GENERAL FACULTY MEETING
Tuesday, December 8, 1987
3:00 p.m.
102 BUS

AGENDA

1. Minutes from November 3, 1987, Faculty Meeting*

3. Committee reports
   Undergraduate - Dr. McCollough
   Proposed course changes
   ECP 3423 (Public Utility Economics) - Attachment 1
   ECO 4935 (Senior Seminar) - Attachment 2
   FIN 3408 (Business Finance) - Attachment 3

MBA - Dr. Weitz
ISE Program

Minority Affairs*

4. Exchange Program with Bocconi - Dr. Tosi

5. Demonstration of DISCLOSURE DATABASE** - Attachment 4
   Presented by Michael Gruenberg, National Sales Manager for DISCLOSURE (15 minutes)
   **Presenter and equipment will be available after meeting for questions

* Minutes to be distributed separately

cc: Larry Humes
    Lee-Ann Humenik

Attachments
November 18, 1987

MEMORANDUM

TO: Alan Merten

FROM: W. A. McCollough
Chairman, Undergraduate Committee

RE: Faculty Meeting Agenda Items

This is to request that the following items be placed on the agenda for the December 8 faculty meeting:

1. ECP 3423 (Public Utility Economics) proposed course change; 4935
2. ECO 4925 (Senior Seminar) proposed course change.

Copies of Form UCC 2 and appropriate documentation are attached for each of the proposed changes.

WAM: mfr

Attachments: 2
PROPOSAL TO INCREASE ECP 3423 FROM 2 CREDITS TO 3 CREDITS

I find five benefits from this change.

1. The additional class meetings permit more in-depth coverage of a number of issues. For example, technological change is currently covered in only two sessions, yet changes in economics of scale and scope are driving forces behind deregulation. Similarly, diversification is not currently examined, yet both telecommunications and electricity utilities are moving in this direction. I would like to introduce students to price sustainability, uncertainty, public utility finance, and other topics listed in the table of contents. Obviously, the concepts will be introduced at an introductory level—but the added time enables an expansion of topics.

2. More class time will make it possible to attract more students. Currently, two credits needs to be supplemented by another credit to meet credit requirements for economics majors. The change should expand the market for the course.

3. Currently, almost one-eighth of the class time is taken by two exams. I would like to use additional problem sets for the course, but that would involve disproportionate work for two credits. Last year I introduced an example of cost-sharing arrangements that generated much discussion and stimulated critical thinking. Additional credit allows me to expand the use of such problem sets.

4. Finally, past students assert that they work as hard for my two credit course as in many three credit classes. I would like to assuage my conscience!

5. The course one can help a student get a job. Undergraduates in past years have parlayed their exposure to utility concepts into jobs. This could be accomplished more effectively via three credits.
ECP 3423 Public Utility Economics

Credits: 3 Prerequisite: ECO 2023 or permission of instructor

Public regulation of infrastructure industries, including energy, telecommunications, and transportation. Issues addressed include characteristics of natural monopolies, principles of efficient rate design (including peak load pricing), entry and rate of return regulation, determinants of technological change, consequences of deregulation, and independent regulatory commissions.
ECF 3423
Public Utility Economics

Instructor: Sanford V. Berg
Office: Bryan Hall - 125 (Office Hours T, Th. 9:00-11:30)
Section: 3690X - MAT 13
Tuesday 7th period 1:55-2:45
Thursday 7th period 1:55-2:45

Grades: Two Exams (60%) and the Final (40%).


<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Reading</th>
</tr>
</thead>
<tbody>
<tr>
<td>8/21</td>
<td>Nature of Regulation</td>
<td>1.0 - 1.1</td>
</tr>
<tr>
<td>8/23</td>
<td>Financial Issues</td>
<td>1.2 - 1.1.A</td>
</tr>
<tr>
<td>8/28</td>
<td>Principles of Rate Design</td>
<td>2.0, 2.1.A</td>
</tr>
<tr>
<td>8/30</td>
<td>Kahn's Perspectives</td>
<td>2.1 - 2.3</td>
</tr>
<tr>
<td>9/4</td>
<td>Marginal Cost Pricing</td>
<td>2.4 - 2.5</td>
</tr>
<tr>
<td>9/6</td>
<td>Inflation/Conventional Methodologies</td>
<td>2.6 - 2.7</td>
</tr>
<tr>
<td>9/11</td>
<td>Decreasing Costs and Price Structures</td>
<td>3.0 - 3.1, 3.1.A</td>
</tr>
<tr>
<td>9/13</td>
<td>Multipart Pricing</td>
<td>3.2 - 3.3</td>
</tr>
<tr>
<td>9/18</td>
<td>Cost Allocation/Review</td>
<td>3.4</td>
</tr>
<tr>
<td>9/20</td>
<td>FIRST EXAM</td>
<td></td>
</tr>
<tr>
<td>9/25</td>
<td>Peak Load Pricing</td>
<td>4.0 - 4.2</td>
</tr>
<tr>
<td>9/27</td>
<td>TOU Complications</td>
<td>4.3 - 4.2.A</td>
</tr>
<tr>
<td>10/2</td>
<td>Regulatory Incentives</td>
<td>5.0, 5.1.A</td>
</tr>
<tr>
<td>10/4</td>
<td>Cost Adjustment Clauses</td>
<td>5.1, 5.2</td>
</tr>
<tr>
<td>10/9</td>
<td>Rate Base Alternatives</td>
<td>5.3, 5.4</td>
</tr>
<tr>
<td>10/11</td>
<td>Technological Change</td>
<td>6.1, 6.1.A</td>
</tr>
<tr>
<td>10/16</td>
<td>Innovation and Regulation</td>
<td>6.2, 6.3</td>
</tr>
<tr>
<td>10/18</td>
<td>Electric Utility Regulation</td>
<td>7.0, 7.1.A</td>
</tr>
<tr>
<td>10/23</td>
<td>Future/Fairness</td>
<td>7.1, 7.2</td>
</tr>
<tr>
<td>10/25</td>
<td>Conservation/Review</td>
<td>7.2, 7.4</td>
</tr>
<tr>
<td>Date</td>
<td>Topic</td>
<td>Reading</td>
</tr>
<tr>
<td>--------</td>
<td>------------------------------</td>
<td>---------------</td>
</tr>
<tr>
<td>10/30</td>
<td>SECOND EXAM</td>
<td></td>
</tr>
<tr>
<td>11/1</td>
<td>Destructive Competition</td>
<td>8.A</td>
</tr>
<tr>
<td>11/6</td>
<td>Air Transportation</td>
<td>Reserve</td>
</tr>
<tr>
<td>11/8</td>
<td>Surface Transportation</td>
<td>Reserve</td>
</tr>
<tr>
<td>11/13</td>
<td>Telephone Regulation</td>
<td>8.0</td>
</tr>
<tr>
<td>11/15</td>
<td>Objectives of Regulation</td>
<td>8.1, 8.2</td>
</tr>
<tr>
<td>11/20</td>
<td>Competition and Regulation</td>
<td>8.3, 8.4</td>
</tr>
<tr>
<td>11/22</td>
<td>THANKSGIVING</td>
<td></td>
</tr>
<tr>
<td>11/27</td>
<td>Rate Design for Local</td>
<td>8.5, 8.6</td>
</tr>
<tr>
<td>11/29</td>
<td>AT&amp;T Divestiture</td>
<td>8.7, 8.8</td>
</tr>
<tr>
<td>12/4</td>
<td>Natural Gas</td>
<td>9.0, 9.1, 9.A</td>
</tr>
<tr>
<td>12/6</td>
<td>Rate Design</td>
<td>9.2 – 9.3</td>
</tr>
</tbody>
</table>

FINAL EXAM: GROUP 14C

FRANK AND ERNEST

I ALWAYS SAY, IF IT MOVES, TAX IT.
IF IT MOVES TOO QUICKLY, REGULATE IT... AND IF IT DOESN'T MOVE, BAIL IT OUT.
REQUEST FOR COURSE DELETION OR CHANGE(S) IN ANY CHARACTERISTIC OF A CURRENT COURSE

Institution: UF FICE 1535
Department: Economics

CNS Prefix and Number: ECO 4935

Course Title: Senior Seminar

Check One: Deletion X Change

Change: From | To

*Title

*Credit | 2 | 3

First Digit Assignment

Lab Indicator

UF Prefix Number

*Revised Catalog Description

/*

*NOTE: Significant changes in these items may substantially alter the placement of this course within the discipline taxonomy (i.e., they may require a different alpha prefix and/or number). If a different prefix and/or number seems appropriate, please complete a NEW COURSE TRANSMITTAL FORM and submit a course syllabus.

Please state reason(s) for the requested change(s) or deletion: greater breadth and depth in topics covered

Which quarter is this change to become effective? Fall 1989

Signature of Department Chairman | Date

Signature of College Dean | Date

Signature of Graduate Dean (if applicable) | Date

APPROVED | DISAPPROVED | Effective Date

Chairman, University Curriculum Committee/Institutional Liaison Officer | Date

FOR FACULTY DISCIPLINE TASK FORCE AND SYSTEM STAFF USE ONLY

Does change affect Prefix or Number? Yes No

If yes, is a NEW COURSE TRANSMITTAL FORM etc., attached Yes/No

If yes, new Prefix and Number should be:

Remarks:

Submitted by: Discipline Task Force Representative | Date

Input into Database by: | Date
PROPOSAL TO INCREASE ECO 4935 FROM 2 CREDITS TO 3 CREDITS

There are three benefits from this change.

