

Part V: Letters of Support



The Rehabilitation Institute

OFFICE SYSTEMS & BUSINESS EDUCATION-ADVISORY COUNCIL MEMO

Date: C2/07/97

To: Dr. Wayne Moore
Acting Department Chairperson
IUP Office Systems and Business Education
Department

From: Sharon L. Dorogy *Sharon Dorogy*
Director of Information Systems
The Rehabilitation Institute of Pittsburgh

Subject: 1st Qtr 96-97 Advisory Council Meeting Follow-Up

As a follow-up to the first quarter 96-97 Advisory Council meeting, I would like to first begin with a thank-you on behalf of the Advisory Council, to you and the IUP Office Systems and Business Education Department faculty who hosted the departmental break-out session. The meeting was well-organized and, more importantly, invited a forum to openly discuss issues related to the Office Systems and Business Education program.

Specifically, topics covered during the session referenced not only the successful history of the Office Systems and Business Education program, but also strongly focused on positioning the program for a solid future. The Advisory Council emphasized the strong market niche for the current and future program graduates, especially, as technologies are ever-changing, the need for individuals who can bridge the technical and customer support worlds is crucial. As the council was gathered, many of us could cite various personal circumstances where we had been involved with the hiring of technology-aware support individuals, who could have easily been recruited out of the Office Systems and Business Education curriculum at IUP. Although we discussed many positives, one troubling point surfaced during these discussions--> *the name of the current program* that prepares candidates who have strong interests in technology, but also pivotal interests in the 'people-side' of technology and business.

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organizational focus on customer service throughout all industries, the Advisory Council also strongly recommended that serious consideration be given to updating the name of the program that is currently referenced as Office Systems and Business Education. There were several suggestions made throughout the discussion, with an emphasis on incorporating *systems and technology* into the name (for example: Applied Systems Technologies). We envisioned this as a change that would have positive effects on both the recruitment of students to the IUP campus as well as the recruitment of the program graduates into the work force.

As we elaborated on this issue's importance, many of us could relate real-life experiences where our own industries have re-engineered and updated departmental names and roles to foster a continued competitive market advantage. We also openly shared real-life resume realities. Specifically, while reviewing stacks of resumes, we are repeatedly forced to make our first judgments about the limited information contained on a single document. A major in Office Systems and Business Education would not have caught the attention of many Information Systems or Technical Customer Service department directors because it frankly sounds like an advanced secretarial program. Not to undermine the candidates from an exceptional secretarial program, but the Advisory Council felt strongly that the graduates of the current IUP Office Systems and Business Education program could offer much more than secretarial support to the business community. The program truly stands as a unique niche, combining a state-of-the-art technology curriculum with crucial people, business, and management skills.

Because we are actively committed to the fine programs at IUP, we hope that this recommendation is seriously considered by your colleagues within the Office Systems and Business Education program and The Eberly College of Business. On behalf of the Office Systems and Business Education Advisory Council, if there is anything that we can do for you as you consider this recommendation, please do not hesitate to contact us. We look forward to seeing you at the next Advisory Council meeting.



Indiana, Pennsylvania 15705

TO: ECOB Curriculum Committee
University-Wide Curriculum Committee

FROM: Wayne Moore, Chair
Office Systems and Business Education Department
Kenneth Shildt, Chair
Management Information Systems Department

DATE: May 6, 1998

SUBJECT: PROGRAM REVISIONS

Both the Management Information Systems and the Office Systems and Business Education Department realize that major curriculum revisions are necessary to keep our graduates competitive in the ever changing field of information technology. In an effort to strengthen the programs within the Eberly College of Business, the two departments (Management Information Systems and Office Systems and Business Education) have been meeting for the past three months to develop curriculum revisions. These revisions: (1) reflect the delineation between the two departments, (2) enhance both the Eberly College of Business and departmental missions, and (3) provide clear career paths for the students.

OFFICE SYSTEMS

Office Systems has evolved over the past ten years to encompass the knowledge, skills and attitudes required of a professional who bridges the gap between the developer of information technology systems and the typical computer user. The proposed program changes as well as the name change, Business Technology Support, provides the students and employers with a better understanding of the field.

