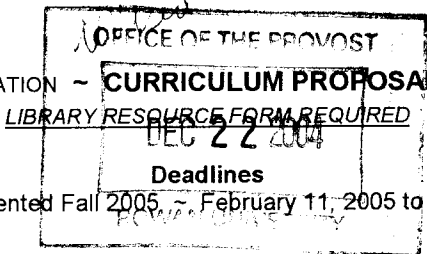


PROCESS A NON-GENERAL EDUCATION ~ **CURRICULUM PROPOSAL**

SCC #04-05- 113



October 8, 2004 to be implemented Fall 2005, ~ February 11, 2005 to be implemented Spring 2006

PROPOSAL TITLE: Decision-Making Tools for Managers

Sponsor(s): Faye X. Zhu _____ E-Mail: zhu@rowan.edu _____ Ext: 5431

DEPARTMENT: Management/MIS _____

COLLEGE: College of Business _____

If Liberal Arts & Sciences CHECK : History/Humanities Math/Sciences Social/Behavioral Sciences

XX UNDERGRADUATE GRADUATE

THE ATTACHED **NON-GEN-ED** PROPOSAL IS BEST DESCRIBED BY THE ITEM(S) CHECKED

- XX** New non gen-ed course
- Short-term non gen-ed course
- Minor curricular changes (fewer than three) to:
- Existing non gen-ed course
- Non gen-ed degree requirements
- Major
- Minor, specialization, concentration, track, certificate program

THE FOLLOWING SIGNATURES REPRESENT APPROVAL

Department Chair: [Signature] Date: 10/5/04

Department Curriculum Chair: [Signature] Date: 10/5/04

Academic Dean: [Signature] Date: 10/5/04

COLLEGE CURRICULUM COMMITTEE

OPEN HEARING Date: 11/29/04 Approved Not Approved

COLLEGE CURRICULUM CHAIR: [Signature]

Senate Curriculum Chair Signature: [Signature] Date: Senate Announcement 12/20/04

Comments: _____

EXECUTIVE VICE PRESIDENT/PROVOST Signature: [Signature] Date: 2/14/05

Approved Not Approved

REGISTRAR

Date: 2/21/05 Course Description Received & Approved ~ Hegis Taxonomy & Course #: 0506311

Registrar Signature: [Signature]

NOTIFICATION FORWARD

- SCC Chair Academic Dean Department Chair Registrar IR CAP
- VP Student Affairs Others

28. ~~37~~ 37.

Tim 3/24/05
DB 3/24/05
[Signature]

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APPENDIX C

New Course Proposal

Decision-Making Tools for Managers

Details:

- a. Course title: Decision-Making Tools for Managers
- b. Hegis Number: 0506.3XX
- c. Sponsor(s): Faye X. Zhu
Department of Management/MIS
- d. Credit hours: 3 s.h.
- e. Course level: Undergraduate (Junior 300 level)
- f. Prerequisites: Operations Management HEGIS 0506.305
57 credit hours
admitted to Management Specialization or permission of Instructor
- g. Suggested time and scale of implementation:
Initial Offering, Spring, 2006
Multiple sections (at least 1 section per each academic semester)

Curricular Effect:

Specialization Impact:

This course was developed as part of a Major Program Revision for the Management Specialization (Mgt) within the College of Business in order to meet the needs of the students enrolled in the Management Specialization as described in the Major Program Revision Proposal to which this course is attached.

The revisions include developing three new required Management courses, moving three currently required courses to the electives bank, creating one new Management elective, and revising the electives that Management students complete in order to graduate. Each of these revisions is based on improving the curriculum and is discussed in detail in the Major Program Revision Proposal.

Offerings:

The overall impact of these courses will have no effect on other departments and colleges within the University.

Adequacy:

The major impact will be within the Management Specialization. As a result of the totality of the revisions, some Management Specialization courses will be offered less often but the faculty teaching the currently required courses will be reassigned to the proposed new courses. In summary, the Management/MIS department has the depth and quality of faculty to implement these proposed revisions with no diminution of teaching effectiveness. No additional faculty will be required. The impact is completely explained on page 12 of the Process C: Major Program Revision to which this proposal is attached.

Recommended Library Resources:

The existing library holding and online database will meet the library requirements for the proposed Leadership and Supervision for Manager course.