1) This will enable me to discuss five more articles in the first part of the course. As a result, the students will have a better understanding of what constitutes good and bad research before they embark on their own research.

2) More class time will make it possible to accommodate more students. A thoughtful class discussion of each student's research takes time.

3) Many students who take this course also sign up for one credit of individual research concurrently to obtain honors in Liberal Arts and Sciences. (The procedure is described in the attached syllabus.) By making this course a three credit course, honors could be obtained simply by taking this course and satisfying some GPA requirements. This change would eliminate considerable confusion.
The purpose of this course is to give students exposure to and experience in positive economics, i.e., the development and testing of economic models. Toward this end, each student will develop and test his or her own economic model.

FIRST PART

We begin this section with discussions of how knowledge advances and statistical testing. It is impossible to teach you all of the statistical theory that would be useful in this course. It would be nice to have a course like EGB 3121 behind you, but the reading that has been assigned should give you enough knowledge so that you can interpret regressions. To gain some feeling for what constitutes good economic research and for what constitutes mediocre economic research, we then will read and discuss several published papers in economics in the field of public choice. (Additional papers will be assigned for later dates if the class is small enough.) This section concludes with discussions on using the computer to estimate regressions. You will see how easy it is to run regressions using SAS. The papers in the schedule below can be purchased as a packet from me at cost.

Aug. 24 - Introduction

Aug. 26 - Economics as a Science -

Milton Friedman, "The Methodology of Positive Economics"


Aug. 31 - An overview of statistical testing - Roger D. Blair and Lawrence W. Kenny, Microeconomics with Business Applications, Section 4.1, 4.2

Sep. 2 - Statistical overview continued - Blair and Kenny, Sections 4.3 - 4.5

Sep. 7 - LABOR DAY - NO CLASS.

Sep. 9 - The researcher's bias and mistakes -


Sep. 23 - Using the statistical package SAS (Note that these two class sessions are devoted to showing you how to run regressions on a main frame computer. I can also show you how to use the PC statistical package STATA.)

Sep. 28 - File editing with CMS

During this time, you should settle upon a topic for your research. In the past, students have researched:

Medicare and the Demand for Health
The Effects of Advertising on the Price of Legal Services
Zoning Changes and Land Value
Academic Performance and Sports Participation
The Determinants of Admission to Medical School
Price Discrimination by Campus Bookstores
Savings Behavior
The Determinants of Research and Development
The Effects of Airline Regulation and Deregulation
The Effects of Affirmative Action Programs
The Allocation of Funds for Highway Maintenance
The Determinants of Sentencing of Criminals
Compensating Differentials in Criminal Returns
The Location-of Convenience Stores
Tourism In Florida
Shopping Center Rental Prices
Apartment Rents
Demand for Japanese Cars
Demand for Cigarettes
Determinants of the Incidence of Regulation
Defense Expenditures
The Determinants of Inflation
U.S. Trade with Europe
The Determinants of Migration to Localities In Florida
The Demand for Mass Transit
The Demand for Retail Shopping Centers
The Demand for Branch Banks
Land Prices
Expenditures on Higher Education
Consumer Installment Credit
Political Campaign Expenditures
Measuring Ideology
The Demand for Import Quotes
The Decline In SAT Scores

One of these papers has been published and several others could have been. It is fun to use economics to analyze a question you've always been interested in. The subject matter of some your field courses in economics (e.g., public finance) and of articles in economics journals provide another source of topics. You should come in and discuss your topic with me.
SECOND PART

In the second part of the course, each student will present a proposal which develops the hypothesis to be tested and describes the manner in which it will be tested. You must ascertain whether the project is feasible; that is, are the data that are required to test the hypothesis available? What variables will you create? What are your predictions about these variables? From what sources will the data be obtained? The dates for this part include Sep. 30, Oct. 5, 7, 12, 14, 19, 21, 26, 28, and Nov. 2. Written proposals are due on week prior to the class at which they are scheduled.

THIRD PART

In the third part of the course, each student will present his or her results. Students are strongly urged to use the computer as early as possible. Empirical research takes time. The dates for this part include Nov. 4, 9, 16, 18, 23, 25, 30, and Dec. 2, 7, 9. Again, papers describing the results and their relationship to the hypothesis are due one week prior to the class at which they are scheduled. In your paper, restate your predictions, describe your data and the construction of your variables, and discuss whether your results support or refute your hypothesis.

FINAL PAPER

Finally, your research project culminates in a paper (a minimum of 10 pages), which without exception is due Tuesday, December 15 at 10:00 a.m. There is no exam in this course. The paper will develop the model and discuss the testing of the model, paying particular care to how the revised results relate to the model. Do not waste your money purchasing a binder for the paper.

MISCELLANEOUS

Economic research profits considerably when many minds think deeply about the problem to be researched. Consequently, class participation will play an important role in this course; each student will be expected to contribute to the discussion of published papers and to the discussion of student research. The level and quality of classroom participation will affect the final grade. To further encourage this participation, I will withhold my comments as much as possible until student comments have been exhausted.

HONORS

Economics majors in the College of Arts and Sciences who have a 3.3 average in all economics work can receive departmental honors by combining 1 hour of ECO 4905 with this course. This can be done very simply by signing up for 1 hour of ECO 4905 this semester under my supervision. I would then require 3 credits worth of work on your project rather than 2 credits worth of work; only one project would be entailed. You should note that in order to receive college honors, you must first receive departmental honors.
November 24, 1987

MEMORANDUM

To: Alan Merten
From: W. Andrew McCollough
Subject: Curriculum Changes

The Undergraduate Committee would like to recommend the following curriculum changes at the next College faculty meeting.

1. FIN 3408, Business Finance, be reduced in number of hours from four (4) to three (3).

2. The prerequisites for FIN 3408 be changed from ACG 2001, MAC 3224, ACG 2302 (coreq.) to ACG 2001, ACG 2302.

3. The requirements to become a major in Finance be changed from a "C" in FIN 3408 to "C" grades in ACG 2001, ACG 2302 and FIN 3408.

WAM: kd
REQUEST FOR COURSE DELETION OR CHANGE(S) IN ANY CHARACTERISTIC OF A CURRENT COURSE

Institution: UF    FICE 1535

Department: Finance, Insurance and Real Estate

CNS Prefix and Number: FIN 3408

Course Title: Business Finance

Check One: Deletion ___ Change ___

Change:

*Title

*Credit 04 03

First Digit Assignment

Lab Indicator

UF Prefix Number

*Revised Catalog Description Prereq: ACG 2001 and ACG 2302.

*NOTE: Significant changes in these items may substantially alter the placement of this course within the discipline taxonomy (i.e., they may require a different alpha prefix and/or number). If a different prefix and/or number seems appropriate, please complete a NEW COURSE TRANSMITTAL FORM and submit a course syllabus.

Please state reason(s) for the requested change(s) or deletion: Revised course content.

Which quarter is this change to become effective? Fall 1988

Signature of Department Chairman Date

W.A. McCollough

Signature of College Dean Date

Signature of Graduate Dean (if applicable) Date

APPROVED ___ DISAPPROVED ___ Effective Date ___

Chairman, University Curriculum Committee/Institutional Liaison Officer Date

FOR FACULTY DISCIPLINE TASK FORCE AND SYSTEM STAFF USE ONLY

Does change affect Prefix or Number? Yes ___ No ___

If yes, is a NEW COURSE TRANSMITTAL FORM etc., attached Yes/No

If yes, new Prefix and Number should be:

Remarks:

Submitted by: Discipline Task Force Representative Date

Input into Data Base ___ by Date
MEMORANDUM

To: F.I.R.E. Faculty

From: W. Andrew McColough

Subject: Finance Curriculum Changes

I will propose the following curriculum changes to the faculty at the next Departmental faculty meeting. Please let me have any comments or suggestions concerning these proposals prior to that time.

1. The prerequisites stated for FIN 3408 be changed from MAC 3224, ACG 2001, ACG 2301 (coreq.) to ACG 2001, ACG 2302.

The calculus prerequisite is redundant for College of Business Administration students and perhaps too prohibitive and irrelevant for the non-business student.

The ACG 2302 is a relevant prerequisite and for business majors would, as a pre-professional requirement, typically be taken prior to FIN 3408.

2. FIN-3408 be reduced in number of hours from four (4) to three (3).

This would call for a revision of the syllabus and some topics currently covered would either be removed or covered in less detail. Proposed syllabus is forthcoming.

3. The current requirement to be a major in Finance is:

a. Admission to the College of Business Administration.

b. A minimum C grade in FIN 3408.

An additional requirement would be imposed.

c. A minimum C grade in ACG 2001 and 2302.