The proposed major requires courses that prepare students to pursue various career paths as they relate to customer-focused solutions, support services and technical training. Careers in the Business Technology Support field, require strong communication and leadership skills.

MANAGEMENT INFORMATION SYSTEMS

MIS majors analyze and design business information systems and their inherent application through a curriculum which includes programming, database, networking, analysis and design courses.

The Management Information Systems and Decision Sciences Department Curriculum Committee has worked with their Office Systems counterpart to develop a curriculum which will provide the Eberly College of Business with a presence in the evolving field of information technology.

RATIONALE FOR COOPERATION

We have attempted to develop programs that are not redundant and permit each department to fulfill its mission of training high-quality graduates. These graduates will support the growing technical needs of organizations.

The MIS courses will focus upon programming, database management and administration, project management, and the planning and implementation of enterprise-wide information systems. New courses are being prepared to provide students with knowledge relative to networks, data warehouse technology, and electronic commerce. The Seminar course will provide an opportunity to explore current developments in the field.

The Business Technology Support program will place emphasis on understanding how technology contributes to individual and work group performance and to behavioral factors, such as communications, ergonomics, training, and change. The curriculum is designed to challenge students to understand their dynamic role from both an organizational and individual viewpoint.

Although there is a degree of overlap in several of the basic courses, the scope varies according to the requirements of each major. An attempt has been made to limit the requirements which crossover to each other's program so students will not be repeating the material at the introductory levels. An evidence of this is the decision to permit either IM 350 or OS 313 to serve as the prerequisite for IM 352, Network Administration.

In summary, both departments have contributed to and support the proposed curriculum and program changes for the Management Information Systems program and the Office Systems program. The College Curriculum Committee should provide guidance in the revision of the programs to meet the needs of our students.

This memo was written jointly to show the curriculum committees that the departments have collaborated to develop two unique programs. We support the program revisions of the Management Information Systems program and the Office Systems program.

12 October 1998

To: Wayne Moore, Chair
Office Systems and Business Education Department

From: Jim Wolfe, Chair Computer Science Curriculum Committee *JW*
Bill Oblitey, Chair Computer Science Department *WBO*

Subject: Program Revision

The Computer Science Department is pleased to support the revision of the Office Systems program to become Business Technology Support.

After extensive discussions involving faculty from the Office Systems and Management Information Systems Departments, members of the Curriculum Committee and the Department Chair believe we have reached an understanding regarding the overall thrust of each of our departments' programs and regarding the courses proposed as part of the new Business Technology Support program. Because each of our departments deals with computer technology, all involved felt it was important to clearly delineate our programs and to make course content distinctive. To that end, we tried to make sure that phrasing used in course titles, objectives, and outlines reflected the level of technicality that would be present in each course. As we did this with the new courses (OS 402 and OS 311), we also took note of some rewording that can be done to the Computer Science courses currently in development; this will help to further clarify the distinctiveness of each program.

Two critical areas of the new program, from our perspective, are the requirement of IM 352 and the inclusion of two Computer Science courses as controlled electives. A cooperative effort between Computer Science and Management Information Science is seeking to cross list the IM 352 course in both departments. We believe that adding the two computer programming courses as electives in the Business Technology Support will add strength and flexibility to that program. We do not foresee any problem in accommodating Business Technology Support students in the Computer Science courses.


Given the effort each department has put into this proposal and into finding consensus regarding our missions, we feel that it is important that all who teach the courses proposed in the new program and the courses under development in each of our departments adhere to the agreed upon outlines. By so doing, students in the respective departments will understand what the content of each course will be; and the distinctiveness of each program can be maintained. We recognize that technology is an ever-changing field and that as time goes on additional coordination efforts between the departments will be needed; we will be happy to be a party to that effort.

Finally, we see the evolution of Office Systems into Business Technology Support as an excellent direction for the OS & BE department. The new program will be filling a growing need for help desk administrators, trainers, support services, and managers in various technology areas. We are happy to have played a small role in getting this program off the ground.

