism among Jews? What is the
      impact of feminism on Jewish spirituality? How does the growth of
      spirituality among Jews relate to the growth of spirituality in general
      American culture? Silberstein. (HU)

      Rationale: This course address important issues not currently addressed in
      our presently offered courses

   c. Other changes (number, title, credits, or distribution designation)
      Rel/Asia 169. Add: Prerequisites: One prior course in Religion or Asian
      Studies

      Rationale: This course is a seminar that gives students the opportunity to do
      advanced-level interpretation of some of the most challenging texts of Asian
      Religion. For two Chinese works, several English translations are compared
      with the original Chinese text. Students must have some background in
      Religion or Asian Studies to keep up with the class

d. Changes in description
None

e. Impacts of course changes
None.

2. Curriculum changes
None.
Sociology and Anthropology

1. Course changes
   a. Courses dropped
      None.
   b. Courses added
      None
   c. Other changes (number, title, credits, or distribution designation)
      None
   d. Changes in description
      Anth 145. Human Evolution (4)
      Principles of biological anthropology focusing on the evolution of the human species. Topics include evolutionary theory, nonhuman primate diversity and behavior, the relationship between biology and behavior in evolutionary terms, the hominid fossil record, and genetic variability among contemporary human populations. Prerequisite: Anth 1 or 11. Students may not receive credit for both Anth 12 and Anth 145. Gatewood (NS)

      Rationale: The catalog should alert students to the fact that credit cannot be earned for both Anth 12 and Anth 145. This notice is necessary as we shift from offering introductory anthropology in a two-semester sequence (Anth 11 and Anth 12) to a single semester introductory course (Anth 1).

      SSP 160: Medicine and Society
      Add: 'required fieldwork component'

      Rationale: A fieldwork component has been included but students currently have no way of knowing it from the current description. This change will give students more complete information.

2. Curriculum changes
   Anthropology (BA)
   Collateral Requirement (4 credits)
      One general course in statistics: Math 12, Eco 145, Psy 210, or equivalent. (Note: Math 12 fulfills the College of Arts and Sciences mathematics requirement.)
   Introductory and Disciplinary Core Courses (12 credits)
      Anth 1. Introduction to Anthropology
      Anth 11. Comparative Cultures or Anth 140. Introduction to Linguistics
      Anth 12. Doing Archaeology or Anth 145. Human Evolution
   Theory and Methods (8 credits)
      SR 111. Research Methods and Data Analysis
      SR 381. Development of Social Theory
   Major Electives (16 credits)
Four additional anthropology courses, at least two of which must be at the 300-level. (Individualized study courses — 300, 393, 384, 395, and 399 — cannot be used to fulfill this requirement; however, one SSP course can be substituted as an “anthropology” elective.)

Research, Internship, or Thesis (4 credits)
Preferably during the senior year, majors must complete at least four credits of experiential learning on a subject or in a context relevant to their major. Students may fulfill this requirement in a variety of ways — research, field school, internship, or thesis:

Anth 300: Apprentice Teaching
Anth 393: Supervised Research
Anth 394: Field School
Anth 395: Internship
Anth 399: Senior Thesis

Students who intend going on to graduate or professional school are strongly encouraged to do the senior thesis option and a senior thesis is required for departmental honors.

Rationale: The revised program, presented in its entirety above, involves three rather minor modifications. These changes and their rationales are:
1. Anth 1 is specified as the required introductory course, rather than listing Anth 1, 11, or 12. This reflects our decision to offer a single introductory course, rather than the current two-semester sequence.
2. Whereas the current major requires five “Major Electives,” the new program requires four “Major Electives,” but adds two “Disciplinary Core Courses” to the “Introductory” category. This new requirement stipulates that majors must take at least one second-tier course in sociocultural or linguistic anthropology and one second-tier course in archaeology or biological anthropology. The intent is to broaden majors’ exposure to the subdisciplines that comprise anthropology. The net effect is to increase the major from 40 to 44 credits (both totals include 4 credits of collateral “math” requirements).
3. Apprentice teaching is added to the ways in which majors can fulfill the “Research, Internship, or Thesis” requirement. Apprentice teaching is a special kind of internship, and other kinds of internships are already allowed.

Sociology / Social Psychology (BA)
Under the “Research, Internship, or Thesis” category,
Add “SSP 300: Apprentice Teaching” to list of ways majors may fulfill this requirement.

Rationale: Apprentice teaching is a special kind of internship, and other kinds of internships are already allowed.

Theatre
1. Course Changes
   a. Courses dropped
      Thtr 86. Audio Production
   b. Courses added
      None.

CAS course and curriculum changes for 2003-04
c. Other changes (number, title, credits, or distribution designation)
   Thtr 185. Production Seminar, change credits from 1–4 to 2–4
   Thtr/Engl 328. Shakespeare, change credits from 3–4 to 4.

d. Changes in description
   Thtr 129. History of Fashion and Style
   from: Dress and culture from pre-history to Pierre Cardin. The history of
   costume and ornament in the Western Hemisphere and its relationship to
   politics, art and behavior.
   to: Dress and culture in the Western Hemisphere from pre-history to today.
   The evolution of silhouette, garment forms and technology. The
   relationship of fashion to politics, art, and behavior. Cultural and
   environmental influences on human adornment.

   Rationale: The new description more accurately reflects the course content.

e. Impacts of course changes
   None.

2. Curriculum changes
   None.