The grades in the preprofessional accounting classes are strongly related to successful completion of the finance curriculum. In Fall, 1986, there were 30 students majoring in finance that had D grades in either ACG 2001 and/or 2302. Their average GPA was 2.2.
FIN 3408 - Changing to a 3-Hour Course

Using

Fundamentals of Financial Management

<table>
<thead>
<tr>
<th>Chapters</th>
<th>Subject</th>
<th>Tentative Number of Days Per Chapter</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>4-Hours</td>
</tr>
<tr>
<td>-</td>
<td>Introduction</td>
<td>1</td>
</tr>
<tr>
<td>1-2</td>
<td>Overview, Organizations, Taxes</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>Markets and Interest Rates</td>
<td>4</td>
</tr>
<tr>
<td>4</td>
<td>Discounted Cash Flow Analysis</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>Bond and Stock Valuation Models</td>
<td>4</td>
</tr>
<tr>
<td>6</td>
<td>Risk and Rates of Return</td>
<td>5</td>
</tr>
<tr>
<td>7</td>
<td>Analysis of Financial Statements</td>
<td>1</td>
</tr>
<tr>
<td>8</td>
<td>Financial Forecasting</td>
<td>1</td>
</tr>
<tr>
<td>9-10</td>
<td>Capital Budgeting</td>
<td>7</td>
</tr>
<tr>
<td>11-12</td>
<td>Common Stock and Debt</td>
<td>1</td>
</tr>
<tr>
<td>13</td>
<td>Hybrid Financing</td>
<td>4</td>
</tr>
<tr>
<td>14</td>
<td>Cost of Capital</td>
<td>5</td>
</tr>
<tr>
<td>15</td>
<td>Capital Structure and Leverage</td>
<td>5</td>
</tr>
<tr>
<td>16</td>
<td>Dividend Policy</td>
<td>2</td>
</tr>
<tr>
<td>17</td>
<td>Working Capital Policy</td>
<td>3</td>
</tr>
<tr>
<td>18</td>
<td>Cash and Marketable Securities</td>
<td>3</td>
</tr>
<tr>
<td>19</td>
<td>Receivables/Inventory Management</td>
<td>4</td>
</tr>
<tr>
<td>20</td>
<td>International Finance</td>
<td>0</td>
</tr>
<tr>
<td>21</td>
<td>Mergers and Divestitures</td>
<td>2</td>
</tr>
<tr>
<td>-</td>
<td>Course Review</td>
<td>1</td>
</tr>
<tr>
<td>-</td>
<td>Exams</td>
<td>3</td>
</tr>
<tr>
<td>-</td>
<td>Holidays</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Days Per 16-Week Term 64 48

On the following pages is a subject outline of those topics I try to cover in FIN 3408 during the course of the term. Those topics marked with an asterisk are only discussed if time permits (usually it does not for many of them). I believe that the proposed scheduling for a 3-hour course will still give the students a good, basic understanding of the fundamentals of financial management. Those items which are not covered probably could, and should, be covered in upper level courses, where they may be covered in significantly more depth.
COMPACT DISCLOSURE

Here's what you get

A Compact Disc

The disc contains:
- Complete profiles for more than 11,000 public companies
- Annual (5-year comparative) and quarterly balance sheets
- Annual (5-year comparative) and quarterly income statements
- Annual sources and uses of funds (up to 3 years)
- 5-year summary and 5-year growth rates for operating income, sales, and EPS
- Names, titles, ages, and salaries for officers and directors
- Full text of the president's letter and management discussion from the annual report
- Ratios and price/earnings information
- All subsidiaries
- Abstracts of extraordinary events
- Ownership information
- A list of documents filed with the SEC
- All exhibits filed with 10-K’s, 10-Q’s, and registration statements

Including Disclosure Spectrum, the disc also contains:
- Ownership stock profiles for over 5,500 companies
- Latest shares traded
- Latest trade date
- Total shares held
- Rank/position of owner

Quarterly Updates

Software

The Compact Disc Reader

For assistance in using COMPACT DISCLOSURE, you can call our database service number: 800-843-7747.

COMPACT DISCLOSURE
annual subscription fees

Not-for-profit organization rate: $3,200

Commercial rate: $4,500

Disclosure Spectrum rate: $2,000

A subscription without the disc reader is available at a reduced price. Multiple subscription discounts are also available.

An example of a COMPACT DISCLOSURE corporate record is displayed on the following pages.
**DIRECTORS (NAME/AGE/TITLE/RENUMERATION)**

(Source: Proxy 02/11/87)

<table>
<thead>
<tr>
<th>Name</th>
<th>Age</th>
<th>Title/Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hollingsworth, David J.</td>
<td>55</td>
<td>Vice President, Nominee</td>
</tr>
<tr>
<td>McBride, Guy T., Jr.</td>
<td>67</td>
<td>Nominee</td>
</tr>
<tr>
<td>Petty, John R.</td>
<td>55</td>
<td>Nominee/NA</td>
</tr>
<tr>
<td>Buckner, Fred L.</td>
<td>54</td>
<td>54th/34th/Second Officer/34th</td>
</tr>
<tr>
<td>Ettenstadl, Stuart L.</td>
<td>44</td>
<td>N/A NA</td>
</tr>
<tr>
<td>Engbretson, Arland B.</td>
<td>55</td>
<td>Vice Chairman of the Board/33rd/89th</td>
</tr>
<tr>
<td>Schwoeger, Henry A.</td>
<td>57</td>
<td>Group President/254/390</td>
</tr>
<tr>
<td>Spara, Joan E.</td>
<td>42</td>
<td>N/A NA</td>
</tr>
<tr>
<td>Glaccum, Alexander F.</td>
<td>67</td>
<td>Chairman of the Board, President, Chief Executive Officer/1,040,000</td>
</tr>
<tr>
<td>Jacobson, Jerome A.</td>
<td>65</td>
<td>N/A NA</td>
</tr>
<tr>
<td>Jahn, Robert G.</td>
<td>56</td>
<td>56th/33rd/NA</td>
</tr>
<tr>
<td>Nielsen, Arthur C., Jr.</td>
<td>67</td>
<td>N/A NA</td>
</tr>
</tbody>
</table>

**OWNERSHIP**

State Farm Mutual Automobile Insurance Co., 6.05% (PRX 02-19-85) Delaware Trust Co., 5.4% (PRX 02-19-85)

<table>
<thead>
<tr>
<th>TYPE</th>
<th>DATE(M)</th>
<th>OWNERS</th>
<th>CHANGE (000)</th>
<th>HELD</th>
<th>%OWN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Institutions</td>
<td>12/31/86(M)</td>
<td>252</td>
<td>100</td>
<td>36,896</td>
<td>87.56</td>
</tr>
<tr>
<td>5% Owners</td>
<td>01/31/87(M)</td>
<td>2</td>
<td>NA</td>
<td>6,134</td>
<td>11.26</td>
</tr>
<tr>
<td>Insiders</td>
<td>12/31/86(M)</td>
<td>17</td>
<td>1</td>
<td>209</td>
<td>0.30</td>
</tr>
</tbody>
</table>

**INSTITUTIONAL HOLDINGS (SPECTRUM 3)**

<table>
<thead>
<tr>
<th>INSTITUTIONAL HOLDER</th>
<th>LATEST QTR</th>
<th>INVESTMENT RANK</th>
<th>CHG IN SHS</th>
<th>SHARES HELD</th>
<th>FILING DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bank of California N.A.</td>
<td>2</td>
<td>2</td>
<td>4,590</td>
<td>1,749,683</td>
<td>12/31/85</td>
</tr>
<tr>
<td>University of California</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>1,659,741</td>
<td>12/31/85</td>
</tr>
<tr>
<td>Lord Abbett &amp; Company</td>
<td>4</td>
<td>4</td>
<td>-247,500</td>
<td>1,151,800</td>
<td>12/31/85</td>
</tr>
<tr>
<td>Jenkinson Assoc Capital</td>
<td>5</td>
<td>5</td>
<td>-900,500</td>
<td>950,000</td>
<td>09/30/85</td>
</tr>
<tr>
<td>Investors Research Corp</td>
<td>6</td>
<td>6</td>
<td>63,500</td>
<td>784,100</td>
<td>12/31/85</td>
</tr>
<tr>
<td>Sellman, J.W. &amp; Co.</td>
<td>7</td>
<td>7</td>
<td>-60,000</td>
<td>781,630</td>
<td>12/31/85</td>
</tr>
<tr>
<td>Wells Fargo Bank N.A.</td>
<td>8</td>
<td>8</td>
<td>-134,346</td>
<td>777,065</td>
<td>12/31/85</td>
</tr>
<tr>
<td>Citi Public Empy Rent</td>
<td>9</td>
<td>9</td>
<td>0</td>
<td>763,800</td>
<td>09/30/85</td>
</tr>
<tr>
<td>New York St Common Ret</td>
<td>10</td>
<td>10</td>
<td>0</td>
<td>759,200</td>
<td>12/31/85</td>
</tr>
<tr>
<td>Dreyfus Corporation</td>
<td>11</td>
<td>11</td>
<td>-35,000</td>
<td>745,000</td>
<td>09/30/85</td>
</tr>
</tbody>
</table>

**OWNERSHIP BY 5% OWNERS (SPECTRUM 5)**

<table>
<thead>
<tr>
<th>NAME OF OWNER</th>
<th>LOCATION</th>
<th>SHARES HELD</th>
<th>DATE</th>
<th>FORM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delaware Trust Co</td>
<td>Delaware</td>
<td>2,921,726</td>
<td>12/31/85</td>
<td>130</td>
</tr>
<tr>
<td>State Farm Mut Auto</td>
<td>Illinois</td>
<td>3,222,230</td>
<td>12/31/85</td>
<td>130</td>
</tr>
</tbody>
</table>