DATE: December 28, 1998

SUBJECT: Actions of Council of Trustees – December 18, 1998

TO: Dr. Robert C. Camp
Dean, Eberly College of Business

FROM: Mark J. Staszkiwicz 
Provost and Vice President
for Academic Affairs

I write to officially notify you that at its December 18, 1998 meeting, the IUP Council of Trustees approved the following motion:

THAT THE REQUEST FROM THE DEPARTMENT OF OFFICE SYSTEMS AND BUSINESS EDUCATION TO CHANGE ITS NAME TO THE DEPARTMENT OF TECHNOLOGY SUPPORT AND TRAINING, AS ENDORSED BY THE PROVOST AND PRESIDENT, BE APPROVED EFFECTIVE WITH THE SPRING 1999 SEMESTER.

Please advise all individuals of this change.

MJS/jkp

cc: Mr. Steve Deemer, Chair, Troubleshooting Committee
Council of Deans
Dr. Wayne Moore, Chair ✓

Part VI:

Attachments

Part V: Letters of Support



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Program Revisions
Page 2

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Part VI:

Attachments

LSC Use Only
Number: _____
Submission Date: _____
Action-Date: _____

UWUCC USE Only
Number: _____
Submission Date: _____
Action-Date: _____

CURRICULUM PROPOSAL COVER SHEET
University-Wide Undergraduate Curriculum Committee

I. CONTACT

Contact Person Jim Wolfe Phone 7-6104

Department Computer Science

II. PROPOSAL TYPE (Check All Appropriate Lines)

COURSE Internet Prog Java
Suggested 20 character title

New Course* CO 304 Interactive Internet Programming with Java
Course Number and Full Title

Course Revision _____
Course Number and Full Title

Liberal Studies Approval+ _____
for new or existing course Course Number and Full Title

Course Deletion _____
Course Number and Full Title

Number and/or Title Change _____
Old Number and/or Full Old Title

New Number and/or Full New Title

Course or Catalog Description Change _____
Course Number and Full Title

PROGRAM: Major Minor Track

New Program* _____
Program Name

Program Revision* _____
Program Name

Program Deletion* _____
Program Name

Title Change _____
Old Program Name

New Program Name

III. Approvals (signatures and date)

[Signature]
Department Curriculum Committee

[Signature]
Department Chair

College Curriculum Committee

College Dean

+Director of Liberal Studies (where applicable)

*Provost (where applicable)

Interactive Internet Programming with Java

I. Course Description

CO 304 Interactive Internet Programming with Java

3c-01-3sh

Prerequisites: CO110 or equivalent

An introduction to interactive Internet programming using Java. The focus is on writing platform independent multimedia applications that are useable across the Internet. Uses a write once, run anywhere approach while providing adequate security. Covers event based processing, multithreading, MIME file handling, exception handling, sandbox security, networking and component architectures.

II. Course Objectives

Students will:

1. Learn to program multithreaded applets to add functionality and interactivity to Web sites.
2. Discuss system and file security issues.
3. Explore event based processing models using the abstract windowing toolkit.
4. Develop and test reliable internet programs involving exception handling
5. Develop skill for managing packages and interfaces for networking and telephony

III. Course Outline

A. Introduction to Object Oriented Programming & Environment: 4 hours

- Overview of the language and environment.
- Installation of the Java Development Kit, an Integrated Development Environment and the code examples for the labs.
- Thinking in Objects: creating classes, attributes and methods: The API documentation
- How to Compile, Link and run simple programs and applets

B. Introduction to Java Basics. Review of Programming constructs. 8 hours

- Review of arithmetic operators, if statements, case statements and loops.
- Similarities and differences relative to C++ statements.
- Coverage of basics of inheritance and working with objects.
- Creating a simple class.
- Working with methods (functions). Syntax involved.
- Developing constructors.
- Use and need for overloading.
- Distinction between overloading and overriding.

C. Working with Java Applets, parameters, threads and sound. 5 hours

- Passing parameters to Applets;
- Use of threads to deal with parallel processors:
- Development of the start, stop, init, run, destroy methods
- Cover loading and manipulation of graphics files for animations.
- Techniques for reducing flicker; the use of double buffering

- Manipulating sound files, combining them with graphics

D. Managing simple events and interactivity: 4 hours

- The Event model.
- Dealing with mouse and keyboard events.
- Using a listener.

