

Faculty Meeting Agenda 6 December 2004

**Call to order at 4:10 p.m., Sinclair Auditorium
Refreshments will be served at 3:30 p.m.**

1. Minutes

Corrections or approval of the 1 November 2004 faculty meeting minutes.

2. Committee Motions

- Education Policy Committee – Ed Kay
The motions are also available from the Faculty Motions link on the Registrar's web page: <http://www.lehigh.edu/~inrgs/ccindex.shtml> The changes are as follows:
 1. From the College of Business and Economics (CBE):
 - a. Proposal to create a structure for minors
 - b. Proposal for
 - i. Business and Information Systems (BIS) Technology minor.
 - ii. BIS Applications minor
 - c. Revisions to BIS major
 - d. New BIS courses and changes to existing BIS courses
 - e. Change to Computers Science and Business program (CSB, see below)
 - f. Proposal for double majors in CBE.
 - g. Proposal for new course in Economics and for changes in description of current courses.
 - h. New BUS course
 2. From the Rossin College of Engineering and Applied Science (RCEAS)
 - a. Change in description of ECE courses
 - b. Change in CSB program (see above)
 - c. Change in BS in Computer Science program
 - d. New CSE courses and change in description of CSE courses.

3. Unfinished Business

4. New Business

5. **Committee Reports**

- a. Faculty Steering Committee – Alwyn Eades
 - 1. Promotion and Tenure
 - 2. Poll on Governancc
- b. Faculty Compensation Committee - Frank Gunter

6 **Provost's Report**

7. **Adjournment**

Please note the following meeting dates for 2005. Refreshments will be served at 3:30 p.m. and all meetings will begin at 4:10 p.m. in Sinclair Auditorium.

7 February 2005
21 March 2005

2 May 2005

NEXT MEETING: 4:10 PM 7 February 2005 Sinclair Auditorium.
Refreshments at 3:30.

Lehigh University

MINUTES OF THE FACULTY MEETING

6 December 2004

Presiding: Mohamed El-Aasser (Sinclair Auditorium)

Provost El-Aasser called the meeting to order at 4:10 PM.

1. **Minutes.** The minutes of the November 1 2004 faculty meeting were APPROVED.
2. **Graduation Motions.** Registrar Bruce Correll MOVED the three customary resolutions for the January 2005 graduation [see Attachment 1]. The resolutions were SECONDED and PASSED.
3. **Committee Motions.** Professor Ed Kay, on behalf of the Educational Policy Committee, MOVED a package of proposals for the College of Business and Economics [see Attachment 2].

Professor Bob Folk asked the Educational Policy Committee to consider returning to circulating motions via the printed page. Registrar Correll noted that anyone wishing a 'hard copy' may e-mail him and he will be happy to send them a 'hard copy'. The motion was SECONDED and PASSED.

Professor Kay then MOVED a package of proposals for the P.C. Rossin College of Engineering and Applied Science [see Attachment 3]. The motion was SECONDED and PASSED.

4. **Unfinished Business.** None.
5. **New Business.** None.
6. **Committee Reports.** Professor Alwyn Eades, on behalf of the Faculty Steering Committee reported on several items.

First, the proposed change in the structure in promotion and tenure went to the board of trustees, and was returned by the trustees with major changes. A new committee has been established to resolve differences and develop a new proposal. The new committee will be established as a subcommittee of the Personnel Committee chaired by Professor Tom Hyclak. A new proposal will be sent to the faculty by the conclusion of the academic year.

Second, the electronic survey of the faculty on faculty governance resulted in 154 responses (35% of the voting faculty). The percentage of faculty responding with a "yes" ranged from 80-94% for each of the five survey questions. Professor Eades stated there is a mandate for moving ahead in proposing a new governance structure.

The R&P subcommittee of the FSC has taken the first steps. A new committee will be formed to write a specific and detailed proposal for presentation to the faculty in the fall of 2005.

Third, in the area of policy structure, Professor Eades noted that the board of trustees, in June 2002, laid out a structure for the adoption of new policies. The FSC felt that document was not acceptable. For the last two-and-a-half years, FSC has been working with the trustees and the administration to change the wording of the structure. The FSC is close to achieving a revision acceptable to the trustees. The revision will be presented to the faculty during the spring semester of 2005.

Professor Folk recommended the faculty make no changes to R&P.

Professor Eades stated that he believed this was not appropriate. He said he believes it is useful to collaborate with the administration and the trustees when there is a benefit to collaboration. There are parts of R&P that do not meet current legal requirements and the trustees will make changes if the faculty does nothing.

Professor Mary Beth Deily expressed concern about the selection bias in the faculty poll on governance. She said she believed this could be a problem when the actual proposal comes up for a vote. Professor Eades agreed.

Professor Peter Beidler asked what the vote was on Question #2. Professor Eades said he believed approximately 85% of the faculty voted "Yes" to Question #2.

Several faculty suggested it be appropriate for the faculty to have legal counsel review any proposed changes to R&P.

Professor Frank Gunter, on behalf of the Faculty Compensation Committee, stated he had no formal report (it is still in progress). He reported that the committee has had a variety of meetings with the president, the provost, human resources, and the vice president for finance and administration.

In terms of 2005-06 compensation, he noted that the administration has

provided information on budgetary constraints, but has not shared any data. Assistant professor compensation will be based on aggregate data; the committee is talking to all four academic deans to get college compensation data. The university administration is proposing changes to the comparison group schools currently used for compensation benchmarking due to a concern that the current peer group is not appropriate.

Professor Gunter asked the faculty to e-mail him with their concerns.

Professor Folk asked for a breakdown of compensation by colleges and spread of salaries within ranks. Professor Gunter said FCC has requested this information, but that it has not yet been provided by the administration.

7. **Provost's Report.** Provost El-Aasser noted that he has now spent 857 hours on the job, and that the "honeymoon" is over [laughter].

The provost provided a status report in accordance with the USA Patriot Act Faculty Resolution that passed in May 2004 [see Attachment 4].

Middle States Association reaccreditation is in process. A site visit to Lehigh will occur in early 2008.

The search for the new RCEAS dean is wrapping up. The provost said he expects a report shortly, and, the announcement of the new dean will certainly occur before Christmas.

A new search is underway for two deputy provosts and will be completed by December 16.

The provost concluded by saying he is enjoying his meetings with the faculty.

The meeting stood adjourned at 4:57 PM

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December 6, 2004

GRADUATION MOTIONS

- That, with the approbation and consent of the Board of Trustees signified by their mandamus, the appropriate academic degrees be conferred at the end of the current semester on those individuals who shall have completed all requirements for graduation no later than Wednesday, January 12, 2005, and that the President of the University and the Secretary of the Faculty be authorized to sign on behalf of the Faculty diplomas issued to these individuals;
- That the appropriate graduation honors be awarded to those individuals whose averages the as computed by the Office of the Registrar, shall entitle them to be graduated with honors, high honors, or highest honors according to the regulation published in section 3.11.1 of the current edition of the Rules and Procedures of the Faculty;
- That the Committee on Standing of Students be empowered to act for the Faculty on any special cases involving candidates for bachelor's degrees which may arise between now and January 12 and that the Graduate Committee be empowered to so act in cases involving candidates for graduate degrees.