**OWNERSHIP BY INSIDERS (SPECTRUM 6)**

<table>
<thead>
<tr>
<th>NAME OF INSIDER</th>
<th>RELATIONSHIP RANK</th>
<th>TRADE</th>
<th>HELD</th>
<th>FILING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glaccum, Alexander F.</td>
<td>D</td>
<td>1</td>
<td>-1,000</td>
<td>48,827</td>
</tr>
<tr>
<td>Ryan, John R.</td>
<td>D</td>
<td>2</td>
<td>0</td>
<td>25,088</td>
</tr>
<tr>
<td>Schwoeger, Henry A.</td>
<td>D</td>
<td>7</td>
<td>NA</td>
<td>12,131</td>
</tr>
<tr>
<td>Crittendon, Eugene Dwight</td>
<td>D</td>
<td>8</td>
<td>0</td>
<td>11,339</td>
</tr>
<tr>
<td>Turk, S. Maynard</td>
<td>D</td>
<td>9</td>
<td>0</td>
<td>10,510</td>
</tr>
<tr>
<td>Leach, Robert John</td>
<td>D</td>
<td>10</td>
<td>-600</td>
<td>10,463</td>
</tr>
<tr>
<td>Engbersteap, Ardon B.</td>
<td>D</td>
<td>11</td>
<td>-1,000</td>
<td>9,903</td>
</tr>
<tr>
<td>Watson, Ross O.</td>
<td>D</td>
<td>12</td>
<td>514</td>
<td>3,127</td>
</tr>
<tr>
<td>Nicol, William Osborne</td>
<td>D</td>
<td>13</td>
<td>0</td>
<td>2,528</td>
</tr>
<tr>
<td>Gumbale, Charles W.K.</td>
<td>D</td>
<td>14</td>
<td>0</td>
<td>1,243</td>
</tr>
<tr>
<td>Morrow, Richard R.P.</td>
<td>D</td>
<td>15</td>
<td>-200</td>
<td>1,154</td>
</tr>
<tr>
<td>Jacobson, Jerome</td>
<td>D</td>
<td>16</td>
<td>200</td>
<td>1,000</td>
</tr>
<tr>
<td>McBride, Guy T., Jr.</td>
<td>D</td>
<td>16</td>
<td>800</td>
<td>1,000</td>
</tr>
</tbody>
</table>

**EXHIBITS**

Quarterly Report to Shareholders (10-0 03-31-86) (10-0 09-30-86)
Restated Certificate of Incorporation, Inc. by Ref.
Bylaws, as Revised and Amended, Inc. by Ref.
1980 Restricted Stock Incentive Plan, Inc. by Ref. to PRX 02-11-80
Amendment to 1980 Restricted Stock Incentive Plan, Inc. by Ref. to PRX 02-14-85
Unit Incentive Plan, Inc. by Ref. to PRX 02-10-95
Bonus Plan, Inc. by Ref.
Executive Survivor Benefit Plan, Inc. by Ref.
Phantom Stock Plan, Inc. by Ref. to PRX 02-14-86
1986 Restricted Stock Plan, Inc. by Ref. to PRX 02-14-85
1986 Stock Option Plan, Inc. by Ref. to PRX 02-14-85
Portions of 1986 Annual Report to Shareholders
Subsidiaries
Consent of Independent Public Accountants

**OTHER CORPORATE EVENTS**

Debt financing, issuance of sinking fund debentures due 01/15/2017 (B 9:1 01-29-87)
Dent financing, issuance of notes due 03-01-96 (B 9:2 04-07-88) Election of 13 Directors,
Annual Shareholders' Meeting, 03-26-86 (10-0 03-31-85)
Disapproval of proposal to resume preemptive rights to shareholders, Annual Shareholders' Meeting, 03-26-86 (10-0 03-31-85)

**PRESIDENT'S LETTER**

(From Annual Report to Shareholders)

To Our Shareholders

Nine years ago, in my first annual report to you as president and chief executive officer, I stated that major changes were taking place in the industrialized world, especially in the manufacture of and marketing for chemicals. They were being caused by new and increasingly foretable worldwide competition, lower economic growth, the realities of the new energy economics, increasingly expensive raw materials, and growing Government intervention in the private sector.

Science and technology are the prime motivators of the revolutionary changes that are reshaping the industrialized world. Hercules has moved to the forefront of these advances in the areas of high-energy propulsion systems, composite materials, and advanced processes technology. Our company is clearly well situated for many years of growth and prosperity.

Sincerely, A. F. Glaccum, Chairman of the Board, President and Chief Executive Officer, January 30, 1987.

**MANAGEMENT DISCUSSION**

(From Annual Report to Shareholders)

In recent years we have pointed to the fact that Hercules has been in the process of transforming itself from a company heavily involved in petro-related commodity chemicals and relatively mature chemical businesses to a company emphasizing growth-oriented specialty chemicals and related systems businesses. This process has continued through 1986. During 1986, the company has disposed of several nonstrategic businesses and investments while increasing its investment base in the current portfolio of growth-oriented businesses and broadening its exposure in related businesses. In addition, the company is currently in the process of joint-venturing the mature and highly cyclic water-tolerate polymers business in order to capitalize on the manufacturing and marketing strengths of both partners.

As discussed earlier, Hercules expects to generate the majority of funds required for these projects internally, with the balance to be met by additional debt without significantly changing the structure of the company.

**SUBSIDIARIES**

Patex Chemie GMBH, Traun
Hercules International Trade Corporation Limited
Hercules Chemical N.V., Beringen
Hercules DB Brasil Produtos Quimicos Ltda.
Hercules Brasil, Inc.
Russ Pulp & Paper, Inc.
Hercules Chemical Corp.
Hercules Defense Electronics Systems, Inc.
Hercules Trading Corporation
Mica Corporation
Simmonds Precision Products, Inc.
Hercules Overseas Corporation
Compact Disclosure
by Jeff DeTray

Disclosure's business data base offers financial and operational information on more than 10,000 publicly traded companies.

As the CD-ROM drive becomes a more common computer peripheral, one growing segment of the information industry—on-line data bases—faces interesting challenges and opportunities. Data bases that, due to their large size, were previously available only on line can now be placed on CD-ROM and sold to individual users. The savings in on-line fees and telecommunications charges can be substantial. So is the convenience of having the information immediately available at one's desk.

Disclosure Online is a data base of companies whose shares are publicly traded on American stock exchanges. It has been available on line for some time. Now its vendor, The Disclosure Information Group, has released Compact Disclosure, a CD-ROM version of the on-line product. On a single CD-ROM disc, Compact Disclosure provides business and financial information on more than 10,000 public companies. It is updated four times a year.

A floppy disk containing search and retrieval software accompanies the CD-ROM disc, and the package runs on the IBM PC, XT, AT, and many compatibles.

Data-Base Description
Compact Disclosure (hereafter called Disclosure) offers detailed profiles of companies whose securities are traded on the New York Stock Exchange, American Stock Exchange, NASDAQ, and other over-the-counter exchanges. To be included in the data base, a company must have at least 500 shareholders of one class of stock, have at least $3,000,000 in assets, have filed a document containing financial data with the Securities and Exchange Commission (SEC) within the last 18 months, and sell goods and services to the public.

For each company fulfilling these requirements, Disclosure includes approximately 300 lines or 20,000 characters of information. First and foremost, Disclosure provides extensive financial data, including a balance sheet of assets and liabilities covering the last two or three fiscal years. This is followed by income (profit/loss) statements for the three most current fiscal years and quarterly results since the close of the last fiscal year. Finally, a small table summarizes sales and net income for the past five years.

Nonnumeric data includes such items as the name, age, title, and salary of company officers and directors. A complete list of subsidiaries shows the relation of each offspring to the parent. Disclosure also provides excerpts from the company's most recent annual report to shareholders, along with a complete list of filings made to the SEC.
Finding Your Way

Disclosure has two methods for searching for a desired piece of information: the Dialog II Emulation mode and the Easy Menu mode. Disclosure asks which you prefer as soon as you load the program (Photo 1). In whichever mode you select, you can search the facts and figures in the data base by any of the 92 fields listed in Table 1.

For users familiar with the Dialog on-line service, Disclosure has a Dialog II emulator. When you select this option, Disclosure behaves much as it would if accessed on line via Dialog, although some enhanced search, index, and format options have been added to the standard Dialog repertoire. This method is flexible and capable of quite complicated searches, but it is relatively difficult to learn, requiring frequent referral to either the instruction manual or the scanty help screen. To be fair, this mode seems to be primarily a convenience for Disclosure's many Dialog on-line users.

The uninitiated will find the Easy Menu mode much less intimidating. Almost anyone can use this menu-driven mode without reading the manual. I'll describe a couple of searches using the Easy Menu mode.

In Search of Pickles

In today's corporate world, many of the best-known companies are subsidiaries of larger firms. With Disclosure, it's easy to find out who owns whom. In this example, I'll search for the parent company of Vlasic, the pickle maker.

Photo 2 shows the initial screen of the Easy Menu mode. The first choice lets me search for a specific company name. When I make that selection, another menu (Photo 5) gives me several options. I can search for a stock ticker symbol, the full company name, subsidiary names, and so on. The third choice, Words in Company Name, is particularly interesting.

Photo 1. Main search menu. You must select either the Dialog II Emulator or Easy Menu mode.

Photo 2. The home screen of the Easy Menu mode. This is where all Easy Menu searches begin.

Photo 3. The company name menu includes several options. For my example, I select the fourth choice: Subsidiaries.
I could use this option to search for any company with the word "steel" in its name, for instance. But I am after pickles, not I-beams, so I'll select the fourth choice, Subsidiary Name.

At the top of the next screen (Photo 4), Disclosure asks for the name of the subsidiary I want to find. When I type in VLASIC, the CD-ROM drive goes to work. In less than three seconds, a message indicates that only one company out of the 10,000 in the database has a subsidiary with the word "Vlasic" in its name.