E. Creating User Interfaces with the AWT: 6 hours

- Overview of the AWT(Abstract Windowing Toolkit):
- Components: Buttons, checkboxes, pulldown lists, combos.
- Containers: Canvas, panels, Frames, Windows, Dialog boxes
- Layouts: managing components in containers.
- Handling interactions and events in multiple windows with Listeners.

F. The I/O Model- Streams and Pipes: 6 hours

- The I/O model and its 56 pipes.
- Security issues with file access.
- Opening files across the internet.
- Use of compression through jar files.
- Network classes -client server connections. E.g. Chat

G. Overview of Advanced Developments: Possible topics 6 hours

- Exception handling
- Java Beans: Component architecture model.
- Telephony
- JDBC (Java Data Base Connection)
- Swing set: standardized set of interface components

H. In-class Examinations 3 hours

IV. Evaluation Methods

1. Classroom and lab activities -30%. There will be weekly graded projects involving hands-on programming in Java in the lab or developing algorithms and pseudocode in the classroom. The points earned in these activities cannot be made up if the student misses the class. Outside class readings are required in association with these activities.
2. Homework: 30%. Students will have 5-6 programming assignments to complete outside of class time.
3. Quizzes and exams. 40%. Students will be evaluated on their understanding of the concepts presented using short essay questions on the readings and class material.
4. Grading Scale. The standard grading scale will be used.90%+ =A; 80-89%=B; 70-79%=C; 60-69%=D; <60%=F.

V. Required Textbook:

Lemay, Laura and Rogers Caldenhead. *Teach Yourself Java 1.2 in 21 Days*. Indianapolis, IN: Sams Net, 1996.

Alternate texts:

Bruce Eckel. *Thinking in Java: the definitive Introduction to Object Oriented Programming in the Language of the World Wide Web*. Upper Saddle River, NJ: Prentice-Hall, 1998

Deitel and Deitel *Java: How to Program*. . Upper Saddle River, NJ: Prentice Hall, 1997

VI. Special Resource Requirements

Each student will be expected to supply two HD diskettes and to carry out their homework either on their own PC or in the public labs. A Zip disk will be recommended.

VII. Bibliography

- Bishop, Judy. *Java Gently: Programming principles explained*. Reading, MA: Addison-Wesley, 1997
- Courtois, Todd. *Java Networking and Communications*. Upper Saddle River, NJ: Prentice-Hall. 1998.
- Deitel and Deitel. *Java How to Program with an Introduction to J++*. Upper Saddle River, NJ: Prentice-Hall, 1997
- Enete, Noel. *Java Jump Start*. Upper Saddle River, NJ: Prentice Hall, 1997
- Flanagan, David. *Java in a Nutshell: a Desktop Quick Reference*. 2nd edition. Cambridge, MA: O'Reilly Press, 1997.
- Geary, David. *Graphic Java*. Palo Alto, CA: Sun Microsystems Press, 1997
- Horton, Ivor. *Beginning Java*. Birmingham, UK: Wrox Press. 1998.
- Hume, J.N. Patterson and Christine Stephenson. *Programming Concepts in Java* Toronto, Ontario: Holt Software Associates, 1998
- Ince, Darrel and Adam Freeman. *Programming the Internet with Java*. Reading, MA: Addison-Wesley, 1997
- Jackson, Jerry and Alan McClellan. *Java by example*. Palo Alto, CA: Sun Microsystems Press, 1998
- Lewis, John and William Loftus. *Java Software Solutions*. Reading, MA: Addison-Wesley, 1998
- Linden, Peter van der. *Just Java*. 3rd edition Palo Alto, CA: Sun Microsystems Press, 1997
- Turner, E. Shane. *Java Programming Basics for the Internet*. Boston, MA: South-Western Educational Publishing, 1997

Web sites:

- [The Original Sun Java site](#)
- [The Gamelan collection of Java applets](#)
- [University of Washington Java site](#)
- [Hidaho JAVA site](#)
- [C2 Java Scripts](#)

Undergraduate Course Analysis Questionnaire:

Section A. Details of the Course

A1. How does this course fit into the programs of the Department? For what students is the course designed?