November 14, 2004

Proposal for Creation of Minors

College of Business & Economics

Students within the College of Business & Economics should have the opportunity to accomplish a minor in a discipline that is outside of his or her major subject area. By creating sets of courses labeled minors, we will be helping students think of groups of courses in a meaningful way. This will also help provide our students with differentiating factors, other than the majors. Further, this will create an opportunity for students to gain greater breadth in their study of Business & Economics.

A minor will be defined as three or more upper level (200 or 300) courses relating to that area. At least two of these must be 300 level.

This proposal is intended to create the standards for minors within the College of Business & Economics and to create a number of minors for students to pursue.

- These minors would be available only to College of Business & Economics students except where otherwise indicated by the department.
- No student may declare a minor until after they have declared a major.
- Minors will be declared on a single "Minor Declaration" form submitted to the Undergraduate Program Office. Completed forms will be distributed to the appropriate department for approval.
- There will be no overlapping credit between major and minor courses or between minors.
- Minors will appear on the student's final transcript.
- Any new minors must be approved by the Faculty approval process.
- All courses require the completion of appropriate pre-requisites.

College of Business & Economics

Proposal for Business Information Systems (BIS) Technology Minor

Rationale for BIS Technology Minor: Information systems today are an integral part of all business functions. Many students in different functional areas will be called upon to work closely with IS professionals to develop new applications in their functional areas. We believe that a minor that provides an overview of the major technical functions in IS, such as databases, networks, analysis and design, and programming, will be a solid secondary focus for students in all other business majors.

Resources: Since we have been hiring IS faculty in anticipation of program strengthening, we feel that we have adequate faculty to pursue the revised BIS major as well as the minor. We believe that our courses will accommodate both majors and concentrators.

Academic Impact: We believe that the BIS program provides an option for students who are interested in focusing on information systems in business but do not wish to pursue the strong technical track of other programs on campus such as computer science, computer engineering, and computer science and business. The minor will provide business students in other majors with fundamentals in information technology.

Information Systems Technology

4 courses

- BIS 120 (JAVA) or CSE 17
- BIS 311 Managing Information Systems
- BIS 3xx (Business Data Management),
- BIS 3yy (Business Data Communications)

College of Business & Economics

Proposal for Business Information Systems (BIS) Applications Minor

Rationale for BIS Applications Minor: All business students today will be using business applications in their functional areas as well as cross-functional applications. We believe that students in each of the majors can benefit from understanding more about the information systems that primarily support their business functions as well as other enterprise business applications that will interface with their own business disciplines. Students will be able to select from courses covering ecommerce strategies and development, enterprise business applications strategies and technologies, financial applications of IS, accounting applications, and, additionally special topics that will focus on applications in other areas such as data mining for marketing or HR systems

Resources: Since we have been hiring IS faculty in anticipation of program strengthening, we feel that we have adequate faculty to pursue the revised BIS major as well as the minor. We believe that our courses will accommodate both majors and minors.

Academic Impact: We believe that the BIS program provides an option for students who are interested in focusing on information systems in business but do not wish to pursue the strong technical track of other programs on campus such as computer science, computer engineering, and computer science and business. The minor will provide business students in other majors with a more thorough understanding of IS applications that support business today

Information Systems Applications

3 courses

Three courses chosen from the following:

BIS 331 Electronic Commerce

BIS 342 E-Business Enterprise Applications

ACCT 311 Accounting Information Systems

BIS 372 Special Topics

Lehigh University College of Business & Economics
Revisions to Business Information Systems Major
Fall 2004

Proposal:

- ◆ Improve and strengthen the BIS major (figure 1)

Proposed BIS major

The BIS major requires five courses and two electives beyond the core requirements of the College of Business and Economics

Required Courses (5):

BIS 120	Business Applications in Java (4)
or CSE 17	Structured Programming and Data Structures (4)
BIS 311	Managing Information Systems Analysis and Design (3)
BIS 3xx	Business Data Management (3)
BIS 3yy	Business Data Communications (3)
BIS 3zz	Project Management in IS (3)

Elective Courses: (Choose 2)

Acc 311	Accounting Information Systems (3)
BIS 331	E-commerce (3)
BIS 342	E-business Enterprise Applications (3)
BIS 372 *	Special Topics in Information Systems (3)
BIS 360	BIS Practicum (3)
or CSB 211	Design of Integrated Business Applications (3)

*We plan to offer different courses focusing on different applications of IS in business. For example, data warehousing and mining; HR applications in IS; Numerical Methods for Business Decisions (Eco 395), etc.

Rationale for Revision of Major: The new major will strengthen our program; more closely reflecting the needs of the current IS profession. We have hired several IS faculty since the program was developed and can now institute changes to improve our program. For information on history and a detailed rationale please see Appendix 1.

Note that many of our courses incorporate ILE (integrated learning experiences). These courses include BIS 311, BIS 3xx, BIS 3zz, BIS 331, BIS 360, CSB 211. While not required, courses such as BUS 211, BUS 212 and Mgt. 311 are strongly recommended for additional project experience with businesses.

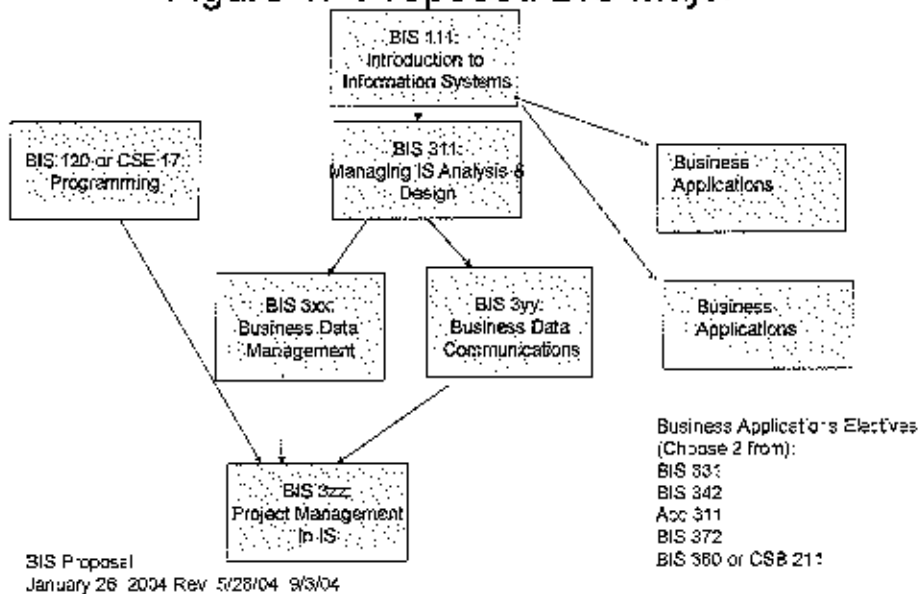
Changes from Existing Major: This major reflects the following program changes, with detailed rationale listed in the Appendix:

1. Change database requirement from IE 224 or CSE 241 to BIS 3xx.
Current courses not meeting student needs
2. Addition of new course on network management: BIS 3yy.
Required by IS profession.
3. Elimination of current practicum requirement.
Internships and practicum experiences were highly variable in content and quality, often not meeting the needs of all our students. The practicum will still be available to students as an elective.
4. Addition of project management course
Required by IS profession.
5. Development of a structured course sequence to reduce redundancy.
6. Change in electives, removing upper level computer science and IE requirements. These courses were taken infrequently due to additional prerequisite requirements and were not meeting business student needs.
7. Addition of special topics course focusing on different applications of IS in business

Resources: Additional resources are included with course descriptions. Since we have been hiring IS faculty in anticipation of program strengthening, we feel that we have adequate faculty to pursue the revised program and concentrations. We believe that our courses will accommodate both majors and concentrators.

Academic Impact: We believe that the BIS program provides an option for students who are interested in focusing on information systems in business but do not wish to pursue the strong technical track of other programs on campus such as computer science, computer engineering, and computer science and business. Our program will prepare students primarily for positions as business systems analysts. We will emphasize business usage of information systems as opposed to technical issues.

Figure 1: Proposed BIS Major



BIS Proposal
 January 28 2004 Rev 5/28/04 9/3/04

College of Business & Economics
New Courses

BIS 3xx Business Data Management

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

BIS 3xx: Business Data Management (3)

This course covers the fundamentals of database management systems (DBMS) including database development, processing, logical and physical design, access, implementation and administration. Students will gain extensive experience in developing data models, creating relational databases, and formulating and executing complex queries. The focus in the course will be on analyzing the connections between data and business organizational information needs and decisions, and understanding the principles of managing organizational data. The course includes a project with hands-on experience with a large scale database and SQL. Prerequisite: BIS 311

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

Three hours of lecture per week including occasional labs

3. Rationale for proposed new course:

Existing database courses on campus were not meeting the needs of business students. They did not incorporate enough large scale business database management

4. Academic impact on programs affected by new course:

Is this proposed new course cross-listed? NO

Is the proposed new course acceptable to all affected programs? YES

If there are known effects, individuals in charge of the affected programs must be consulted about the changes and the following information provided:

Who was consulted?

Is the proposed new course acceptable to the affected program?

Will any changes be required in the affected programs? If so, describe. No changes needed

Identify any known effects of the proposed new course on the University's commitment to diversity. We are unaware of any effects.

5. Resource Impact Statement:

Provide each of the following:

Library impact statement: There is no impact

Computer impact statement: We will use existing computer labs for occasional lab classes.

Faculty impact statement. We have hired a faculty member who is currently teaching this course.

Facilities impact statement: There is no impact

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

The resource implications of this course were considering in hiring new IS faculty.

College of Business & Economics
BIS 3yy Business Data Communications

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

BIS 3xx: Business Data Communications (3)

This course covers modern data communication technologies and how they are used in business. It provides an exposure to current and emerging networking and telecommunications technologies introduces software and hardware fundamentals for various computer/network architectures and provides an understanding of the business context of these technologies. Students will learn how to evaluate, select, and implement different communication options within an organization. The course emphasizes the business context of data communication technologies. Prerequisite: BIS 311

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

Three hours of lecture per week with occasional labs

3. Rationale for proposed new course:

Data communications is a fundamental part of the information infrastructure for business computing. Students need to understand the technologies and how to implement them in a business context.

4. Academic impact on programs affected by new course:

Is this proposed new course cross-listed? NO

Is the proposed new course acceptable to all affected programs? YES

If there are known effects, individuals in charge of the affected programs must be consulted about the changes and the following information provided:

Who was consulted?

Is the proposed new course acceptable to the affected program?

Will any changes be required in the affected programs? If so, describe. No changes needed

Identify any known effects of the proposed new course on the University's commitment to diversity. We are unaware of any effects.

5. Resource Impact Statement:

Provide each of the following:

Library impact statement: There is no impact

Computer impact statement: There is no impact

Faculty impact statement. We have hired a faculty member to teach this course

Facilities impact statement: There is no impact

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

The resource implications of this course were considering in hiring new IS faculty.

College of Business & Economics
BIS 3zz
Project Management in Information Systems

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

BIS 3zz: Project Management in Information Systems (3)

This course covers the factors necessary for successful management of information systems development, enhancement, and implementation projects. Both technical and behavioral aspects of project management are applied within the context of an information systems implementation project. The course covers managing the systems life cycle, including systems implementation testing, quality assurance, delivery, training, post implementation review, configuration management, maintenance. Topics include managing expectations of managers, clients, team members and others; staffing; cost analysis; reporting and presentation techniques; change management. Software tools for project tracking and monitoring. Team collaboration techniques and tools. Prerequisites: BIS 120 or CSE 17, BIS 3xx and BIS 3yy

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

Three hours of lecture per week.

3. Rationale for proposed new course:

The curriculum guidelines for IS programs include courses on both project management and system implementation. Our contacts to IS recruiters also strongly recommend project management. We feel that this course could better position our graduates, strengthening their opportunities to apply their technical skills to implementation while learning important project management skills that will be needed in their careers.

4. Academic impact on programs affected by new course:

Is this proposed new course cross-listed? NO

Is the proposed new course acceptable to all affected programs? YES

If there are known effects, individuals in charge of the affected programs must be consulted about the changes and the following information provided:

Who was consulted?

Is the proposed new course acceptable to the affected program?

Will any changes be required in the affected programs? If so, describe. No changes needed

Identify any known effects of the proposed new course on the University's commitment to diversity. We are unaware of any effects.

5. Resource Impact Statement:

Provide each of the following:

Library impact statement: There is no impact

Computer impact statement: There is no impact

Faculty impact statement. All current IS faculty can teach this course. We also have an adjunct interested in teaching this course.

Facilities impact statement: There is no impact.

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

The resource implications of this course were considering in hiring new IS faculty.

College of Business & Economics
Changes to Existing Courses

Following are new catalog descriptions. They reflect coverage in existing courses and do not reflect substantive change.