At this point, I can select the Display or Print option from the menu. After a couple of seconds, the first page of information about the search target appears (Photo 5). It turns out to be the Campbell Soup Company, the parent firm of Vlasic Foods. Indeed, if I scroll down to the subsidiaries section of the Campbell data, I see Vlasic highlighted in green (Photo 6). I can also check on Campbell’s profits for the past three years (Photo 7).

One Small Step

By selecting the second option in Photo 2, I can search for a company other than company and subsidiary names. In fact, quite a number of submenus are available, enough to provide search options for all 92 fields shown in Table 1. One of the submenu options allows for searching by members of a company’s board of directors (Photo 8).

On this screen, I typed in the name of Neil Armstrong, the first man to walk on the moon, in order to discover whether he’s on the board of directors of any firm in the Disclosure data base. As I begin to type, Disclosure's index of directors appears at the right side of the screen. With every character, the names scroll up the screen, moving closer and closer to "Armstrong, Neil A." Once the desired name is under the cursor bar, I hit the return key to initiate the search. Again, it takes only two or three seconds for Disclosure to

---

Photo 4. On this screen, I enter the name of the subsidiary for which I am searching. Disclosure tells me that only one company has a subsidiary with the word "Vlasic" in its name.

Photo 5. Here is the result of the search, the Campbell Soup Company. Shown are the first 22 lines of data.

Photo 6. The subsidiaries section of the Campbell Soup record highlights the search word "Vlasic."
find seven corporations that number the first man on the moon among their board members (Photo 9). Examining the complete company record for Lear Jet, I find Neil Armstrong listed among the other officers and directors (Photo 10).

**Advanced Searching**

You can narrow or expand any search by selecting the Modify option shown in Photo 4. For instance, it would be simple to create a search for all companies manufacturing children’s clothing, with fewer than 250 employees, more than $100,000,000 in sales, and located in Michigan. If any companies in the data base meet those criteria, Disclosure would find them. In this way, you can construct quite elaborate searches using the Easy Menu mode.

**The Price of Power**

Several pricing options are available for Compact Disclosure, and all prices include a Philips CM-100 CD-ROM drive and controller.

---

**Table 1. Disclosure’s Searchable Fields.**

<table>
<thead>
<tr>
<th>Accounts Payable</th>
<th>Current Long Term Debt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accrued Expenses</td>
<td>Current Outstanding Shares</td>
</tr>
<tr>
<td>Accumulated Depreciation</td>
<td>Deferred Charges</td>
</tr>
<tr>
<td>Auditor</td>
<td>Deferred Charges (taxes/income)</td>
</tr>
<tr>
<td>Auditor Change</td>
<td>Deposits and Other Assets</td>
</tr>
<tr>
<td>Auditor’s Report</td>
<td>Depreciation and Amortization</td>
</tr>
<tr>
<td>Capital Surplus</td>
<td>Description of Business</td>
</tr>
<tr>
<td>Cash</td>
<td>Directors/Nominees</td>
</tr>
<tr>
<td>City</td>
<td>Disclosure Company Number</td>
</tr>
<tr>
<td>Comments</td>
<td>Exchange</td>
</tr>
<tr>
<td>Common Stock Net</td>
<td>Exhibits</td>
</tr>
<tr>
<td>Company Name</td>
<td>Extraordinary Items/Discontinued Operations</td>
</tr>
<tr>
<td>Convertible Debt</td>
<td>Filings Listed</td>
</tr>
<tr>
<td>Cost of Goods</td>
<td>Finished Goods</td>
</tr>
<tr>
<td>Cross Reference</td>
<td>Fiscal Year END</td>
</tr>
<tr>
<td></td>
<td>Fortune Number</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gross Profit</th>
<th>Income Before Depreciation and Amortization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income Before Tax</td>
<td>Income Taxes</td>
</tr>
<tr>
<td>Incorporation</td>
<td>Intangibles</td>
</tr>
<tr>
<td>Interest Expense</td>
<td>Inventories</td>
</tr>
<tr>
<td>Investment in Subsidiaries</td>
<td>Investment Gains/Losses</td>
</tr>
<tr>
<td>Long Term Debt</td>
<td>Management Discussion Text</td>
</tr>
<tr>
<td>Marketable Securities</td>
<td>Minority Interest (income)</td>
</tr>
<tr>
<td>Minority Interest</td>
<td>Mortgages</td>
</tr>
<tr>
<td></td>
<td>Net Income</td>
</tr>
</tbody>
</table>
card for an IBM PC, XT, AT, or compatible. The regular commercial rate with quarterly updates is $4,500 per year ($3,500 without the updates). The college and public library rate is $3,200 with updates and $2,200 without. After two years, you own the drive unit. If you already have the proper drive, you can deduct $500 from the annual subscription rates.

At these prices, Disclosure is not an item for casual purchase. It is an alternative for users who spend many hours and a great deal of money using on-line services to gather business data. The on-line fees and telecommunications costs of some services are high enough to make Disclosure's pricing seem attractive. But cost is not the only factor. Equally important for many users is the convenience of having business data available at a moment's notice. In the final analysis, that might be Disclosure's best selling point.

Jeff DeVany is director of special products for CW Communications/Peterborough.

Photo 9. This screen displays the seven corporations with Neil Armstrong on their boards of directors.

Photo 10. The data for Lear jet shows Armstrong listed among the directors.
The meeting was chaired by Dean Snowball in Dean Merten’s absence.

1. **Minutes**
   Minutes from the November 3, 1987, Faculty Meeting were approved as distributed.

2. **Committee Reports**

   **Undergraduate Committee**
   Dr. McCollough made a motion to accept the proposed course change for "Public Utility Economics" - ECP 3423 (Attachment 1). The motion was seconded and carried unanimously.

   He also made a motion to accept the proposed course change for "Senior Seminar" - ECO 4935 (Attachment 2). This motion was also seconded and carried unanimously.

   Dr. McCollough moved that the faculty accept the proposed course change for "Business Finance" - FIN 3408 (Attachment 3) involving the reduction of hours from 4 to 3 and change the prerequisite course requirements. There was some discussion on the rationale for dropping certain topics from the course. The motion was seconded and carried, with 1 dissenting vote. Dr. McCollough then moved that the faculty approve the proposed additional requirement of achieving a minimum "C" grade in the preprofessional classes, ACG 2001 and ACG 2302, in order to major in Finance (Attachment 3). The motion was seconded and carried unanimously.

   **MBA Committee**
   Dr. Weitz discussed the proposed MBA/ISE Program. He indicated that the College had initiated discussions on joint programs with the College of Engineering several years ago, that the program will attract students with high GMAT scores and GPAs, and that the students will take the MBA courses in the fifth and sixth years of the program. Dr. Weitz made a motion that the faculty accept the proposed joint BS in Industrial and Systems and Engineering and Masters of Business Administration program (Attachment 4). The motion was seconded and passed unanimously.
Minority Affairs Committee
Dr. Gleim reported that the committee was formed several years ago and was relatively inactive until now. Dr. Gleim noted that there is only one black faculty member out of 125 in the College. Other problems identified by Dr. Gleim concern the admission and retention of black students in the undergraduate and graduate programs, and the retention of female faculty members. Dr. Gleim asked the faculty for their input and help with the problems.

3. Exchange Program with Bocconi

Dr. Tosi discussed the Bocconi Exchange Program. According to Dr. Tosi, Bocconi is the strongest business school in Italy, and it would be in the interest of the University of Florida College of Business Administration to develop an exchange program with Bocconi. He indicated that exchange arrangements would encompass third and fourth year undergraduate students, masters students and, perhaps, Ph.D research students. Faculty exchange would also be possible. Dr. Tosi indicated that Bocconi wants their faculty to come here, and that our faculty could teach graduate elective courses at Bocconi since they are interested in having these taught in English. Our faculty could also teach international courses at the masters level, since these also are to be taught in English.

Dr. Tosi explained that this program was submitted to the Undergraduate Committee and the MBA Committee and it met with no major objections. If it continues through the University Graduate Committee, it will be ready for signatures from President Criser and the President of Bocconi. He made a motion that the proposed program be approved.

Dr. Fox asked that a detailed description of the program be distributed for the faculty to review before a vote is taken. Dr. Tosi withdrew his motion and agreed to distribute the agreement to the faculty prior to the next faculty meeting.

Dr. Crum explained to the faculty that the Committee on International Programs is a University Committee which is set up to review international programs such as this. There are eight schools in Europe interested in having exchange programs with the University of Florida and Bocconi is one of them.

Dr. Snowball adjourned the faculty meeting at 3:50 p.m., inviting interested faculty members to remain for a presentation by Mr. Michael Gruenberg of a computer program, DISCLOSURE.
November 18, 1987

MEMORANDUM

TO:       Alan Merten
FROM:     W. A. McCollough
Chairman, Undergraduate Committee
RE:       Faculty Meeting Agenda Items

This is to request that the following items be placed on the agenda for the December 8 faculty meeting:

1. ECP 3423 (Public Utility Economics) proposed course change;
2. ECO 4025 (Senior Seminar) proposed course change.

Copies of Form UCC 2 and appropriate documentation are attached for each of the proposed changes.

WAM: mfr

Attachments: 2
REQUEST FOR COURSE DELETION OR CHANGE(S) IN ANY CHARACTERISTIC OF A CURRENT COURSE

Institution:  
UF  FICE 1535

Department:  
Economics

CNS Prefix and Number:  
ECP 3423

Course Title:  
Public Utility Economics

Check One:  
Deletion ___ Change X

Change:
*Title

From

To

*Credit

2

3

First Digit Assignment

Lab Indicator

UF Prefix Number

*Revised Catalog Description  (attached)

/


*NOTE: Significant changes in these items may substantially alter the placement of this course within the discipline taxonomy (i.e., they may require a different alpha prefix and/or number). If a different prefix and/or number seems appropriate, please complete a NEW COURSE TRANSMITTAL FORM and submit a course syllabus.

