CURRICULUM REDESIGN UPDATE: ON INTEGRATING SIX BUSINESS DISCIPLINES IN THE UNDERGRADUATE BUSINESS CORE CURRICULUM

Patricia Sendall, Merrimack College
Susan E. Pariseau, Merrimack College

ABSTRACT

At the ABE 2005 conference, the author presented a paper on her college's effort to update, improve and integrate six functional areas of business in the sophomore-level core curriculum. The curriculum structure and assessment tools were also presented. This paper is an update on that course one year later. It addresses the Business School's efforts toward continuous improvement of the course based on student feedback and faculty input from the Spring 2005 semester.

INTRODUCTION

Merrimack College is a private, Catholic Augustinian college, located 30 miles north of Boston with undergraduate student population of 2150 students. It offers majors in the Liberal Arts, Sciences, Engineering and Business.

The Girard School of Business and International Commerce is a candidate for AACSB accreditation and expects to be evaluated by an AACSB peer review team in the Spring of 2007. In addition to strategic planning and assessment, the Girard School faculty has worked tirelessly on the redesign of the core curriculum with initial implementation in the Fall of 2001, beginning with the freshman core courses.

Prior to the redesign, the curriculum was based on a 20+ year old model, that is, several 3-credit courses taught in "silos" without any interdisciplinary integration. Those courses were: Business Computer Applications, Introduction to Management, Principles of Marketing, Accounting I and II, Finance, Business Law, Statistics I and II and Business Policy. In addition to the core within the Business School, students were expected to take Macro and Microeconomics, College Algebra and Business Calculus.

The old core courses were "thrown out" and a completely new core curriculum was developed. Business Enterprise I and II, each 4 credits, were taught in fall and spring of the student's freshman year. BE101 and 102 integrated all of the functional areas of business and was taught by teams of two faculty, one from the "soft" side of management (i.e., organizational behavior, marketing, etc.) and another from the "hard" side of management (i.e., accounting, finance, etc.).

In addition, whereas under the old curriculum, the students were required to take two 3-credit courses in each of the following, Accounting, Statistics and Mathematics, the new curriculum model consolidated each area into one 4-credit hour course. With input from the Girard School faculty, the Math Department redesigned the business math requirement by combining key elements of College Algebra and Business Calculus to create one 4-credit course, Math for Business. The Statistics faculty also solicited the Girard School faculty for input and crafted one 4-credit Statistics course based on their input. Finally, the Accounting faculty collaborated and devised a new 4-credit course with elements of Accounting that they concluded "every business major should know." One of the biggest undertakings of the curriculum redesign was to develop the sophomore-level core, which was to include the functional areas of Finance, Marketing, Operations Management, Management Information Systems, Organizational Behavior (OB), Law and Ethics. In addition, the faculty had concluded that they should not longer teach the core in "silos" and therefore should be an integrative element to the courses.

BUSINESS ENTERPRISE III

The sophomore level core, Business Enterprise III, was a 12-credit course that included the following two-credit units: Finance, Marketing, Operations Management, Management Information Systems, Organizational Behavior, Law and Ethics. Law and Ethics was taught together as one course. The students were scheduled to take the courses in cohorts. One-half of the sophomore business class took Marketing, Management Information Systems and Law/Ethics, while the other half took Operations Management, Finance and OB. The classes were conducted twice a week for two hour segments. At the end of the 7th week, the cohorts would switch and take the other three courses, starting a new unit for both students and faculty. Each class had two exams; most required a brief student presentation.

At the first class, we gathered the students in one room to set the goals and expectations of the course. They were introduced to the common syllabus that outlined the learning objectives of the overall course and we introduced the integrative team project. The students were required to fill out a questionnaire. They were randomly selected and assigned to teams of 3 or 4, with at least one student having indicated that he/she had a car on campus. In addition, each faculty group from the various functional areas gave a brief presentation outlining expectations for their course. Each functional area was required to have a common syllabus which flowed from the overall course syllabus.

The purpose of the integrative team project was to explore and analyze, in modest depth, the business functions of an existing organization, in order to understand how they work together interdependently. The student's data collection addressed all six modules or functional areas. The faculty from each area provided the students with a list of questions that they might ask during the discovery phase of their project. Their final analysis was to result in an understanding of "how the functional areas work together to make decisions and take actions in support of the company's strategic objective."