BIS 311

1. Proposed new course description (as is it will appear in course catalog):

BIS 311 Managing Information Systems Analysis and Design (3)

This course focuses on managing the requirements analysis and system design methodology and techniques for business information systems. Students learn current methods and techniques for system requirement analysis as well as system design, and apply them to real world projects. It covers cost benefit analysis and risk management of business systems development, JAD and structured walkthroughs, structured and object oriented methodologies, and software package evaluation. It emphasizes the factors for effective communication and integration with users and user systems and encourages interpersonal skill development with client users, team members and others associated with development, operation and maintenance of the system
Prerequisite: BIS 111 or consent of instructor

2. Rationale for Change: The title and description better reflect course content

BIS 342

1. Proposed new course description (as is it will appear in course catalog):

BIS 342 (SCM 342): eBusiness Enterprise Applications (3)

Introduction to the implications of key information technologies used within and across businesses to conduct e-business. The course covers the functionality of various enterprise applications and their integration: customer relationship management, enterprise resource planning, supply chain management, supplier relationship management, data warehousing and mining, business intelligence, and product lifecycle management. Prerequisites: BIS 111 or consent of instructor

2. Rationale for Change: Title and description are more accurate reflections of course. Prerequisite of BIS 111 was added.

Appendix 1 Detailed Rationale for BIS Major Revision

History of BIS major

1. Origin of major: The BIS major was instituted Fall 1997 with no additional resources. Given the interest of students and the external business community, we decided to institute a major that would meet basic needs. At that time, we had one full-time IS faculty and several business faculty interested in teaching courses in the program. With the exception of one new course, the program was put together using existing courses on campus, both within our college and within computer science and industrial engineering.
2. Analysis of Program: In August 2002, we studied the undergraduate major, evaluating six different options for the future of the major, and decided to strengthen the major. This would require hiring some new business faculty to staff the major. We now have four full time IS faculty providing the opportunity to strengthen the program

Problems with existing major

1. Students did not find the computer science courses to be useful to them.
 - a. In order to take CSE 17, most of our students had to complete CSE 10 and CSE 14 first since they do not have any programming background. The students had great difficulty with the CSE programming classes. We introduced BIS 120 to give students the programming background that they need, requiring 4 credits instead of 7, and focusing on Java, rather than C++, because of business requirements. This course gave them an adequate understanding of object oriented programming for business information systems students and the ability to write web based applets, using business related examples and exercises.
 - b. The database courses in IE and CSE were not meeting the needs of our students. We tried an experimental course BIS 297 as an option for the database requirement, providing a business view of databases, which was very popular with students. Information systems professionals need to have a wide perspective of data management, and comprehend fully the organizational role of information technology, and how databases can address business problems within an organization. CSE 241 focused more on system-internal aspects of databases (storage management, query optimization, transactions, concurrency and recovery, and relational algebra). IE 224 focused on desktop databases to demonstrate analysis and design issues. Business students need a data management course that covers not only the basic technical aspects of databases but also covers organizational data management issues.
 - c. Very few students took the elective computer science courses, especially after computer science revised their curriculum adding additional prerequisites for their upper level courses such as CSE 216 and CSE 330.
 - d. The IE data communications course was taken by very few students and did not meet their needs. IE 331 requires additional prerequisites (IE 220) and focused on theory of networks rather than business management of networks.
2. Because we were requiring different fundamental courses, our program could not be lock-step, so that we could not build on previous courses. Given the need to accommodate demands on other colleges we could not enforce coverage in these classes. For example, in database courses, students were not all receiving equivalent fundamentals and we found that we were repeating material in different courses because some students had not seen this material before.
3. The BIS practicum requirement was not achieving its goals. Student internships were highly variable. Many students chose Mgt. 311 as their practicum and their experiences there were highly variable in terms of the applicability of the projects to their studies. There were no resources allocated to development and management of appropriate projects with industry.
4. Students felt that they needed more technical skills. Since most were not taking the computer science courses due to their prerequisites, they were focusing more on applications and less on technology.
5. Contacts to recruiters suggested that students needed more large scale database exposure, networks, programming, and project management.

6. During the last few years we have been following the development of "Guidelines for Model IS Curriculum" developed by several professional organizations.¹ While we do not seek to duplicate this model, we would like to at least ensure coverage of the major topics. We recognize that we have deficiencies in several areas: Networks and Telecommunications, II Hardware and System Software, Physical Design and Implementation Emerging Environments, Project Management and Practice. We believe that we can incorporate these topics, albeit at a broader level, in the courses suggested.
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Changes for Computer Science and Business Program

Computer Science & Business CBE is considered InterCollegiate, but is supported by both the College of Engineering & Applied Science and the College of Business & Economics. This proposal has been passed by the faculty of both Colleges.

Proposal:

Alter the requirements for completion of the Computer Science and Business Program to include the following course, which is already being offered by the Computer Science Department:

CSE 252 Computers Society and the Internet

An interactive exploration of the current and future role of computers, the Internet, and related technologies in changing the standard of living, work environments, society and its ethical values. Privacy, security, depersonalization, responsibility, and professional ethics; the role of computer and Internet technologies in changing education, business modalities, collaboration mechanisms and everyday life. (SS) cross-listed as HSS

Rationale:

The ABET/CAC Accreditation team visited Lehigh from 19 September 2004 to 21 September 2004 to evaluate the Computer Science and the Computer Science and Business major programs. Their report highlighted one major deficiency in the CSB program, which was that the program does not include sufficient formal instruction on computing ethics. In order to gain ABET/CAC accreditation this deficiency must be addressed immediately.

Impact:

This change will not add additional credits to the CSB program, but does restrict the HSS electives by requiring CSE 252.

Resources:

This change will not have an impact on L.T.S.
The department offering this course has been consulted. There should be no need for additional faculty resources.

The faculty has voted to approve the re-institution of double majors for students in the College of Business and Economics, according to the following guidelines.

Rules for pursuing a double major at the College of Business & Economics:

1. All students must declare a single major prior to declaring a second major.
2. Students must complete an application, available in the Undergraduate Program Office, to double major, including a statement of rationale for pursuing the second major.
3. Accompanying the application must be a semester-by-semester plan for completion of both majors, listing specific courses and with no semesters of credit overload.
4. Each major must contain a minimum of four (4) courses that are not counted for the other major.
5. The student must meet with their assigned major advisor, who will be responsible for determining the viability and educational value of the student's plan. The signature of the major advisor will be required.
6. Prior to final approval, the student must meet with a designated advisor for the second major (as assigned by the CBE Undergraduate Program Office) and gain his or her signature, indicating approval of that student's plan.
7. Students planning to pursue more than one major within the CBE must have as a pre-requisite good academic standing (2.0 gpa or higher)
8. In order to successfully complete any major in the College, a student must attain a minimum gpa of 2.0 in the courses of that major. Where a student is attempting to complete two majors, the same rule applies.
9. Should a student choose to pursue completion of only one of the selected majors, they must complete and submit another major declaration form, removing the unwanted major.