Please state reason(s) for the requested change(s) or deletion: Greater breadth and depth in topics covered

Which quarter is this change to become effective?  
Fall 1989

Signature of Department Chairman  
Date

Signature of College Dean  
Date

Signature of Graduate Dean (if applicable)  
Date

APPROVED _______ DISAPPROVED _______  Effective Date _______

Chairman, University Curriculum Committee/Institutional Liaison Officer  
Date

FOR FACULTY DISCIPLINE TASK FORCE AND SYSTEM STAFF USE ONLY

Does change affect Prefix or Number?  
Yes  __ No  __

If yes, is a NEW COURSE TRANSMITTAL FORM etc., attached  
Yes/No

If yes, new Prefix and Number should be:  

Remarks:  

Submitted by:  
Discipline Task Force Representative  
Date

Input into Data Base  
by  
Date
PROPOSAL TO INCREASE ECP 3423 FROM 2 CREDITS TO 3 CREDITS

I find five benefits from this change.

1. The additional class meetings permit more in-depth coverage of a number of issues. For example, technological change is currently covered in only two sessions, yet changes in economics of scale and scope are driving forces behind deregulation. Similarly, diversification is not currently examined, yet both telecommunications and electricity utilities are moving in this direction. I would like to introduce students to price sustainability, uncertainty, public utility finance, and other topics listed in the table of contents. Obviously, the concepts will be introduced at an introductory level—but the added time enables an expansion of topics.

2. More class time will make it possible to attract more students. Currently, two credits needs to be supplemented by another credit to meet credit requirements for economics majors. The change should expand the market for the course.

3. Currently, almost one-eighth of the class time is taken by two exams. I would like to use additional problem sets for the course, but that would involve disproportionate work for two credits. Last year I introduced an example of cost-sharing arrangements that generated much discussion and stimulated critical thinking. Additional credit allows me to expand the use of such problem sets.

4. Finally, past students assert that they work as hard for my two credit course as in many three credit classes. I would like to assuage my conscience!

5. The course one can help a student get a job. Undergraduates in past years have parlayed their exposure to utility concepts into jobs. This could be accomplished more effectively via three credits.
ECP 3423 Public Utility Economics

Credits: 3 Prerequisite: ECO 2023 or permission of instructor

Public regulation of infrastructure industries, including energy, telecommunications, and transportation. Issues addressed include characteristics of natural monopolies, principles of efficient rate design (including peak load pricing), entry and rate of return regulation, determinants of technological change, consequences of deregulation, and independent regulatory commissions:
ECF 3423
Public Utility Economics

Instructor: Sanford V. Berg
Office: Bryan Hall - 125 (Office Hours T, Th. 9:00-11:30)
Section: 3690X - MAT 13
Tuesday: 7th period 1:55-2:45
Thursday: 7th period 1:55-2:45

Grades: Two Exams (60%) and the Final (40%).


<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Reading</th>
</tr>
</thead>
<tbody>
<tr>
<td>8/21</td>
<td>Nature of Regulation</td>
<td>1.0 - 1.1</td>
</tr>
<tr>
<td>8/23</td>
<td>Financial Issues</td>
<td>1.2 - 1.4</td>
</tr>
<tr>
<td>8/28</td>
<td>Principles of Rate Design</td>
<td>2.0, 2.4</td>
</tr>
<tr>
<td>8/30</td>
<td>Kahn's Perspectives</td>
<td>2.1 - 2.3</td>
</tr>
<tr>
<td>9/4</td>
<td>Marginal Cost Pricing</td>
<td>2.4 - 2.5</td>
</tr>
<tr>
<td>9/6</td>
<td>Inflation/Conventional Methodologies</td>
<td>2.6 - 2.7</td>
</tr>
<tr>
<td>9/11</td>
<td>Decreasing Costs and Price Structures</td>
<td>3.0 - 3.1, 3.4</td>
</tr>
<tr>
<td>9/13</td>
<td>Multipart Pricing</td>
<td>3.2 - 3.3</td>
</tr>
<tr>
<td>9/18</td>
<td>Cost Allocation/Review</td>
<td>3.4</td>
</tr>
<tr>
<td>9/20</td>
<td>FIRST EXAM</td>
<td></td>
</tr>
<tr>
<td>9/25</td>
<td>Peak Load Pricing</td>
<td>4.0 - 4.2</td>
</tr>
<tr>
<td>9/27</td>
<td>TOU Complications</td>
<td>4.3 - 4.4</td>
</tr>
<tr>
<td>10/2</td>
<td>Regulatory Incentives</td>
<td>5.0, 5.4</td>
</tr>
<tr>
<td>10/4</td>
<td>Cost Adjustment Clauses</td>
<td>5.1, 5.2</td>
</tr>
<tr>
<td>10/9</td>
<td>Rate Base Alternatives</td>
<td>5.3, 5.4</td>
</tr>
<tr>
<td>10/11</td>
<td>Technological Change</td>
<td>6.1, 6.4</td>
</tr>
<tr>
<td>10/16</td>
<td>Innovation and Regulation</td>
<td>6.2, 6.3</td>
</tr>
<tr>
<td>10/18</td>
<td>Electric Utility Regulation</td>
<td>7.0, 7.4</td>
</tr>
<tr>
<td>10/23</td>
<td>Future/Fairness</td>
<td>7.1, 7.3</td>
</tr>
<tr>
<td>10/25</td>
<td>Conservation/Review</td>
<td>7.2, 7.4</td>
</tr>
</tbody>
</table>
## Date | Topic | Reading
--- | --- | ---
10/30 | SECOND EXAM
     | Destructive Competition | 8.A
11/1  |     | 
11/6  | Air Transportation | Reserve
11/8  | Surface Transportation | Reserve
11/13 | Telephone Regulation | 8.0
11/15 | Objectives of Regulation | 8.1, 8.2
11/20 | Competition and Regulation | 8.3, 8.4
11/22 | THANKSGIVING | 
11/27 | Rate Design for Local | 8.5, 8.6
11/29 | AT&T Divestiture | 8.7, 8.8
12/4  | Natural Gas | 9.0, 9.1, 9.A
12/6  | Rate Design | 9.2 - 9.3

**FINAL EXAM:** GROUP 14C

---

**FRANK AND ERNEST**

I ALWAYS SAY, IF IT MOVES, TAX IT...
IF IT MOVES TOO QUICKLY, REGULATE IT... AND IF IT DOESN'T MOVE, BAIL IT OUT.
REQUEST FOR COURSE DELETION OR CHANGE(S) IN ANY CHARACTERISTIC OF A CURRENT COURSE

Institution: UF  FICE 1535
Department: Economics

CNS Prefix and Number: ECO 4935
Course Title: Senior Seminar
Check One: Deletion ______ Change ______ X

Change:

Title
Credit: 2  3
First Digit Assignment
Lab Indicator
UF Prefix Number

*Revised Catalog Description


*NOTE: Significant changes in these items may substantially alter the placement of this course within the discipline taxonomy (i.e., they may require a different alpha prefix and/or number). If a different prefix and/or number seems appropriate, please complete a NEW COURSE TRANSMITTAL FORM and submit a course syllabus.

Please state reason(s) for the requested change(s) or deletion: greater breadth and depth in topics covered

Which quarter is this change to become effective? Fall 1989

Signature of Department Chairman  Date

Signature of College Dean  Date

Signature of Graduate Dean (if applicable)  Date

APPROVED ________ DISAPPROVED ________ Effective Date ________

Chairman, University Curriculum Committee/Institutional Liaison Officer  Date

FOR FACULTY DISCIPLINE TASK FORCE AND SYSTEM STAFF USE ONLY

Does change affect Prefix or Number? ______ Yes ______ No  Requested ______ Received ______
If yes, is a NEW COURSE TRANSMITTAL FORM etc., attached  Yes/No

If yes, new Prefix and Number should be:

Remarks:

Submitted by: ___________________________  Date

Input into Data Base ________ by: ___________________________  Date

Discipline Task Force Representative  Date
PROPOSAL TO INCREASE ECO 4935 FROM 2 CREDITS TO 3 CREDITS

There are three benefits from this change.

1) This will enable me to discuss five more articles in the first part of the course. As a result, the students will have a better understanding of what constitutes good and bad research before they embark on their own research.

2) More class time will make it possible to accommodate more students. A thoughtful class discussion of each student’s research takes time.

3) Many students who take this course also sign up for one credit of individual research concurrently to obtain honors in Liberal Arts and Sciences. (The procedure is described in the attached syllabus.) By making this course a three credit course, honors could be obtained simply by taking this course and satisfying some GPA requirements. This change would eliminate considerable confusion.
The purpose of this course is to give students exposure to and experience in positive economics, i.e., the development and testing of economic models. Toward this end, each student will develop and test his or her own economic model.

**FIRST PART**

We begin this section with discussions of how knowledge advances and statistical testing. It is impossible to teach you all of the statistical theory that would be useful in this course. It would be nice to have a course like GEB 3121 behind you, but the reading that has been assigned should give you enough knowledge so that you can interpret regressions. To gain some feeling for what constitutes good economic research and for what constitutes mediocre economic research, we then will read and discuss several published papers in economics in the field of public choice. (Additional papers will be assigned for later dates if the class is small enough.) This section concludes with discussions on using the computer to estimate regressions. You will see how easy it is to run regressions using SAS. The papers in the schedule below can be purchased as a packet from me at cost.

