A TALE OF TWO COURSES: PLACEMENT OF MIS
IN THE BUSINESS CORE

Dr. Lynn R. Heinrichs, Elon University, lheinrichs@elon.edu
Dr. Herb Schuette, Elon University, hschuette@elon.edu

ABSTRACT

How does the MIS course fit in the typical business school curriculum? The authors examined the MIS service course at 59 AACSB-accredited business schools to determine the current state of delivery. Data were collected concerning number of hours required, common course titles, departmental responsibility, level of course offering, and required prerequisites. Implications of the profile for designing the MIS course are discussed as well as considerations for distance delivery.

Keywords: MIS core course, business core, curriculum, AACSB schools

INTRODUCTION

The MIS service course is a continual challenge to design and deliver in today's business programs. In addition to responding to the changing information technology environment, faculty members often are challenged to deliver a course that satisfies multiple audiences and multiple goals. MIS instructors can be left in a position of trying to be all things to all programs. The design of the MIS course can vary widely, depending on the specific needs of the institution.

The authors have responsibility for delivering the MIS course at their institution. The course is under constant review as part of the curriculum assessment process. Currently, the course is offered early in the business program and many of the students enrolled are first or second semester freshmen. Is this the best placement of the MIS course? As part of the assessment process, the authors compared the current structure of their MIS course with similar AACSB-accredited institutions.

The purpose of this paper is to investigate and describe how the MIS course fits in the typical business school curriculum. The authors examined business programs at 59 AACSB-accredited schools categorized as Master's Colleges and Universities I. Using program Web pages or on-line catalogs, data were gathered regarding who is responsible for the course, its position in the business curriculum, course title, number of credit hours, and course prerequisites. The profile of MIS courses that was compiled is presented and discussed.

BACKGROUND OF THE MIS CORE COURSE

The MIS course has a long history in the information systems discipline. To understand its evolution, consider the five studies summarized in Table 1 that span almost two decades. McLeod [4] examined the characteristics of the MIS course at AACSB business schools twenty years ago and provided a profile of structure and content. The most frequently taught topic was

systems analysis and design with systems theory close behind. About half the schools responding to Mcleod's survey required a prerequisite computing course.

Table 1. Selected Studies of the MIS Core Course (oldest to most recent)

Authors (year)	Purpose of Study	MIS Prerequisites	MIS Content	Hands-on Content
McLeod, Jr. [1985]	Mail survey of AACSB schools to identify characteristics of MIS course; n=113	More than half of schools required intro to computing and accounting	Most often included: systems analysis & design, systems theory, computing equipment, data base	Slightly more than half required programming; 43% used prewritten software
Kim and Peterson [1992-1993]	Survey of students to determine perceived importance of course objectives	Not reported	Hardware/software concepts, information systems, system design and development, impact on society	Computer applications; hands-on exercises (perceived as most important by students)
Mohagen and Finkenbinder [1994]	Pre-test and post-test performance of students in MIS course	Prereq not specified; 45% completed intro to computers; 61% completed a high school course	75% on concepts of computer and information systems in business, systems analysis & design, implementation of business info systems	25% on developing computer competency through hands-on experience
Moser, VanLengen, and Lucy [2000]	Experiences with alternative methods of delivering the MIS course	Required prior to business policy capstone; designed for first semester, junior year	Application of technology to improve efficiency, effectiveness as well as achieve competitive advantage	Advanced office automation systems tools covered by many instructors
Schatzberg [2003]	Course redesign of MIS to address issues related to computing skills and varying backgrounds of students as well as integration with business disciplines	Informal ISWorld survey with 21 respondents; 17 required computer class; 7 required a management course; author's MIS course positioned near end of program after most of core courses	Case based; MIS concepts integrated with those from OM, HR, org behavior, finance, marketing, and accounting.	Remedial approach; students lacking hands-on skills can take self-paced modules.

Studies by Kim and Peterson [3] and Mohagen and Finkenbinder [5] provided some insights into the content of the MIS course in the early to mid-90s. Both painted a picture of a course with responsibilities for both MIS content and hands-on content. Neither Kim and Peterson or Mohagen and Finkenbinder reported a course prerequisite for MIS. The latter authors did report previous coursework taken by students.

Table 1 summarizes two studies into the new millennium, Moser, VanLengen, and Lucy [6] and Schatzberg [7]. Both emphasized the role of information technology in the organization. Both

also assumed students completed the course in the latter parts of their curricula. While Moser et al. reported some advanced automation tools covered by instructors, the assumption was that students already had hands-on experience when taking the course. Schatzberg described personal productivity tools as a remedial issue for which students could take self-paced modules.