Course Rationale:

This course in Decision-Making Tools for Managers is being developed to respond to one or more of the reasons stated as the foundation for revisions in the Mgt Specialization - specifically changes in the industry requirements for generalist managers; reports from employers of Management (Mgt) Internships that students have weaknesses in managerial problem solving areas; and the College of Business (COB) ETS exam indicates that Mgt students have weaknesses in the quantitative skills and analysis areas.

The Department of Management / MIS is committed to improving the educational experience of its generalist management students through the process of continuous improvement and outside verification of student progress. From this perspective, the Management Specialization is revitalizing its curricular structure by improving course offerings in the area of business problem-solving skills and quantitative skills. This proposed course will focus on helping students acquire the analytical, critical thinking, and quantitative skills considered to be one of the most important competencies for undergraduate business students. This course will also be designed to partially satisfy the learning goals for skills and themes required under revised AACSB accreditation curriculum standards.

Essence of the Course:

- This course will focus on the application of selected statistical tools and quantitative models to the recurring managerial tasks of problem solving and decision-making. It will expose students to real problems in many business disciplines and show them how these problems can be investigated and evaluated with analytical methods. Microsoft Excel,

SPSS, and other commercial spreadsheet add-ins for business (e.g., POM) will be used extensively throughout the course. The course will increase students' knowledge of common analytical tools and help them identify those business situations in which using quantitative analysis would enhance the quality of business decisions. It will also help students develop spreadsheet skills that will add immediate value in other business courses and in their future careers. The course will be taught based on a hands-on, example-driven and practical, and spreadsheet-based approach. The emphasis will be placed upon the process of problem analysis, model building, spreadsheet solution, and managerial interpretation.

- Overall learning objectives:

- Gain an understating of how business decision-making and organizational effectiveness can be improved by the use of modeling and other rational approaches.
- Gain an ability to identify which business decisions and challenges can be addressed using these quantitative tools and rational approaches.
- Be able to analyze and solve business problems using relevant and appropriate analytical tools including sensitivity analysis using Microsoft Excel, SPSS and other commercial business spreadsheet add-ins (e.g., POM).
- Be able to interpret computer output from the managerial perspective.

- Topical content:

- Decision making under uncertainty

Students will learn how to choose among alternative business decisions when uncertainty is involved, how early decisions affect decisions made at a later stage, how attitudes towards risk can affect the decision analysis, etc. They will strengthen their abilities to approach decision problems in a systematic manner by listing decision alternatives, listing the uncertain outcomes and their probabilities, calculating expected monetary values, and obtaining the best decisions.

- Applying linear programming (LP) models in business context

Students will acquire analytical and quantitative problem-solving skills by applying LP models to solve a variety of business problems in practical situations faced by managers, e.g., resource allocation, labor scheduling, inventory management, selection of advertising median, management of cash flow, staffing, tax computation, and many others.

- Applying spreadsheet modeling in business context

Students will gain insight into solving real business problems, such as cost projections, break-even analysis, calculation of NPV, ordering with quantity discounts, etc. using spreadsheet modeling, Solver optimization, and sensitivity analysis.

Students will learn how to analyze the relationship between variables and how to make predictions and decisions using regression analysis. Business applications, including the study of stock prices, customer demand, production costs, and wages of employees will be analyzed and interpreted from the perspective of making effective and high quality management decisions. SPSS will be used to facilitate the analysis.

- Applying time series analysis and forecasting in business context

Students will learn how to project future values of business variables based only on the past and present observations of that variable, e.g., forecast customer demand, annual gross revenues, movement in stock prices and interest rates. Excel / SPSS will be used to support these forecast techniques.

- Applying statistical applications in business quality control context

Students will learn how to create various types of control charts to monitor the variation in the characteristic of a product or service, e.g., average number of customer complaints per day, measurement in the diameter of a crankshaft, proportion of defective gear boxes, etc. The distinction between common causes and assignable causes of variation in process performance will be discussed.

In each topic area, the problems from operations management, finance, marketing, and/or human resources will be posed, structured, analyzed, and answered using spreadsheet-based and statistical software packages, e.g. SPSS. Students will report their analysis and conclusions in written and presentation formats.