The teams were responsible for selecting an off-campus organization that had not been studied during the previous year. A faculty advisor was assigned to each team. The advisor's role was to provide feedback and assistance to the team and to receive the required deliverables. Teams were encouraged to communicate regularly with their team advisor.

At the end of the semester, the teams were required to prepare a brief integrative summary of its company analysis, and then present its findings (supported by PowerPoint slides) to the team's six professors.

At the end of the semester, an electronic evaluation instrument was administered. The students were asked to evaluate each of their professors, each of their course modules and the overall course. Based on the evaluation data and in the spirit of continuous improvement, the BE220 course coordinator (and member of the BE220 faculty) created a curriculum development plan

CURRICULUM DEVELOPMENT PLAN

In order to provide for a systematic rather than ad hoc process of curriculum oversight and revision, the core curriculum is subject to a comprehensive annual review culminating in a written Course Development Plan (CDP). The general process involves an annual report from each of the Business Enterprise (BE) teams; the CDPs will evaluate the following:

- The effectiveness of specific learning activities within the course
- Learning outcome attainment
- The methods through which AACSB Standards 13 and 14 are satisfied
- How consistency of educational experiences is maintained across multi-section courses
- Remedies for course deficiencies identified through assessment data

CDPs will conclude with a set of specific recommendations that demonstrate a commitment to continuous improvement. Appropriate appendices to the CDP include syllabi, exams, and major assignment descriptions.

CDPs will be submitted to the curriculum committee by:
Fall courses: February 15
Spring courses: October 15

The curriculum committee is responsible for reviewing and approving CDPs, offering feedback where warranted. In instances where the committee concludes that the CDP does not adequately provide for continuous improvement, the CDP may be remanded for additional work. The curriculum committee in conjunction with core teaching teams and track chairs will monitor the implementation of CDPs.

In addition to overseeing "within-course" evaluation and development, the curriculum committee is also responsible for maintaining curricular effectiveness across the BE sequence. Central to this process, the committee will ensure that the core curriculum adequately and effectively achieves the school's learning outcomes. In instances where assessment data suggest deficiency, the curriculum committee will investigate whether the problem is course-based or the result of problems in courses earlier in the core sequence.

BE220 COURSE DEVELOPMENT PLAN

At the close of the semester, online evaluations were administered to the students (see Appendix A). The students were asked to separately evaluate each one of their professors and each one of their courses. The following Course Development Plan, written in the Fall of 2005, is based on input and output from BE 220 during spring 2005 semester. Although the BE 220 course is taught in both fall (2 sections) and spring semesters (8 sections), it is primarily a spring semester course.

Learning Activities

The Course Evaluation provides information about the various learning activities. Students perceived that that class discussion (81%), group projects (74%), lecture (71%), use of technology (68%), and use of cases or articles (53%) were most useful in helping to achieve the BE 220 learning outcomes. All other activities were not deemed helpful by more than half of the students. Student presentations were only considered to be helpful by 33% of the students. In light of this data, faculty must reconsider the use of student presentations.

Based on the student comments, it appears that the students valued the work they did on the overall project which resulted in end-of-semester team presentations. All students, however, listened to group presentations in each of the six modules. Perhaps their assessment of student presentations was based on listening to the presentations of other teams during the individual modules; in other words, the students who were listening to peer presentations during the semester may not have valued the peer presentations as helpful in achieving the course learning outcomes.

Learning Outcome Attainment

The attainment of learning outcomes is measured by student perceptions (Course Evaluation) and by rubrics designed by the Girard School faculty to measure skills.

Course Evaluation

A gap analysis (Improvement minus Importance) was completed to determine whether there were differences between the perceived importance of the BE 220 learning outcomes (1=Not at All Important and 5= Critically Important) and the improvement in that knowledge or skill as a result of the BE 220 course (1= Not at all Improved and 5= Greatly Improved). All negative gaps signifying opportunities for improvement. The gaps, however, were not large. For the fourteen learning outcomes, only five had gaps in excess of 0.25 (1/4 point). Learning outcomes with the two largest gaps were 1) understand how the activities of financial institutions and markets influence business strategies (-0.46) and 2) identify, reflect upon, and articulate one's individual vision and personal strengths and weaknesses (-0.42).