As shown in Table 2, some guidance regarding MIS course content can be gleaned from published standards such as AACSB [1] or IS2002 [2]. AACSB describes general topics of management education programs as well as anticipated knowledge and skills acquired by learners. No specific course content or course structure are recommended, but rather left to the mission of the particular program. In fact, an MIS course is not even required as part of a business program.

IS2002 does provide guidance on course design topics. Two courses in the model curricula influence the direction of the MIS course: IS2002.P0 and IS2002.1 (see Table 1). The course numbering implies the content is part of a lower-level offering; however, IS2002 is a guideline and institutional implementations can, and do, vary.

Table 2. Guidelines for MIS Core Content

Organization	Content Guideline
AACSB Business Standards	Topics typically found in general management degree programs include: Information acquisition, management, and reporting for business (including information management and decision support systems for accounting, production, distribution, and human resources) [p. 69]. General knowledge and skills area [p. 70]: Use of information technology. Management-specific knowledge and skills areas [p. 70]. Information technologies as they influence the structure and processes of organizations and economies, and as they influence the roles and techniques of management.
IS 2002	**IS 2002.P0 – Personal Productivity with IS Technology** **Topics:** Knowledge work productivity concepts; advanced software functionality to support personal and group productivity such as templates and macros; reuse rather than build from scratch; organization and management of data (sorting, filtering) via spreadsheets and database tools; accessing organizational and external data; information search strategies; tool use optimization and personalization; professional document design; Web page design and publishing; effective presentation design and delivery. **IS 2002.1 – Fundamentals of Information Systems (Prereq. 2002.P0)** **Topics:** Systems concepts; system components and relationships; cost/value and quality of information; competitive advantage of information; specification, design, and re-engineering of information systems; application versus system software; package software solutions; procedural versus non-procedural programming languages; object oriented design; database features, functions, and architecture; networks and telecommunication systems and applications; characteristics of IS professionals and IS career paths; information security, crime, and ethics. Practical exercises may include developing macros, designing and implementing user interfaces and reports; developing a solution using database software.

RESEARCH QUESTIONS AND METHODOLOGY

While IS literature and model curricula provide some insights into designing an MIS service course, of particular interest to the authors were the current practices of business schools. What does the typical business program require in terms of information systems preparation?

To better understand how other institutions treat IS in the business core, the authors reviewed core requirements at AACSB institutions similar to their own. Answers were sought to the following specific questions:

1. How many hours of MIS/IT coursework are required in the business core?
2. What are the most common course titles?
3. What department is responsible for delivering MIS/IT coursework (course prefix)?
4. At what level is the Management Information System service course delivered (e.g., 100, 200, 300, etc.)?
5. What prerequisite coursework is typical?

In February 2005, the AACSB Knowledge Services database was searched for all US, Master's Colleges and Universities I with business accreditation. The database returned 140 institutional links in alphabetical order. The authors numbered the institutions numerically from 1 to 140 and then used the Microsoft Excel random number function to select 72 (51%) institutions for examination.

The authors visited the Web site for each business school to extract relevant data. In cases where the information could not be located on the Web site, the authors used an on-line undergraduate catalog if available. As shown in Table 3, of the 72 institutions in the sample, usable information was extracted for 64 business programs. In five cases, the authors found information about a basic MIS course that was required for some majors, but not universally across the core. Of the original 72 institutions, 59 were used for the data analysis.

Table 3. Data Summary

	No. of Institutions
Total institutions in pool	140
Randomly selected institutions	72
Institutions with MIS or other IS course title	64
Institutions for which course was required in the core	59

Data were collected concerning number of hours required, common course titles, departmental responsibility, level of course offering, and required prerequisites Institutional and program attributes were entered into an MS-Access database that consisted of four tables. MS-Access queries were used to generate frequency counts.

ANALYSIS AND FINDINGS

Table 4 summarizes the number of hours of information systems/computer coursework required by the 59 programs examined. While the majority of programs (54%) require 3-5 hours (one

course), a substantial number (44%) require two courses. The latter group does not include prerequisite courses that appear to be part of general education. In other words, programs counted in the "6-8" group require those hours in business IS coursework.

Table 4. Hours of IS Required

No. of Hours	No. of Programs	% of Programs
1 or 2	1	2%
3-5	32	54%
6-8	26	44%

Table 5 summarizes the most popular course titles for the highest level course required by a program, i.e., if a program included both an entry and advanced course, only the advanced course is included in Table 5. By far, the most popular title is Management Information Systems (46%) followed by variations on the title Information Systems or Information Technology (24%).