**College of Business & Economics
Department of Economics**

Three Undergraduate Course Changes

1. Proposed New Course in Statistics:

Eco 245 Statistical Methods II (3)

This course is a continuation of Economics 145, and gives broader coverage of linear regression and the construction of empirical models. Topics include the analysis of variance, simple and multiple regression, index numbers, forecasting, nonparametric methods, and statistical methods for quality control. Prerequisites: Economics 145, or a comparable course in introductory statistics.

Rationale: Currently there is no intermediate statistics course offered by the CBE. Such a course will serve two purposes. First, as compared with a formal econometrics course, Economics 245 will place less emphasis on proofs and more emphasis on general intuition and ideas. The material will then provide a natural link between the introductory statistics course and more advanced courses in econometrics and forecasting, such as Economics 357. In fact, Economics 245 is intended to serve as a prerequisite for Economics 357 and other CBE courses that rely heavily on statistical reasoning. Second, the course will cover topics (such as nonparametric methods) that cannot be adequately covered in the introductory course due to time constraints. With the additional exposure to statistics, the student will be able to better match the appropriate statistical method to the empirical problem at hand.

Is the new course interdisciplinary? While the course is targeted to students in economics, the statistical techniques are applicable to all fields of study within the CBE and others within the university. As a few examples from the field of business, the material is useful for survey research, sales forecasting, financial modeling, auditing and the estimation of demand and supply curves.

Identify any known effects of the proposed course on other programs at the University? None.

Are the proposed changes acceptable to all affected programs? N/A

Identify any known effects of the program change on the University's commitment to diversity? No known effects.

Resource Impact Statement:

Eco 245 will be offered on a regular basis, while Eco 357 may be offered less frequently. Undergraduates with a strong interest in a formal econometrics course can petition to take

the Masters level econometrics course (Economics 415) after having taken Economics 245.

Financial responsibility for new resources: No new resources are required.

2. Proposed change to the course description for Eco 333 The Economics of Business Decisions:

Prerequisites: Eco 245 and Math 21 31 or 51.

Rationale: Including Eco 245 as a prerequisite will allow for a significant expansion in course coverage since at present the instructor is required to devote time to a review of statistical methods needed for the case studies and empirical analysis projects in this course.

3. Proposed change to the course description for Eco 357 Econometrics:

Prerequisites: Eco 245.

Rationale: Adding Eco 245 as a prerequisite will increase the student's preparation for econometrics.

College of Business & Economics
New Course
Beginning Summer 2005

BUS 173 Non-Major Summer Internship

1. Proposed new course number and course description as it will appear in course catalog:

BUS 173 Non-Major Summer Internship (1)

CBE internships will expose students to the business world, enriching their understanding of ideas and problems encountered in their business courses.

This course is available summers and open to students in the College of Business & Economics and those in the following programs: CSB, IBE, and Business Minor.

The student will be evaluated on a directed writing assignment of no fewer than 9 pages and on a detailed evaluation provided by his or her work supervisor. A minimum of 150 hours of work must be completed in the internship, and verified by work supervisor. It should be noted that the work experience itself is not the basis for academic credit. Course registration and related arrangements must be made in advance of the work experience. This course cannot be used to satisfy any major requirements. Prerequisite: completion of a minimum of 24 college credits.

2. Rationale for proposed new course:

A credit-bearing internship opportunity during the summer session, early in a student's academic career will greatly enhance our students' ability to gain an appropriate internship experience and, eventually, better full-time job opportunities.

3. Academic impact on programs affected by new course:

Is this proposed new course cross-listed? No

Is the proposed new course acceptable to all affected programs? Yes

If there are known effects, individuals in charge of the affected programs must be consulted about the changes and the following information provided:

Who was consulted?

Is the proposed new course acceptable to the affected program?

Will any changes be required in the affected programs? If so, describe.

No changes needed

4. Resource Impact Statement:

Provide each of the following:

Library impact statement: There is no impact

Computer impact statement: There is no impact

Faculty impact statement: Since this is a summer-only offering, there is the potential for professor of practice or other appropriate person to supervise. It is suggested that all participants in a single summer be assigned to a single faculty member.

#1

Approved F'04

ECE Department Catalog Changes – October 19, 2004

Proposed Course Changes (Modify existing description)

1. Current course number and course description (from course catalog):

ECE 33 Introduction to Computer Engineering (4) fall

Analysis, design and implementation of small digital circuits. Boolean algebra. Minimization techniques synchronous sequential circuit design, number systems and arithmetic. Microcomputer architecture and assembly level programming. Prerequisite: Engr 1 or CSE 17.

2. Proposed course number and course description (as it will appear in course catalog):

ECE 33 (CSE 33). Introduction to Computer Engineering (4) fall

Analysis, design and implementation of small digital circuits. Boolean algebra. Minimization techniques synchronous sequential circuit design, number systems and arithmetic. Microcomputer architecture and assembly level programming. Prerequisite: Engr 1 or CSE 17

3. Description of proposed change(s):

Crosslist with CSE 33 (CSE department has added CSE 33 in anticipation)

4. Rationale for proposed change(s):

Rationale: To accommodate the CSE department, as per its request. Specifically, CSE majors must take this course and CSE faculty may also teach the course.

5. Impact Statement:

None. This course is offered now and will not be affected

Proposed Course Changes (Modify existing description)

1. Current course number and course description (from course catalog):

ECE 201 Computer Architecture (3) Spring

Structure and function of digital computers. Computer components and their operations. Computer interconnection structures. Memory system and cache memory. Interrupt driven input/output and direct memory access. Instruction sets and addressing modes. Instruction pipelining. Floating-point representation and arithmetic. Alternative architectures: RISC vs. CISC and introduction to parallel architectures. Prerequisite: ECE 33.

2. Proposed course number and course description (as it will appear in course catalog):

ECE 201 (CSE201). Computer Architecture (3) Spring

Structure and function of digital computers. Computer components and their operations. Computer interconnection structures. Memory system and cache memory. Interrupt driven input/output and direct memory access. Instruction sets and addressing modes. Instruction pipelining. Floating-point representation and arithmetic. Alternative architectures: RISC vs. CISC and introduction to parallel architectures. Prerequisite: ECE 33 (CSE33).

3. Description of proposed change(s):

Crosslist with CSE 201 (CSE department has added CSE 201 in anticipation)

4. Rationale for proposed change(s):

Rationale: To accommodate the CSE department, as per its request. Specifically, CSE majors must take this course and CSE faculty also teach the course.