Outcomes: Scale 1-5	Importance	Improvement	Gap
Present and defend recommendations (based upon functional knowledge and techniques) to resolve a business problem/situation presented in cases, articles or videos.	3.83	3.54	-0.29
Critique and respond to business problems/situations presented through oral discussions.	3.79	3.67	-0.12
Write succinct and persuasive documents that incorporate functional knowledge and techniques to analyze and resolve a business problem/situation presented in cases, articles or videos.	3.96	3.71	-0.25
Identify viable alternatives for business problems/situations presented in cases, articles and videos.	3.87	3.75	-0.12
Analyze, discuss, and resolve ethical problems/situations presented in cases, articles or videos.	3.58	3.52	-0.06
Analyze, critique and defend one's personal values and ethical standards.	3.71	3.54	-0.17
Identify, reflect upon, and articulate one's individual vision and personal strengths and weaknesses.	3.88	3.46	-0.42
Utilize financial analysis tools (e.g., ratio analysis) to assess a firm's financial position.	3.83	3.63	-0.20
Understand how the activities of financial institutions and markets influence business strategies.	3.79	3.33	-0.46
Outcomes: Scale 1-5	**Importance**	**Improvement**	**Gap**
Identify how important changes/trends in the external environment impact businesses.	3.92	3.58	-0.34
Utilize concepts and techniques that enable firms to add value in the production and delivery of desired products or services.	3.88	3.71	-0.17
Understand how marketing strategies enable firm's to identify and profitably satisfy consumer needs.	3.92	3.83	-0.09
Utilize individual, group, and organizational concepts and techniques to resolve business problems/situations.	3.96	3.67	-0.29
Understand the need for functional areas to interact effectively in business.	4.04	3.92	-0.12

BE 220 was considered to be a demanding course (3.75/4.00). When compared to other courses, the amount of time required for outside-of-class work was considered to be high

(3.88/4.00). Unfortunately, students did not necessarily perceive that the time spent outside of class was beneficial (2.63/4.00).

The following three major themes were seen in the student comments:

- the course was demanding
- modules need to be coordinated better; too much due at the same time
- modules were rushed; too much to cover, not enough time

Girard School Rubrics

All of the Girard School rubrics were used by faculty and students teaching BE 220. The **Team Member Assessment** rubric was used by the faculty to assess team performance, an important component of the BE 220 experience. Where there were significant differences in student evaluations on this rubric (in other words, all team members, except for the individual being evaluated, found an individual's performance to be poor), the faculty lowered the individual student grade on the project portion (1/7)[1] of the course. Unfortunately, the way the information was gathered did not allow us to use the overall information for assessment purposes.

The **Leadership** rubric was also used by the students. Faculty did not use the results from this rubric for assessment purposes. Data from this rubric is also in a format that would require significant data entry to put it in a usable format for assessment use.

Faculty members teaching the law portion of the course were responsible for providing the results of the **Participation** rubric. This data is not available.

The **Presentation** rubric was used by the marketing faculty during the team presentations of the Integrative Project. Below is a summary of the results:

Criteria	% Needs Improvement	% Adequate	% Proficient
Introduction	2	31	66
Organization	0	17	83
Conclusion	2	26	72
Visuals	3	38	59
Mechanics	0	5	95

Lastly, the **Verbal Communication** rubric was used by the BE 220 faculty during the team presentations of the Integrative Project. Below is a summary of the results:

Criteria	% Needs Improvement	% Adequate	% Proficient
Eye Contact	8	37	55
Appropriateness for Audience	0	38	62

[1] There were six functional area modules plus the term team project. Each was worth 1/7 of the student's grade.

Attire	1	12	87
Delivery	7	43	50
Audibility	1	27	71
Use of Disciplinary Language	0	16	84
Responses to Questions	5	28	67

Results from each of the remaining rubrics are presented below. For each rubric used, examples of student work that has been assessed as superior (score/s of 4), adequate (score/s of 3) and needs improvement (score/s of 1 or 2) are on file in the Dean's office.