This course has been designed as a second-level programming course to expose our upper level students to developing Web-based interactive programs that address multimedia issues and utilize parallel processing. These topics are not covered in other courses. The students also need exposure to a language that can be used to deliver interactive database content over the Web with reasonable security. This course is distinct from our two primary programming classes (CO 110 and CO 310) in terms of language and environment used and purpose of programs being written.

A2. Does this course require changes in the context of existing courses or requirements for a program?

This course does not require changes in the content of existing courses. Rather, it provides a different focus from the existing computer courses. As our discipline has evolved and Internet usage has exploded, our students are expected to program secure multimedia applications that can be delivered on the Internet across many platforms.

A3. Has this course ever been offered at IUP on a trial basis? If so explain the details of the offering.
This course has been offered as a special topics course in the Computer Science Department twice already with various modifications.

A4. Is this course to be a dual-level course?

Approval is being sought for dual listing CO 304 as CO 504 so that the course can also be offered in a proposed master's degree in technology management.

A5. If this course is being offered for variable credit, what criteria will be used to relate the credits to the learning experience of each student?

No variable credit listing is being sought.

A6. Do other higher education institutions currently offer this course? If so please list examples.

Other higher education institutions currently offer Java Programming. The use of Java is debated at SIGSE conferences sponsored by the Association of Computing Machinery. Courses are being offered by Washington University and University of Chicago among others.

A7. Is the content or are the skills of the proposed course, recommended or required by a professional society, accrediting authority, law or other external agency?

Not yet, although it is accepted as a language suitable for teaching Computer Programming courses.

Section B: Interdisciplinary Implications

B1. Will this course be taught by one instructor or will there be team teaching?

This course will not be team-taught. One instructor will teach each section.

B2. What is the relationship between the content of this course and the content of courses offered by other departments?

This course does not overlap with any other course being taught by other departments. Letters of support are attached from the MIS and Office Systems departments.

B3. Will seats in this course be made available to students in the School of Continuing Education?

Seats will be made available to Continuing Education depending on lab availability.

Section C. Resources

C1. Are faculty resources adequate?

No additional faculty are being requested. It is anticipated that this course will serve as an upper level elective. Course offerings of elective courses will be adjusted to accommodate sections of this course. It reflects the changing needs of our discipline.

C2. What other resources will be needed to teach this course and how adequate are the current resources?

We expect to offer hands-on closed labs in this course; the lab to do this is available (Stright 220). The Java development kit needed for this language is available for free from Sun. The entire course can be taught with this tool and no other; copies of the kit need to be installed in public labs for students to access it. It is desirable to have a modern Integrated Development Environment. One can be purchased for \$49 a copy; approximately 30 copies need to be purchased and installed in the public labs. (If two sections of the course are offered, 50 copies are needed.)

- a) Access to Internet is being provided at no cost in all public labs on campus. An Internet browser is being supported by a site license by the TSC.
- b) Students have access to the College lab in Stright 220 for the closed lab sessions.

C3. Are any of the resources for this course funded by a grant?

We have not obtained funding from a grant.

C4. How frequently do you expect this course to be offered?

We expect to offer one or two sections per year as demand warrants.

C5. How many students do you plan to accommodate in a section of this course? Is this planned number limited by the availability of any resources?

Class size will be limited due to the number of machines available in the labs and to make it possible to manage the hands-on and programming assignments.

C6. Does any professional society recommend enrollment limits for a course of this nature?

No professional society has set limits at this time.

Section D. Miscellaneous.

Rationale: Computing technology and the demands being made are changing rapidly. Programming languages have to evolve to stay current. Java is a modern programming language that uses object-oriented programming concepts and provides many new classes to cope with the Internet. We do not currently teach any courses about developing platform independence for the Internet or security or parallel processing. This course begins to meet these needs.