5. Impact Statement:

None. This course is offered now and will not be affected

CSE DEPARTMENT: Proposed Program Change for APC

Name and summary of current program:

Bachelor of Science in Computer Science and Business

Proposed program changes (as they will appear in the catalog):

Current catalog entry::

- Senior year, first semester (16 credit hours)
- CSE 303 Operating System Design (3)
- MGT 280 Management of People and Operations (4)
- CSB Professional Elective (3)*
- CSB 313 Design of Integrated Business Applications II (3)
- HSS electives Humanities/Social Sciences elective (3)

Proposed catalog entry:

- Senior year, first semester (16 credit hours)
- CSE 303 Operating System Design (3)
- MGT 280 Management of People and Operations (4)
- CSB Professional Elective (3)*
- CSB 313 Design of Integrated Business Applications II (3)
- CSE 252 Computers, the Internet and Society (3)

Description of proposed change(s):

Replace the 3-credit HSS elective with the specific HSS course CSE 252.

Rationale for proposed change(s):

This ensures that CSB students have exposure to computer ethics, an accreditation requirement

Academic Impact Statement:

Is this proposed program change interdisciplinary? NO

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

NONE

If there are known effects, individuals in charge of the affected programs must be consulted about the proposed program change and the following information provided: NONE

Who was consulted?

Is the proposed program change acceptable to the affected programs?

Will any changes be required in the affected programs? If so, describe.

Identify any known effects of the proposed program change on the University's commitment to diversity.

NO KNOWN EFFECTS

Resource Impact Statement:

Provide each of the following:

- Library impact statement NONE
- Computer impact statement NONE
- Faculty impact statement NONE
- Facilities impact statement NONE

Provide a statement indicating who will assume financial responsibility for any new resources required: None required

CSE DEPARTMENT: Proposed Program Change for APC

Name and summary of current program:

Bachelor of Science in Computer Science

Proposed program changes (as they will appear in the catalog):

Current catalog entry::

Junior year, first semester (18 credit hours)
CSE 261 Discrete Structures (3)
MATH 231 Probability and Statistics (3) or
MATH 309 Theory of Probability (3)
HSS electives ## (6)
Approved technical elective* (3)
Approved professional elective** (3)

Proposed catalog entry:

Junior year, first semester (18 credit hours)
CSE 261 Discrete Structures (3)
MATH 231 Probability and Statistics (3)
HSS electives ## (6)
Approved technical elective* (3)
Approved professional elective** (3)

Description of proposed change(s):

Remove Math 309 as an alternative to Math 231.

Rationale for proposed change(s):

ABET accreditation standards require that students have exposure to statistics. The very few students who elect Math 309 in place of Math 231 do not satisfy this requirement.

Academic Impact Statement:

Is this proposed program change interdisciplinary? NO

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

NONE

If there are known effects, individuals in charge of the affected programs must be consulted

about the proposed program change and the following information provided: NONE

Who was consulted?

Is the proposed program change acceptable to the affected programs?

Will any changes be required in the affected programs? If so, describe.

Identify any known effects of the proposed program change on the University's commitment to diversity.

NO KNOWN EFFECTS

Resource Impact Statement:

Provide each of the following:

Library impact statement NONE

Computer impact statement NONE

Faculty impact statement NONE

Facilities impact statement NONE

Provide a statement indicating who will assume financial responsibility for any new resources required: None required

Proposed New Course - CSE Department

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

CSE 1aa Technical Presentation (1)

Oral and written communication of information in computer science. Technical writing; structure style, and delivery of oral presentations; use of visual aids. Prerequisite: CSE 17.

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

Lecture supplemented with laboratory exercises

3. Rationale for proposed new course:

Our B.S. students in the College of Arts get no exposure to oral and written communication in their required program. This course fills that gap.

4. Academic impact on programs affected by new course:

a. **Is this proposed new course cross-listed?** No

b. **Is the proposed new course acceptable to all affected programs?** Yes

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

1. **Who was consulted?**

No one else. We direct the B.S. in CS in CAS.

2. **Is the proposed new course acceptable to the affected program?**

Yes.

3. **Will any changes be required in the affected programs? If so describe.**

An additional credit will be required, raising the required number of credits from 126 to 127.

d. **Identify any known effects of the proposed new course on the University's commitment to diversity.**

5. Resource Impact Statement:

a. **Provide each of the following:**

(1) **Library impact statement:** None

(2) **Computer impact statement:** None.

(3) **Faculty impact statement:** Slight. The enrollment will be low, and the course is only 1 credit.

(4) **Facilities impact statement:** None

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

CSE will assume financial responsibility for the change

Proposed New Course – CSE Department

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

CSE 2bb: System and Network Administration (3)

Overview of systems and network administration in a networked UNIX-like environment. System installation, configuration, administration, and maintenance; security principles; ethics; network, host, and user management; standard services such as electronic mail, DNS, and WWW; file systems; backups and disaster recovery planning; troubleshooting and support services; automation, scripting; infrastructure planning. Prerequisite: CSE17.

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

Two hours lecture one hour hands-on laboratory per week

3. Rationale for proposed new course:

This course was taught experimentally in Spring 2004 to two dozen students. Students appreciated the hands-on lab experience and found the material directly useful. Some students believe this should be a required course for all sophomore CS majors. This courses fills a void in our curriculum.

4. Academic impact on programs affected by new course:

a. Is this proposed new course cross-listed?

No

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

Yes

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

1. Who was consulted?
2. Is the proposed new course acceptable to the affected program?
3. Will any changes be required in the affected programs? If so, describe.

d. Identify any known effects of the proposed new course on the University's commitment to diversity.

None

5. Resource Impact Statement:

a. Provide each of the following:

(1) Library impact statement:

None

(2) Computer impact statement:

This course depends heavily on the availability and functionality of a highly configurable and modern computer systems laboratory. One currently exists, supporting 12 workstations. If this course were to be popular, multiple lab sections would be required or additional workstations would be needed (as well as periodic replacement of failed or outdated equipment).

(3) Faculty impact statement:

No special impact.

(4) Facilities impact statement:

None.

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

CSE will assume financial responsibility for the change.

5. Proposed new course number and course description (as is it will appear in course catalog):

CSE 3zz Introduction to Mobile Robotics (3)

Algorithms employed in mobile robotics for navigation, sensing, and estimation. Common sensor systems, motion planning, robust estimation, bayesian estimation techniques, Kalman and Particle filters, localization and mapping. Credit will not be given for both CSE 3zz and CSE 4zz. Prerequisites: Math 205 and CSE 109.

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

Lecture, three hours per week supplemented with a few laboratory exercises

7. Rationale for proposed new course:

This course is consistent with engineering school goals of fostering education in Autonomous and Intelligent Systems (AIS). The course was offered in Fall '03 for the first time with an enrollment of 18 students. A follow-on course is being offered this semester. Enrollment as of 1 Sep is 23 students

8. Academic impact on programs affected by new course:

- e. Is this proposed new course cross-listed? No.
- f. Is the proposed new course acceptable to all affected programs? N/A
- g. If there are known effects, individuals in charge of the affected programs must be consulted about the changes and the following information provided:
 - 4. Who was consulted?
 - 5. Is the proposed new course acceptable to the affected program?
 - 6. Will any changes be required in the affected programs? If so describe.
- h. Identify any known effects of the proposed new course on the University's commitment to diversity.