Results from the use of the **Ethics** rubric were reported by our ethics professor. The results are disappointing and provide the following data:

Criteria	% Needs Improvement	% Adequate	% Proficient
Identification of Issues	83	15	2
Developing Alternatives	92	9	0
Analysis of Alternatives	97	3	0
Resolution of Issues	84	15	1

The **Analytical Skills** rubric was used by both the finance and operations management faculty members. The finance data, summarized in the table below is really more appropriately used as an assessment of BE 101 and BE 102. The knowledge necessary for the assessment quiz was covered during the first year and had not been discussed in the finance module before the quiz.

Finance

Criteria	% Needs Improvement	% Adequate	% Proficient
Problem Identification	67	25	8
Selection of Procedures or Concepts	68	24	8
Information Usage	67	25	8
Application of Procedures or Concepts	62	34	2
Interpretation of Results	68	33	1
Recommendations	87	11	2

The operations data, summarized in the table below, assesses the use of analytical skills and procedures and concepts taught in statistics and enhanced in the operations management module.

Operations Management

Criteria	% Needs Improvement	% Adequate	% Proficient
Problem Identification	49	31	20
Selection of Procedures or Concepts	32	59	9
Information Usage	41	40	20
Application of Procedures or Concepts	45	47	8
Interpretation of Results	51	34	15
Recommendations	52	24	24

The **Quality of Reflection** rubric was used in the organizational behavior module. The following table summarizes this data:

Criteria	% Needs Improvement	% Adequate	% Proficient
Quality of Reflection	41	16	43

The **Writing** rubric was used by both the marketing and information systems faculty members. The tables below provide summary information:

Marketing

Criteria	% Needs Improvement	% Adequate	% Proficient
Introduction	18	42	39
Conclusion	7	30	63
Tone	19	35	44
Presentation	36	35	29
Mechanics	12	35	53
Citations	61	9	29

Information Systems

Criteria	% Needs Improvement	% Adequate	% Proficient
Introduction	10	24	66
Organization	5	37	57
Conclusion	10	37	52
Tone	6	31	62
Presentation	21	28	50
Visuals	50	13	38
Mechanics	9	46	43
Citations	13	37	49

AACSB STANDARD 13: INDIVIDUAL FACULTY EDUCATIONAL RESPONSIBILITY

The Girard School maintains copies of presentations and presentation materials for the Integrative Project. All student submissions subject to Girard School assessment are also retained on CDs.

Student Involvement. The BE 220 course actively involves students in the learning process. Students are encouraged to use the Writing and Math Centers for assistance when doing homework and project assignments. Technology is widely used throughout the course. Students use their laptops in class to work on assignments individually and in teams and each of the modules and the overall BE 220 course has a Blackboard site. Faculty members actively engage students in the classroom rather than merely lecturing. Class discussion (81%), group projects (74%), lecture (71%), use of technology (68%), and use of cases or articles (53%) were cited by the students as being most useful to them in helping to achieve the BE 220 learning outcomes.

Student Collaboration. Each BE 220 student is randomly assigned to a team of three or four students. These teams are required to work on assignments and deliver presentations throughout each of the six modules. Each team is assigned a faculty advisor who is committed to helping the team when necessary. Each of the teams is ultimately responsible for completing the Integrative Team Project which involves an in-depth analysis of a company selected by the team.

Learning Feedback. Faculty members provide feedback to the students through grades, written comments and through Girard School Assessment data. Students are told how their performance is assessed using the Girard School rubrics. Thus, they know whether their skills are adequate for a Girard School graduate.

AACSB STANDARD 14: STUDENT EDUCATIONAL RESPONSIBILITY

The Girard School maintains copies of presentations and presentation materials for the Integrative Project. All student submissions subject to Girard School assessment are also retained on CDs.

Engagement. The BE 220 students are engaged as was suggested by the open-ended student comments provided by the student course evaluations. The projects and presentations show clear evidence of significant student engagement. During spring 2005, all students were required to attend an evening lecture hosted by students in the International Management course.

Perserverance. Students should show “learning that includes an understanding of context and relationships, not just application of methods.” The required Integrative Project requires that students learn about each of the functional areas of the selected business. Once they understand how each of the functional areas operates, they are required to provide an integration that demonstrates how the functional areas work together to enhance the competitiveness of the firm while achieving the company’s strategic objectives.