Aug. 24 - Introduction

Aug. 26 - Economics as a Science -

- Milton Friedman, "The Methodology of Positive Economics"


Aug. 31 - An overview of statistical testing - Roger D. Blair and Lawrence W. Kenny, *Microeconomics with Business Applications*, Section 4.1, 4.2

Sep. 2 - Statistical overview continued - Blair and Kenny, Sections 4.3 - 4.5

Sep. 7 - LABOR DAY - NO CLASS

Sep. 9 - The researcher's bias and mistakes -


Sep. 23 - Using the statistical package SAS (Note that these two class sessions are devoted to showing you how to run regressions on a main frame computer. I can also show you how to use the PC statistical package STATA.)

Sep. 28 - File editing with CMS

During this time, you should settle upon a topic for your research. In the past, students have researched:

- Medicare and the Demand for Health
- The Effects of Advertising on the Price of Legal Services
- Zoning Changes and Land Value
- Academic Performance and Sports Participation
- The Determinants of Admission to Medical School
- Price Discrimination by Campus Bookstores
- Savings Behavior
- The Determinants of Research and Development
- The Effects of Airline Regulation and Deregulation
- The Effects of Affirmative Action Programs
- The Allocation of Funds for Highway Maintenance
- The Determinants of Sentencing of Criminals
- Compensating Differentials in Criminal Returns
- The Location of Convenience Stores
- Tourism in Florida
- Shopping Center Rental Prices
- Apartment Rents
- Demand for Japanese Cars
- Demand for Cigarettes
- Determinants of the Incidence of Regulation
- Defense Expenditures
- The Determinants of Inflation
- U.S. Trade with Europe
- The Determinants of Migration to Localities in Florida
- The Demand for Mass Transit
- The Demand for Retail Shopping Centers
- The Demand for Branch Banks
- Land Prices
- Expenditures on Higher Education
- Consumer Installment Credit
- Political Campaign Expenditures
- Measuring Ideology
- The Demand for Import Quotes
- The Decline in SAT Scores

One of these papers has been published and several others could have been. It is fun to use economics to analyze a question you've always been interested in. The subject matter of some your field courses in economics (e.g., public finance) and of articles in economics journals provide another source of topics. You should come in and discuss your topic with me.
SECOND PART

In the second part of the course, each student will present a proposal which develops the hypothesis to be tested and describes the manner in which it will be tested. You must ascertain whether the project is feasible; that is, are the data that are required to test the hypothesis available? What variables will you create? What are your predictions about these variables? From what sources will the data be obtained? The dates for this part include Sep. 30, Oct. 5, 7, 12, 14, 19, 21, 26, 28, and Nov. 2. Written proposals are due on week prior to the class at which they are scheduled.

THIRD PART

In the third part of the course, each student will present his or her results. Students are strongly urged to use the computer as early as possible. Empirical research takes time. The dates for this part include Nov. 4, 9, 16, 18, 23, 25, 30 and Dec. 2, 7, 9. Again, papers describing the results and their relationship to the hypothesis are due one week prior to the class at which they are scheduled. In your paper, restate your predictions, describe your data and the construction of your variables, and discuss whether your results support or refute your hypothesis.

FINAL PAPER

Finally, your research project culminates in a paper (a minimum of 10 pages), which without exception is due Tuesday, December 15 at 10:00 a.m. There is no exam in this course. The paper will develop the model and discuss the testing of the model, paying particular care to how the revised results relate to the model. Do not waste your money purchasing a binder for the paper.

MISCELLANEOUS

Economic research profits considerably when many minds think deeply about the problem to be researched. Consequently, class participation will play an important role in this course; each student will be expected to contribute to the discussion of published papers and to the discussion of student research. The level and quality of classroom participation will affect the final grade. To further encourage this participation, I will withhold my comments as much as possible until student comments have been exhausted.

HONORS

Economics majors in the College of Arts and Sciences who have a 3.3 average in all economics work can receive departmental honors by combining 1 hour of ECO 4905 with this course. This can be done very simply by signing up for 1 hour of ECO 4905 this semester under my supervision. I would then require 3 credits worth of work on your project rather than 2 credits worth of work; only one project would be entailed. You should note that in order to receive college honors, you must first receive departmental honors.
MEMORANDUM

To: Alan Merten
From: W. Andrew McCollough
Subject: Curriculum Changes

November 24, 1987

The Undergraduate Committee would like to recommend the following curriculum changes at the next College faculty meeting.

1. FIN 3408, Business Finance, be reduced in number of hours from four (4) to three (3).

2. The prerequisites for FIN 3408 be changed from ACG 2001, MAC 3224, ACG 2302 (coreq.) to ACG 2001, ACG 2302.

3. The requirements to become a major in Finance be changed from a "C" in FIN 3408 to "C" grades in ACG 2001, ACG 2302 and FIN 3408.

WAM: kd
REQUEST FOR COURSE DELETION OR CHANGE(S) IN ANY CHARACTERISTIC OF A CURRENT COURSE

Institution: UF, FICE 1535
Department: Finance, Insurance and Real Estate
CNS Prefix and Number: FIN 3408
Course Title: Business Finance
Check One: Deletion Change x

Change: From To

*Title

*Credit 04 03

First Digit Assignment

Lab Indicator

UF Prefix Number

*Revised Catalog Description Prereq: ACG 2001 and ACG 2302.

*NOTE: Significant changes in these items may substantially alter the placement of this course within the discipline taxonomy (i.e., they may require a different alpha prefix and/or number). If a different prefix and/or number seems appropriate, please complete a NEW COURSE TRANSMITTAL FORM and submit a course syllabus.

Please state reason(s) for the requested change(s) or deletion: Revised course content.

Semester Which semester is this change to become effective? Fall 1988

Signature of Department Chairman 11/23/87
W. A. McCollough Date

Signature of College Dean Date

Signature of Graduate Dean (if applicable) Date

APPROVED DISAPPROVED Effective Date

Chairman, University Curriculum Committee/Institutional Liaison Officer Date

FOR FACULTY DISCIPLINE TASK FORCE AND SYSTEM STAFF USE ONLY

Does change affect Prefix or Number? Yes No Requested

If yes, is a NEW COURSE TRANSMITTAL FORM etc., attached Yes/No

Received

If yes, new Prefix and Number should be:

Remarks:

Submitted by: Discipline Task Force Representative Date

Input into Data Base by: Date
October 1, 1987

MEMORANDUM

To: F.I.R.E. Faculty

From: W. Andrew McCollough

Subject: Finance Curriculum Changes

I will propose the following curriculum changes to the faculty at the next Departmental faculty meeting. Please let me have any comments or suggestions concerning these proposals prior to that time.

1. The prerequisites stated for FIN 3408 be changed from MAC 3224, ACG 2001, ACG 2301 (coreq.) to ACG 2001, ACG 2302.

The calculus prerequisite is redundant for College of Business Administration students and perhaps too prohibitive and irrelevant for the non-business student.

The ACG 2302 is a relevant prerequisite and for business majors would, as a pre-professional requirement, typically be taken prior to FIN 3408.

2. FIN 3408 be reduced in number of hours from four (4) to three (3).

This would call for a revision of the syllabus and some topics currently covered would either be removed or covered in less detail. Proposed syllabus is forthcoming.

3. The current requirement to be a major in Finance is:
   a. Admission to the College of Business Administration.
   b. A minimum C grade in FIN 3408.

   An additional requirement would be imposed.
   c. A minimum C grade in ACG 2001 and 2302.

The grades in the preprofessional accounting classes are strongly related to successful completion of the finance curriculum. In Fall, 1986, there were 30 students majoring in finance that had D grades in either ACG 2001 and/or 2302. Their average GPA was 2.2.
## FIN 3408 - Changing to a 3-Hour Course

Using

**Fundamentals of Financial Management**

<table>
<thead>
<tr>
<th>Chapters</th>
<th>Subject</th>
<th>4-Hours</th>
<th>3-Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>-</td>
<td>Introduction</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>1-2</td>
<td>Overview, Organizations, Taxes</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>Markets and Interest Rates</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>Discounted Cash Flow Analysis</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>Bond and Stock Valuation Models</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>6</td>
<td>Risk and Rates of Return</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>7</td>
<td>Analysis of Financial Statements</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>8</td>
<td>Financial Forecasting</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>9-10</td>
<td>Capital Budgeting</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>11-12</td>
<td>Common Stock and Debt</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>13</td>
<td>Hybrid Financing</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>14</td>
<td>Cost of Capital</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>15</td>
<td>Capital Structure and Leverage</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>16</td>
<td>Dividend Policy</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>17</td>
<td>Working Capital Policy</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>18</td>
<td>Cash and Marketable Securities</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>19</td>
<td>Receivables/Inventory Management</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>20</td>
<td>International Finance</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>21</td>
<td>Mergers and Divestitures</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>-</td>
<td>Course Review</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>-</td>
<td>Exams</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>-</td>
<td>Holidays</td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Days Per 16-Week Term 64 48

On the following pages is a subject outline of those topics I try to cover in FIN 3408 during the course of the term. Those topics marked with an asterisk are only discussed if time permits (usually it does not for many of them). I believe that the proposed scheduling for a 3-hour course will still give the students a good, basic understanding of the fundamentals of financial management. Those items which are not covered probably could, and should, be covered in upper level courses, where they may be covered in significantly more depth.
CURRICULUM LEADING TO THE CONCURRENT DEGREES OF
BACHELOR OF SCIENCE IN INDUSTRIAL AND SYSTEMS ENGINEERING
AND MASTER OF BUSINESS ADMINISTRATION

To enhance their careers, many graduate engineers embark on the degree of
Master of Business Administration (MBA). The combination of a bachelors'
degree in engineering and the MBA is regarded as a valuable means for
obtaining managerial or executive positions. The College of Business
Administration and the College of Engineering, through the Department of
Industrial and Systems Engineering offer an efficient opportunity for
concurrently obtaining the degrees of MBA and BSISE.