LSC Use Only
Number: _____
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Contact Person William Oblitey Phone 7-2524

Department Computer Science

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Suggested 20 character title

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Course Number and Full Title

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PROGRAM: Major Minor Track

New Program* _____
Program Name

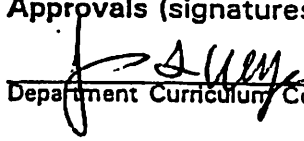
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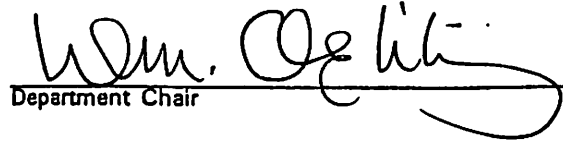
Program Deletion* _____
Program Name

Title Change _____
Old Program Name

New Program Name

III. Approvals (signatures and date)


Department Curriculm Committee


Department Chair

College Curriculum Committee

College Dean

+Director of Liberal Studies (where applicable)

*Provost (where applicable)

CO 352 & IM 352 - Local Area Networks Design and Installation

I. Catalog Description

CO 352 LAN Design and Installation 3c-01-3sh

Prerequisites: IM 350 or OS 313 or any CO course numbered 300 or higher

A study of fundamental local area networking concepts. Detailed study of the basics of local area network (LAN) technology. Comparative study of commercially available LAN systems and products. The course will feature a hands-on laboratory implementation of a LAN.

II. Course Objectives

Upon successful completion of this course, the student will be able to:

- A. Understand the components of LANs and the purpose of each.
- B. Interconnect computing machines to constitute a LAN.
- C. Install and configure a LAN operating system
- D. Examine and analyze packets on a LAN transmission medium.
- E. Implement LAN auditing functions to enhance the security and integrity of LAN transactions.

III. Detailed Course Outline

- 1. The Basics of LANs. (3 hours)
An overview of the history of the evolution of LANs. An explanation of the components and associated terminology of LANs. Advantages of LANs and problems faced by LAN users.
- 2. LAN Standards (3 hours)
A look at the LAN standards that specific vendors follow and the resulting medium access control standards set by the Institute of Electrical and electronic Engineers (IEEE) 802 Standards Committee.
- 3. LAN Transmission Media (3 hours)

- A discussion of the properties and characteristics of the cables that interconnect the nodes in a LAN.
4. LAN Topologies and Protocols (6 hours)
An explicative discussion of the spatial arrangements of the machines that comprise LANs. A look at the rules used in data exchange between the nodes in a LAN and a mapping of the various medium access control protocols with the topologies.
 5. Basic Component Architecture (3 hours)
A detailed exploration of the technology and trends of the important constituents of LAN architectures, namely clients and servers. A study of the vital relationship and interdependencies between hardware technology of the constituents parts of a local area network.
 6. LAN Operating Systems (3 hours)
A look at various network operating systems in terms of their multiuser and multitasking architectures. An examination of the features that distinguish network operating systems from conventional operating systems. An exploration of the functions of server and client software. An explanation of the services provided by network operating systems. Distinguishing between server operating systems and server network operating systems.
 7. Commercially Available LANs (3 hours)
A look at the features of the most prominent commercially available LANs. A comparison and contrast of the products.
 8. Fundamentals of LAN Design (3 hours)
Comparison and contrast of File server functions and Client server functions. Dedicated versus non-dedicated servers. Security issues and disaster recovery details.
 9. LAN Installation (6 hours)
An overview of topology implementation and installation of the network operating system. Examination of the demands on a LAN manager. A look at network operating system menus, establishment of login scripts. A hands-on installation of NetWare or other current operating system.
 10. Application Software (3 hours)
A look at the selection and installation of application software on LANs. Concerns with licensing, file server memory management, etc.
 11. LAN Management and Control (3 hours)
An exploration of the methodologies for gathering LAN traffic statistics; survey of protocol analyzers; security control and encryption/decryption techniques.

12. In-class Examinations (3 hours)

IV. Evaluation Methods

20% Homework assignments and Research paper. These will be based on material discussed in class and on aspects of the project.

40% Examinations. Two in-class exams and a final exam all of which count equally toward the 40%. Examinations consist of short-answer, analysis, and what-if questions.

40% Project. The project is to install network interface cards into the computers, attach the computers with a cable, and then install and configure a network operating system. The student will have to demonstrate that the completed project (the LAN) is functional.

Grading Scale: The standard grading scale will be used.

90%+=A; 80-89%=B; 70-79%=C; 60-69%=D; below 60%=F.