5. Resource Impact Statement:

- c. Provide each of the following:
 - (5) **Library impact statement:** None.
 - (6) **Computer impact statement:** None. The course will make use of computers purchased under the AIS grant.
 - (7) **Faculty impact statement:** None. Prof. Spletzer (CSE) will teach the course.
 - (8) **Facilities impact statement:** None. It will use resources already in place in AIS West (PL322) and the VADER Laboratory (PL450)
- d. Provide a statement indicating who will assume financial responsibility for any new resources required:
CSE will assume financial responsibility for the change.

RCEAS: Computer Science and Engineering

Proposed Course Changes

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

CSE 347. Data Mining (3)

Overview of modern data mining techniques: data cleaning; attribute and subset selection; model construction, evaluation and application. Fundamental mathematics and algorithms for decision trees, covering algorithms, association mining, statistical modeling, linear models, neural networks, instance-based learning and clustering covered. Practical design, implementation, application and evaluation of data mining techniques in class projects. Prerequisites: Either CSE 17 and MATH 231, or BIS 120 and ECO 145.

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

CSE 347. Data Mining (3)

Overview of modern data mining techniques: data cleaning; attribute and subset selection; model construction, evaluation and application. Fundamental mathematics and algorithms for decision trees, covering algorithms, association mining, statistical modeling, linear models, neural networks, instance-based learning and clustering covered. Practical design, implementation, application and evaluation of data mining techniques in class projects. Credit will not be given for both CSE 347 and CSE 447. Prerequisites: Either CSE 17 and MATH 231, or BIS 120 and ECO 145.

3. Nature of proposed change(s)

Do not allow students to get credit for CSE 347 and CSE 447, because the latter course is a graduate version of CSE 347, with the students in CSE 447 attending CSE 347 and doing extra work.

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

4. Resource Impact

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

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

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

No new resources are required.

RCEAS: Computer Science and Engineering

Proposed Course Changes

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

CSE 365. Natural Language Processing (3)

Computer analysis of human languages, such as English. Syntactic parsing and semantic interpretation of sentences; morphological recognition of words and idioms. Applications of natural language processing such as database queries. Prerequisite: CSE 262 or equivalent familiarity with Prolog, Lisp.

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

3. Nature of proposed change(s)

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

DROP.

Rationale: We have not offered the course in a number of years, nor do we intend to offer it again

4. Resource Impact

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

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

N/A

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

N/A

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

N/A

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

N/A

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

N/A

RCEAS: Computer Science and Engineering

Proposed New Course

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

CSE 33 (ECE 33). **Introduction to Computer Engineering (4) fall**
Analysis, design and implementation of small digital circuits. Boolean algebra. Minimization techniques synchronous sequential circuit design, number systems and arithmetic. Microcomputer architecture and assembly level programming. Prerequisite: Engr 1 or CSE 17

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

Lecture and recitation. Four hours per week.

3. Rationale for proposed new course:

The course has been taught for many years as ECE 33. We seek to crosslist it because it is taken by all our Computer Science majors and all our Computer Engineering majors (and few others) and because we sometimes teach the course.

4. Academic impact on programs affected by new course:

None

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

Yes.

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

None.

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

(1) Who was consulted?

We consulted ECE.

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

Yes.

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

No.

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

No.

5. Resource Impact

None.

RCEAS: Computer Science and Engineering

Proposed New Course

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

CSE 201 (ECE 201). Computer Architecture (3)

Structure and function of digital computers. Computer components and their operations. Computer interconnection structures. Memory system and cache memory. Interrupt driven input/output and direct memory access. Instruction sets and addressing modes. Instruction pipelining. Floating-point representation and arithmetic. Alternative architectures: RISC vs. CISC and introduction to parallel architectures. Prerequisite: ECE 33.

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

Lecture. Three hours per week.

3. Rationale for proposed new course:

The course has been taught for many years as ECE 201. We seek to crosslist it because it is taken by all our Computer Science majors and all our Computer Engineering majors (and few others) and because we usually teach the course.

4. Academic impact on programs affected by new course:

None

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

Yes.

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

None.

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

(1) Who was consulted?

We consulted ECE.

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

Yes.

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

No.

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

No.

5. Resource Impact

None.

LEHIGH UNIVERSITY

FACULTY MEETING

December 6, 2004

Presented by

Mohamed S. El - Aasser

The USA Patriot Act Faculty Resolution that was passed by the faculty during its May 2004 meeting calls upon the administration to (1) *report regularly to the faculty on international students, faculty and staff who are denied visas to study or teach at Lehigh* and (2) *conduct an accounting of research and publications which have been suppressed for security or political reasons.*

For the Fall 2004 Semester, a total of seven students (six graduate and one undergraduate) were denied visas. It is important to note that the University has no way of knowing whether the visa denials were related to the Patriot Act or if they were for other reasons, such as lack of adequate documentation.

According to our records, no faculty or staff members were denied visas during this time period.

David Williams, Vice Provost for Research, has reported that in response to his October 7th email to the faculty, not one faculty member has reported that his or her research or publications were suppressed, or otherwise restricted, due to security or political reasons.



LEHIGH
UNIVERSITY

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for Academic Affairs*

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February 8 2005

MEMORANDUM

TO: STEVEN THODE
SECRETARY TO THE FACULTY

FROM: MOHAMED S. EL-AASSER
PROVOST

SUBJECT: COMPELLING CASE PRESENTATION

Enclosed are three color copies of the Compelling Case presentation I made yesterday at the University Faculty Meeting. Unfortunately, I will be unable to send you an electronic copy because each of the graphs is linked to financial data that are confidential. If you should need additional hard copies of this presentation, I will be happy to supply them. Please contact Eileen Gorzelic at 83605 and she will arrange to send you more.

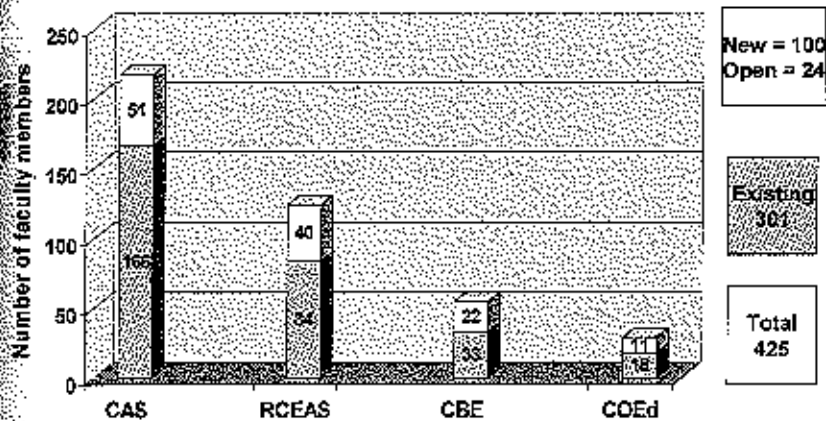
Best regards.