An applicant for the combined curriculum must first be admitted to the
Department of Industrial and Systems Engineering for study toward the
degree of BSISE. After completing a minimum of 80 semester hours of
course work and with the encouragement and endorsement of the Department
of Industrial and Systems Engineering, the student should apply to the MBA
program for acceptance into the combined program. Application to the MBA
program should be completed prior to April 1 for admission into the fall
semester class. In order to apply to the joint program the student should
have a GPA of 3.0 or higher and a score on the Graduate Management
Admissions Test (GMAT) of 600 or better. Foreign students must also have
a score on the TOEFL in excess of 600.

A student in the concurrent degree program could begin the MBA program
courses only in the fall semester after having completed a minimum of 105
semester hours in the BSISE program. All first year core courses
not specifically waived for this joint program must be completed
during the first two semesters of MBA course enrollments. Any courses
deleted from the first year core courses must be replaced by a course
required in either the MBA or BSISE portion of the program in the semester
in which the waived core course is offered.
The concurrent curriculum is intended for superior students only. Those completing the concurrent curriculum receive two degrees that are fully equivalent to the degrees taken separately. The concurrent curriculum contains all program requirements of both degrees, but, owing to the symbiotic nature of the two disciplines, entrants into the concurrent program are relieved of certain specific course requirements. In particular the following courses are deleted from the BSISE curriculum:

1. EIN 4354  
2. ACG 2001  
3. ENC 3213  
4. Microeconomics  
5. 3 credits of technical elective

The following courses are deleted from the MBA curriculum:

1. CAP 5009  
2. GEB 5756  
3. MAN 5505  
4. 3 credits of quantitative elective

These deletions shorten the concurrent curriculum by 27 credits as compared to taking the two degrees separately. The combined program should take about six years to complete.
# SAMPLE PROGRAM PLAN FOR BSISE/MBA

**Fall 1**
- English I (3)
- Humanities (3)
- Chemistry I (4)
- Calculus I (4)
- **Total** (14)

**Spring 1**
- English II (3)
- Social Science (3)
- Chemistry II (4)
- Calculus II (4)
- **Total** (14)

**Fall 2**
- Calculus III (4)
- Physics I (4)
- Humanities (3)
- Biology (3)
- **Total** (14)

**Spring 2**
- Diff Equat (3)
- Physics II (4)
- Social Science (3)
- Fortran (2)
- Graphics (2)
- **Total** (14)

**Fall 3**
- Statistics (3)
- Matrix Methods (3)
- Statics (3)
- Numerical tech (2)
- Materials (3)
- **Total** (14)

**Spring 3**
- Statistics (3)
- Transform Meth (3)
- Strength of Mat (3)
- Quality Control (3)
- Humanities (3)
- **Total** (15)

**Fall 4**
- Operations Res (3)
- Thermo (3)
- Work Design (3)
- Simulation (3)
- **Total** (12)

**Spring 4**
- Operations Res (3)
- Electrical Engrg (3)
- Production & Inv (4)
- Facilities (3)
- **Total** (13)

**Fall 5**
- Financial Acq (3)
- Managerial Eco (3)
- Organiz Behav (3)
- Elective ( )
- Elective ( )
- Prob Ana I (1)
- **Total** (16)

**Spring 5**
- Managerial Acq (3)
- Financial Mgmt (3)
- Internat Bus (3)
- Marketing Mgmt (3)
- Elective ( )
- Prob Ana II (1)
- **Total** (16)

**Fall 6**
- Legal Elective (3)
- Elective ( )
- Elective ( )
- Elective ( )
- **Total** (12)

**Spring 6**
- Business Policy (4)
- Elective ( )
- Elective ( )
- Elective ( )
- **Total** (13)

* Earliest time for application to the MBA program.
November 25, 1987

MEMORANDUM

TO:    Faculty

FROM:  Alan G. Merten

SUBJECT: Amendment to the Faculty Meeting Agenda

Attached is an amended copy of the Faculty Meeting Agenda for the December 8, 1987 meeting. Also attached is an item which will serve as Attachment 5 and will serve as support material for the MBA Committee presentation regarding ISE Program.

AGM:sh

Attachments
GENERAL FACULTY MEETING
Tuesday, December 8, 1987
3:00 p.m.
102 BUS

AGENDA

1. Minutes from November 3, 1987, Faculty Meeting*

3. Committee reports
   Undergraduate - Dr. McCollough
   Proposed course changes
   ECP 3423 (Public Utility Economics) - Attachment 1
   ECO 4935 (Senior Seminar) - Attachment 2
   FIN 3408 (Business Finance) - Attachment 3
   
   MBA - Dr. Weitz
   ISE Program - Attachment 5

   Minority Affairs -

4. Exchange Program with Bocconi - Dr. Tosi

5. Demonstration of DISCLOSURE DATABASE** - Attachment 4
   Presented by Michael Gruenberg, National Sales Manager for DISCLOSURE (15 minutes)
   **Presenter and equipment will be available after meeting for questions

* Minutes to be distributed separately

cc: Larry Humes
    Lee-Ann Humenik

Attachments
To enhance their careers, many graduate engineers embark on the degree of Master of Business Administration (MBA). The combination of a bachelors degree in engineering and the MBA is regarded as a valuable means for obtaining managerial or executive positions. The College of Business Administration and the College of Engineering, through the Department of Industrial and Systems Engineering offer an efficient opportunity for concurrently obtaining the degrees of MBA and BSISE.

An applicant for the combined curriculum must first be admitted to the Department of Industrial and Systems Engineering for study toward the degree of BSISE. After completing a minimum of 80 semester hours of course work and with the encouragement and endorsement of the Department of Industrial and Systems Engineering, the student should apply to the MBA program for acceptance into the combined program. Application to the MBA program should be completed prior to April 1 for admission into the fall semester class. In order to apply to the joint program the student should have a GPA of 3.0 or higher and a score on the Graduate Management Admissions Test (GMAT) of 600 or better. Foreign students must also have a score on the TOEFL in excess of 600.

A student in the concurrent degree program could begin the MBA program courses only in the fall semester after having completed a minimum of 105 semester hours in the BSISE program. All first year core courses not specifically waived for this joint program must be completed during the first two semesters of MBA course enrollments. Any courses deleted from the first year core courses must be replaced by a course required in either the MBA or BSISE portion of the program in the semester in which the waived core course is offered.
The concurrent curriculum is intended for superior students only. Those completing the concurrent curriculum receive two degrees that are fully equivalent to the degrees taken separately. The concurrent curriculum contains all program requirements of both degrees, but, owing to the symbiotic nature of the two disciplines, entrants into the concurrent program are relieved of certain specific course requirements. In particular the following courses are deleted from the BSISE curriculum:

1. EIN 4354
2. ACG 2001
3. ENC 3213
4. Microeconomics
5. 3 credits of technical elective

The following courses are deleted from the MBA curriculum:

1. CAP 5009
2. GEB 5756
3. MAN 5505
4. 3 credits of quantitative elective

These deletions shorten the concurrent curriculum by 27 credits as compared to taking the two degrees separately. The combined program should take about six years to complete.
## Sample Program Plan for BSIE/MBA

### Fall 1
- English I (3)
- Humanities (3)
- Chemistry I (4)
- Calculus I (4)

Total: (14)

### Spring 1
- English II (3)
- Social Science (3)
- Chemistry II (4)
- Calculus II (4)

Total: (14)

### Fall 2
- Calculus III (4)
- Physics I (4)
- Humanities (3)
- Biology (3)

Total: (14)

### Spring 2
- Diff Equat (3)
- Physics II (4)
- Social Science (3)
- Fortran (2)
- Graphics (2)

Total: (15)

### Fall 3
- Statistics (3)
- Matrix Methods (3)
- Statics (3)
- Numerical tech (2)
- Materials (3)

Total: (14)

### Spring 3
- Statistics (3)
- Transform Meth (3)
- Strength of Mat (3)
- Quality Control (3)
- Humanities (3)

Total: (15)

### Fall 4 *
- Operations Res (3)
- Thermo (3)
- Work Design (3)
- Simulation (3)

Total: (12)

### Spring 4
- Operations Res (3)
- Electrical Engrg (3)
- Production & Inv (4)
- Facilities (3)

Total: (13)

### Fall 5
- Financial Acg (3)
- Managerial Eco (3)
- Organiz Behav (3)
- Elective (1)
- Elective (1)
- Prob Ana I (1)

Total: (16)

### Spring 5
- Managerial Acg (3)
- Financial Mgmt (3)
- Internat Bus (3)
- Marketing Mgmt (3)
- Elective (1)
- Prob Ana II (1)

Total: (16)

### Fall 6
- Legal Elective (3)
- Elective (1)
- Elective (1)
- Elective (1)

Total: (12)

### Spring 6
- Business Policy (4)
- Elective (1)
- Elective (1)
- Elective (1)

Total: (13)

* Earliest time for application to the MBA program.