V. Required Textbook(s), Supplementary Books and Readings

Goldman, James E., *Local Area Networking: A Client/Server Approach*, John Wiley & Sons, Inc., New York, NY 1997.

Several handouts will be given to provide students with guidance with the projects. The professor has other related material that will be placed on reserve for students' use during the progress of the course.

VI. Special Resource Requirements

The Eberly networking laboratory is adequately equipped for this course.

VII. Bibliography

Baca, H.R., Zagar, C.M., and Zinky, M.A., *Local Area Networks with Novell*, Wadsworth Publishing Company, Belmont, CA 1995.

Black, U., *OSI: A Model for Computer Communications Standards*, Prentice-Hall, Inc., Englewood Cliffs, NJ 1991.

Black, U., *Computer Networks: Protocols, Standards and Interfaces*, (Second Edition), Prentice-Hall, Inc., Englewood Cliffs, NJ 1993.

Cohen, A.M., *A Guide to Networking*, (Second Edition), Boyd & Fraser Publishing Company, Danvers, MA 1995.

Derfler, F.J., Jr., *PC Magazine Guide to Connectivity*, Ziff-Davis Press, Emeryville, CA 1991.

Fitzgerald, J., *Business Data Communications: Basic concepts, Security, and Design*, (Fourth Edition), John Wiley and Sons, Inc., New York, NY 1993.

Harbaugh, L.G., *Novell's Problem-Solving Guide for NetWare Systems*, SYBEX, Inc. Alameda, CA 1993.

Held, G., *Data Communications Networking Devices*, (Second Edition), John Wiley and Sons, New York, NY 1989.

Lawrence, B., *Using Novell NetWare*, (Second Edition), Que Corporation, Indianapolis, IN 1992.

Madden, J., and Stuple, S. J., (Editors), *Networking Essentials*, (Second Edition), Microsoft Press, Redmond, WA 1998.

Moshos, G.J., *Data Communications: Principles and Problems*, West Publishing Co., St. Paul, MN 1989.

Ramos, E., Schroeder, A., and Simpson, L., *Data Communications and Networking Fundamentals Using Novell NetWare*, Macmillan Publishing Company, New York, NY 1994.

Stallings, W., *Data and Computer Communications*, (Fourth Edition), Macmillan Publishing Company, New York, NY 1994.

Stallings, W., *Local and Metropolitan Area Networks*, (Fourth Edition), Macmillan Publishing Company, New York, NY 1994.

Steenstrup, M., *Routing in Communications Networks*, Prentice-Hall, Inc., Englewood Cliffs, NJ 1995.

Tanenbaum, A.S., *Computer Networks*, (Second Edition), Prentice-Hall, Inc., Englewood Cliffs, NJ 1989.

Walrand, J., *Communication Networks: A First Course*, (Second Edition), WCB/McGraw-Hill Inc. Boston, MA 1998.

White, C.M., *Data Communications and Computer Networks: An OSI Framework*, Boyd & Fraser Publishing Company, Danvers, MA 1995.

Course Analysis

Section A: Details of the Course

- A1 LANs have grown to become quite popular and many of our majors have obtained jobs as LAN managers. Some of our experiential study students also go to companies to function as LAN managers. The departments, at the moment, do not have courses which explicitly teach the ideas of LANs as proposed in this course. Both departments Corporate Advisory Boards have suggested the need for extensive exposure of LANs to the students. This course will fit into the programs of the departments by meeting this need. The course is designed with computer science, MIS, and technology support (office systems) majors in mind, but any student with the necessary background will be accepted.
- A2 The course does not require changes in the contents of any of our existing courses. It will serve as a requirement for both MIS and Technology Support majors.
- A3. The Computer Science and MIS departments have offered this as a special topics course.
- A4 The course is not intended to be listed as dual level.
- A5 The course may not be taken for variable credit.
- A6. Quite a number of universities and colleges offer this course in various forms and modifications. For example, the School of Library and Information Science of the University of Pittsburgh and Kent State University offer versions of this course.
- A7 The Association for Computing Machinery (ACM), the Association for Information Systems (AIS) and the Association for Information Technology Professionals (AITP) all recommend this course.