Enclosures

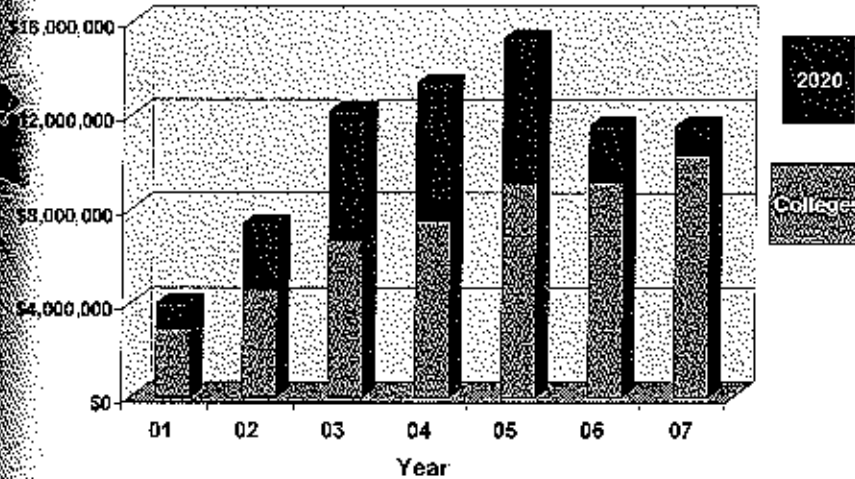
Compelling Case – take home messages

- Faculty renewal over the past 4 years has been achieved – 29.2 % of the faculty are new
- Early return on investment is manifested by their contribution to Lehigh's intellectual capital resulting in the transformation of the University
- Major challenge is to retain the faculty – this requires mentoring, guiding faculty to 'build roots' at LU, and a successful campaign for endowed chairs

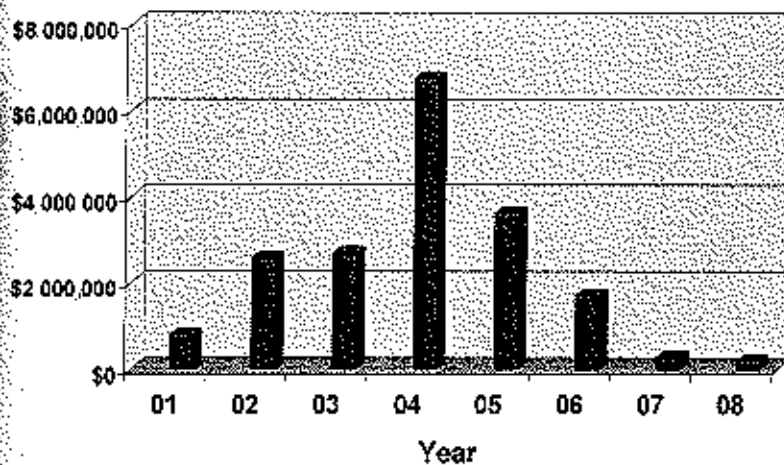
Significant faculty renewal has been achieved in all colleges ('01- '04). Strategic faculty hiring will continue ('05 and beyond).
An overall picture as of January 2005



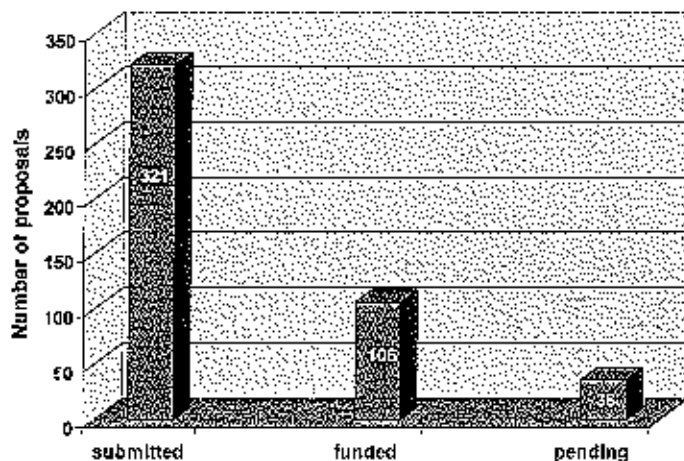
Total cost of hiring 124 faculty members (salary & start-up) is \$75.2M which includes \$25M from 2020



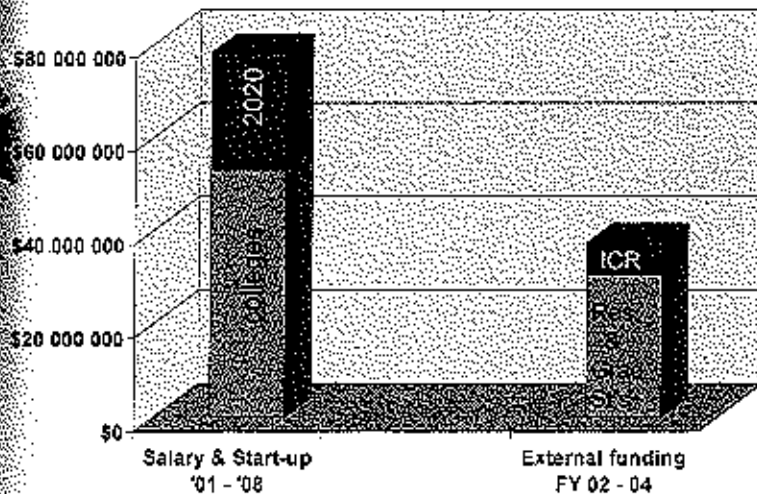
\$18.6M of 2020 money is used to cover the cost of upgrading current and building new infrastructure



Research proposals by 96
new faculty members, AY'02 – AY 04



The investment of \$75.2M in hiring 124
faculty resulted in an initial return of \$37.3M in external
research grants by 96 new faculty members (over a period
of 3 years)



New faculty contributions in teaching

- 96 new faculty taught 9200 students in 550 courses during fall '01 – spring '04 (6 semesters). Some of the courses have been created by them

Nuggets

Initial contributions of new faculty

- See text provided by the deans
 - new programs and curriculum development.
 - research & scholarly work.
 - Individual awards and achievements.

Compelling Case – take home messages

- Faculty renewal over the past 4 years has been achieved – 29.2 % of the faculty are new
- Early return on investment is manifested by their contribution to Lehigh's intellectual capital, resulting in the transformation of the University
- Major challenge is to retain the faculty – this requires mentoring, guiding faculty to "build roots" at LU, and a successful campaign for endowed chairs