Collaborative Learning. Each BE 220 student is randomly assigned to a team of three or four students. These teams are required to work on assignments and deliver presentations throughout each of the six modules. In the OM module, for example, team assignments include creation of a Gantt chart for the overall project, completion of an aggregate planning assignment and a quality case. Overall, each of the teams is ultimately responsible for completing the Integrative Team Project described above. This includes creation of a team charter, company visits, multiple initial presentations in specific modules, and a final presentation of the integrative project.

Performance to Standards. BE 220 faculty monitor student performance by using the Girard School rubrics and by having students complete the course evaluation. The latter measures student perceptions of achievement of the Girard School learning goals while the former actually assesses individual student skills.

CONSISTENCY

Common syllabi are used by faculty teaching the same module. Thus, for example, there is only one operations management module syllabus although two different professors teach this module. The same projects and assignments are given. Exams for some of the modules are not identical although they cover the same material and have a similar format. The weights for individual course components are that same for a given module.

REMEDIES FOR COURSE DEFICIENCIES

Changes Made Fall 2005

The spring 2005 BE 220 faculty met last spring after the course was completed and the course evaluations were tallied. Based upon an analysis of these documents, the following changes were made for fall 2005:

- **Each of the six modules will be taught one day per week for the entire semester.** In the past, students completed three modules during the first half of the semester and three during the second half of the semester. This modification should help to remedy the complaint that the modules were too rushed with too much to cover and insufficient time. Students will have one week between classes in each module. They should be able to reflect upon what they learned and have time to complete their assignments.
- **The Brief Integrative Summary was eliminated.** This document was seen as one more written assignment required at the end of the semester. Faculty did not have sufficient time to properly assess these documents, provide feedback and receive revised summaries. The students perceived that it was just one additional item that had to be completed before they could leave for the semester. Whereas, the project presentations were exceptional, it appeared that these papers were rushed. Since the students had to turn in at least 6 individual written reports during the semester, the faculty decided to eliminate this document.
- Before classes started for fall 2005, the BE 220 faculty held a meeting to attempt to better coordinate the course and remedy the perception that there was too much due at the same time. Despite 90 minutes of discussion, the 6 professors were unable to eliminate this problem. On the first day of class (orientation) students

were told to anticipate multiple exams during the weeks of mid-semester and during the last week of the semester. The problem is not caused by lack of coordination, the problem exists because we only have 12 or 13 class periods and we are all required to give two examinations. At a minimum, this requirement should be discussed. The requirement for team presentations in all modules should also be discussed.

Recommendations from BE 220 Faculty

At the spring 2005 meeting the BE 220 faculty also discussed other problems addressed in student comments and made recommendations that were presented to the Curriculum committee. They also noted enrollment issues and addressed the issue of the lack of flexibility in the BE 220 curriculum. The minor is unwieldy due to the 12-credit course and transfer students have a difficult time and usually must repeat some work that was completed earlier at another institution. The following proposals were made:

- The BE220 course shall be restructured from a single 12 credit course to individual two (2) credit courses to be scheduled to meet one day per week for fifteen weeks.
- A two (2) credit Ethics course will be added to the original six (6) courses.
- The Integrative Project will be eliminated (tie vote 5-5)

The first proposal will lead to an increase in flexibility. It will better accommodate transfer students and will allow the development of a minor.

The second proposal separates law and ethics. Students' comments suggested some dissatisfaction with the current system. They did not believe that they learned enough in either area. Two separate modules would address this issue.

The last proposal is contrary to student perceptions that the projects were one of the most valuable learning activities in the course. Students perceive that the "most important" (4.04/5) learning outcome is to "understand the need for functional areas to interact effectively in business**."** Elimination of the project runs contrary to the assessment data found in this report.

Learning Activities

The Course Evaluation shows that only 33% of the students perceived that student presentations were useful in helping to achieve the learning outcomes for the course. The faculty must discuss whether 6 team presentations (one per module minimum) and an overall presentation should be required. It must be noted, however, that the learning outcomes listed for this question on the evaluation form did not include the skills (presentation, verbal communication) required of a Girard school graduate. The students are exceptional presenters following this course. The requirement for team presentations in every module should be discussed**.**

Gap Analysis
The largest gaps in students' perceptions should be addressed**.** Faculty must discuss whether these outcomes are important for this course, and, if they are, remedies to correct deficiencies must be found. The two largest gaps are:

- understand how the activities of financial institutions and markets influence business strategies (-0.46)
- identify, reflect upon, and articulate one's individual vision and personal strengths and weaknesses (-0.42).