Table 5. Popular Course Titles

Course Title	No. of Programs	% of Programs
Management Information Systems	27	46%
Information systems or information technology variations	14	24%
Management of information, IS, or IT	7	12%
Business computer systems, e-business, e-commerce	6	10%
Other assorted titles: DSS & Expert systems, End-User Computing, Management Technology, Tools for Computing, Computers: Their Impact and Use	5	8%

Table 6 summarizes other course characteristics for the most advanced information systems course required in the core. Seventy-one percent of programs offer a course at the 300 or 400 level, implying some sort of prerequisite either in terms of coursework or student standing. Courses were almost universally three credit hours (92%) with a few exceptions. With two exceptions, courses were in the domain of the business school, either listed with a business prefix or information systems prefix.

Table 6. Course Characteristics

Course Characteristic	Values	No. of Programs	% of Total
Course Level	Lower	17	29%
	Upper	42	71%
Credit Hours	1	1	2%
	3	54	92%
	4	2	3%
	5 (qtr)	2	3%
Staffed by	Business	18	31%
	MIS	39	66%
	CIS/CS	2	3%

Table 7 examines the prerequisites required by the highest level IS course in the business core. Eighty percent of the courses required one or more prerequisites, with one prerequisite being the most common. The prerequisite most frequently cited was some type of introductory computer or information systems course (41%), followed by a tools course (29%). In many cases, there

was overlap between the content of the introductory computer course and the computer tools course. For example, the introductory computer course might also cover basic office productivity tools. Likewise, those courses requiring a computer tools prerequisite might also accept a proficiency test as a prerequisite. For the purpose of analysis, it might be just as meaningful to combine the top three prerequisites and report that 80% of programs required an intro course, a tools course, or a competency exam.

Management, accounting, and statistics/quant were reported as prerequisites by six, five, and four institutions, respectively. Not reported in Table 7 are those prerequisite courses that were only cited once including marketing, math, economics, operations management, and legal environment.

Table 7. Prerequisite Analysis

	Values	**No. of Programs**	**% of Programs**
No. of Prerequisites	0	12	20%
	1	35	60%
	2	7	12%
	3	2	3%
	4	3	5%
Frequency of	Intro Computer/IS/CS	24	41%
Prerequisite*	Computer Tools	17	29%
	Competency Exam	6	10%
	Management	6	10%
	Accounting	5	8%
	Statistics/Quant. Methods	4	7%

*>100% since programs can have more than one prerequisite

DISCUSSION

Based upon the findings of this study, the typical business program places the MIS service course in the upper level (300 or 400) of the core curriculum. Some type of computer prerequisite is usually required, whether it be an introductory course in computer/information systems, a computer applications/tools course, or a competency examination. The MIS course assumes students bring with them a certain level of technical skills. Unlike IS courses in the 1980s and 1990s, today's typical MIS service course is not expected to provide basic technical competency. The MIS course profile developed in this study is similar to models described by Schatzberg [7] and Moser, VanLengen, and Lucy [6].

The typical MIS course is delivered by the business school, not surprising given that the course usually is taught at the upper level. What was somewhat surprising to the authors was the number of programs that delivered two IS courses in the business core. Credit hours devoted to the business core are usually limited and IS often must compete with other disciplines to establish a presence. It should be noted that during the data collection process, the authors also found five schools that appeared to have no specific IS requirement at all in the business core. The authors assume that information technology concepts and skills are integrated with other courses in these programs.

The MIS course at the authors' institution is contrary to the profile developed in this study. Elon's MIS course is offered at the 200-level with no prerequisites. Students planning on a major in business can take it during the first year. While the course is not devoted to coverage of computer applications, students do receive significant coverage of database as a query and reporting tool for managers. The course is housed in the computing sciences department under a CIS prefix. Instructors usually have a joint appointment in business and computing sciences and must meet AACSB academic qualification guidelines.

The authors did not gather data on whether or not institutions delivered the MIS service course in a distance delivery format or not, but plan to do so in a future study. If case analyses and discussions are more difficult to adapt to a distance format than textbook exercises and readings, then the authors would expect to see less distance delivery by institutions teaching the MIS course at the upper level as compared to those teaching it at the lower level.

CONCLUSIONS

The purpose of this paper was to investigate and describe how the MIS course fits in the typical business school curriculum. The results of the study will help the authors' institution in making MIS course design decisions and hopefully provide guidance for other AACSB-accredited programs. The authors plan to extend their study to look at a broader set of institutions and capture additional characteristics such as typical course content and delivery methods.

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