- Evaluation of students and grading procedures: The evaluation of student performance in this course will be based on a combination of examinations, group case studies, homework assignments, as well as classroom participation.
- Course Evaluation: The course evaluation will be consistent with practices in the Department of Management / MIS and the College of Business:
 - Student evaluations (SIR) will be administered every time the course is offered.
 - The Management Specialization Assessment Test, which is conducted every spring semester, will assess student learning in relation to the overall student learning objectives set by the course and the Management program.
 - The Management Specialization Program Review, which is conducted every academic year, will assess the value of this proposed course in relation to the overall student learning objectives set by the Management program and the College of Business.

Results of Consultations:

A consultation letter from the Mathematics Department is attached to this proposal

Catalog Description:

0506.311 ~~3XX~~ 3. s.h.

Decision-Making Tools for Managers

(Prerequisites: ~~Operations Management~~ 0506305, 57 credit hours, admitted to Management Specialization or permission of the instructor)

This course will focus on how the quality of managerial problem solving and decision-making can be enhanced by the use of business statistical tools and quantitative models. It will increase students' knowledge of how to identify business situations which would benefit by the application of common business analytical methods and models and require that they use these methods and models to solve realistic business problems. Spreadsheet and statistical software packages will be used intensively throughout the course.

DB
3/24/05

Rowan University
**CURRICULUM PROPOSAL
 LIBRARY RESOURCE FORM**

The purpose of this form is to provide a channel of communication between the library and faculty changing and designing new courses/programs. The information will be used to assess the resources available in the library, and to identify resources the library should acquire to support the course/program. The information will also provide rationale for institutional support for library acquisitions. This form should be completed in a coordinated effort between the course sponsor(s) and the academic department liaison librarian. **THIS FORM MUST BE COMPLETED FOR ALL CURRICULUM PROPOSALS.**

- The sponsor(s) complete parts A & B. If assistance is required to complete parts A & B, please notify the liaison librarian.
- Forward this form to the librarian who will complete parts C, D & E.

This form must be completed and attached to the original curriculum proposal before being approved by the Senate Curriculum Committee

A. College College of Business Department Management/MIS
 Proposed by Faye X Zhu Date 10/04/04
 Course Title Decision-Making Tools For Managers
 Anticipated Date for Course/Program Offering: Spring, 2006

B. List specific resources that should be acquired to support this course.

ABI-Infom *quantitative*
Search engines which include business data
organized by readers.
Indices of specific businesses and industries

C. Describe the resources available in the library to support this course/program, including reference, monographic, electronic databases, audio-visual materials, etc. A summary statement is sufficient.

ABI Infom/Global *Monographic titles covering the described*
IEEE *content are up-to-date and numerous.*
Emerald *Searching using subject headings such as*
ACM Digital Library *"Business Forecasting," "Application"*
Science Direct *software decision making case studies," "management*

D. List key periodicals available in the library to support this course/program

information systems decision-making case studies," etc.

E. Librarian comments and recommendations

I think we have ample support coverage for this course as it has been described.

Name: LIBRARIAN LIAISON Connie Rosenberger Librarian Signature Connie Rosenberger



Mathematics Department

TO: Faye X. Zhu , Department of Management/MIS

FROM: Ronald J. Czocho, Chairman *Ronald J. Czocho*
Mathematics Dept.

DATE: October 6, 2004

RE: Consultation for new courses entitled *Decision-Making Tools for Managers* and *Managerial Data Analysis*

I have reviewed your proposals for these two courses and have consulted with the members of the Mathematics department. We are happy to see the development of two new courses in the Management curriculum that build on the knowledge that students bring from their calculus and statistics classes. It is particularly relevant that these quantitative courses require statistics and calculus as prerequisites and use the quantitative skills developed in the mathematics courses to address management related problems.

While both courses that you propose are distinct from the mathematics courses listed as prerequisites, there is some overlap in both courses with ideas covered in Statistics I. This overlap is necessary to make the courses complete, but we recommend that any review of the basic ideas of descriptive and inferential statistics that is covered in your courses keep in mind that this material is review and not new to the students.

We are pleased to see that you will be using both Excel and dedicated statistics software in these courses. In our Statistics II course, which would be at roughly the same level as your Managerial Data Analysis course, we use dedicated statistics software exclusively. If your course is designed to accomplish some of the same goals as our Statistics II course, it is a necessity for your students to use a statistical package that is more highly regarded with respect to statistical analysis than Excel.

Since most of your majors do not now take Statistics II, these courses should not have much of an effect on enrollment in our course.