Rubric Analysis
Ethics. Few students had satisfactory performance in the area of ethics. The separate module in ethics proposed by the BE 220 faculty could help to remedy this deficiency.

Analytical Skills: Finance. The significant deficiencies shown by this rubric should be brought to the attention of the BE 100 faculty. As written earlier, the knowledge necessary for this quiz was covered during the first year and had not been discussed in the finance module before the quiz.

Analytical Skills: Operations Management. Approximately half the students have deficiencies in all the criteria measured. The case study in this module required the use of multiple regression analysis. It appears that many students have not mastered the basics of simple linear regression analysis and find it difficult to make the transition to a more involved model. Statistics faculty should discuss increasing the emphasis on the use of this regression as a tool.

Quality of Reflection. Forty-one percent of the students need improvement. This rubric seems to offer additional data with respect to one of the large gaps noted earlier (identify, reflect upon, and articulate one's individual vision and personal strengths and weaknesses).

Writing. Student scores on some criteria are satisfactory while more work is needed to master other criteria. It appears that more writing must be assigned throughout the curriculum. Greater use of the Writing Center can be encouraged. At present, students are required to write one individual paper in each module. It does not seem reasonable to require more writing in this course given the student comments regarding workload. Perhaps we can share our rubrics with the English Department. The students take a required composition course during the first year. A conversation with the Writing Center Director suggests that we may be able to use Writing Fellows in this course. The BE 101 and BE 102 faculty have found this collaboration to be quite helpful.

Presentation. Our students are good/excellent presenters. It does not appear that this needs to be measured again for the Class of 2008. Perhaps we can cut the number of student presentations. Currently one presentation is required in each module.

Verbal Communication. Eight percent of our students need improvement in "eye contact" and 7% need improvement in "delivery." Overall, our students have good/excellent verbal communication skills.

ACTION ITEMS

1. Structure each module as a two-credit course.
2. Create separate law and ethics modules or create one 4-credit Law & Ethics course. The latter suggestion retains the original design of the course but allows for greater coverage of each of these two important areas.
3. Retain the overall integrative project. Consider awarding two-credits for completion of this project.
4. Discuss & change course requirements
    - two exams per module – can some modules be taught with only one exam?
    - one team presentation per module – data and skill level suggests that this number can be reduced
    - Discuss largest gaps. Are these outcomes important and relevant here?
        - ◊ how activities of financial institutions and markets influence business strategies
        - ◊ reflect on individual vision and personal strengths and weaknesses; also identified as a problem area by the Quality of Reflection rubric
    - Share rubric results with faculty teaching other core courses
    - Analytical Skills: Finance – share with BE 100
    - Analytical Skills: OM – share with BE 213
    - Writing
        - Share rubric with English faculty and Writing Center
        - Continue to encourage use of Writing Center
        - Explore use of Writing Fellows in BE 220

    - Implementation Issues: Adoption of the items above would create 16 credits:

Course	**Credits**
Finance	2
Marketing	2
OM	2
OB	2
IS	2
Law & Ethics	4
Project	2

- Discuss when each of these courses would be completed.
- Would students be required to complete some courses at the same time (i.e., all students are required to enroll in OM, Marketing and…. During a single semester)?
- How would teams be formed? Socialized?

- Consider the absence of any required course during the second semester freshmen year. Can one or more of these courses move to that semester?

CONCLUSION

The modifications to the course based on student feedback are outlined above. In the current Fall 2005 (or off-sequence) semester, the only change has been to teach each two credit module over a 14-week period; everything else remains the same. The recommended action items will go into affect during the Spring 2006 semester for the first time.

As the Business Faculty continues to work on creative, integrated curriculum, we must continue to focus on the learning outcomes of this course and the desired outcomes for the overall business curriculum. In the spirit of continuous improvement, we will continue to employ feedback loops to modify and improve the core curriculum.