Section B: Interdisciplinary Implications

- B1 The course is designed to be taught by one instructor.
- B2 This course is jointly proposed by the Computer Science and the MIS Departments and will be cross listed. The course does not overlap with any other courses at this University.
- B3 Students from the School of Continuing Education, if they want to take this course and meet the prerequisites, will be welcome.

Section C: Implementation

- C1** Faculty resources are currently adequate.
- C2** Resources needed for this course are available although they can be improved.
- a.** Space: Classroom space is adequate. The Eberly networking laboratory is adequately equipped for this course.
 - b.** Equipment: The Eberly networking laboratory is adequately equipped for this course.
 - c.** Laboratory Supplies and other Consumable Goods: Both departments have licensed copies of network operating systems and some applications software for projects. However, periodic updates will be required to keep up with the technology.
 - d.** Library Materials: There is an adequate source of reading material in Stapleton Library that can support this course.
 - e.** Travel Funds: No travel funds are needed.
- C3** No resource for this course is funded by a grant.
- C4** The course is expected to be offered every semester. If demand increases, the frequency of offering will be increased accordingly.
- C5.** It is anticipated that one or two sections of the course will be offered each semester. Again, based on demand, this can be increased.
- C6** Twenty-five students will be accommodated in a section of the course.
- C7** No professional society recommends enrollment limits or parameters for this course, or for courses resembling this course. However, past experience has shown that twenty-five students per section can be accommodated.



Date: December 16, 1998

Subject: Letter of Support for Computer Science Curriculum Proposals

To: Dr. William Oblitey, Chair, Computer Science Department
Mr. James Wolfe, Computer Science Department

From: Kenneth L. Shildt, Chair, MIS and Decision Sciences Department *KLS*
Elizabeth M. Pierce, MIS and Decision Sciences Department *EMP*

The MIS and Decision Sciences Department supports the course proposals for CO/IM 352 Local Area Networks Design and Installation as it is being proposed as a course for Computer Science, Office Systems, and MIS majors. This course, along with CO/IM 354 Local Area Networks Administration, will enable students majoring in the area of Information Technology to gain knowledge, which will undoubtedly enhance their professional career preparation.

The dual-listing of these courses demonstrates a spirit of cooperation in the planning and implementation of curriculum which should result in more efficient utilization of the University's resources as well as more flexibility in the scheduling of courses by the majors.

The ability to share the special purpose networking lab located in the Eberly College of Business has the full approval of the MIS Faculty and Dean Robert Camp. A scheduling model will be developed by the Departments to insure that each version of the proposed courses will be given equitable delivery.


The MIS and Decision Sciences Department also supports the course proposal for CO 304 Interactive Internet Programming in JAVA. This course will enable both MIS and Computer Science majors who have had the prerequisite CO110 to learn how to write applications for the Internet. Such skills are currently in high demand in the job market and the offering of this course will benefit both our students and the organizations that recruit our students.


In addition to the new courses listed above, the Computer Science Department listing of a revised set of courses which may be utilized as controlled electives by its majors is strongly supported by the MIS and Decision Sciences Department. The interaction of Computer Science and MIS majors in classes will provide for a continuing dialogue between the Departments and result in a stronger set of courses for both majors to schedule.



TO: William Oblitey, Chair
Computer Science Department

Jim Wolfe, Curriculum Committee Chair
Computer Science Department

FROM: Wayne Moore, Chair 
Office Systems and Business Education Department

Cathleen Golden, Curriculum Committee Co-Chair 
Office Systems and Business Education Department

DATE: December 15, 1998

SUBJECT: CO 304, CO/IM 352, and CO/IM 354 New Course Proposals

The Office Systems and Business Education department faculty have reviewed the course proposals for CO 304, Interactive Internet Programming in JAVA, and CO/IM 352, LAN Design and Installation. CO/IM 354, Advanced Topics in Local Area Networks, is still under review. The following is a statement of our position.

The Office Systems and Business Education department supports CO 304 and CO/IM 352. We feel they are excellent courses and provide necessary coverage in the technology field. We would like our students to be able to take both courses. CO 304 is problematic in that regard since it has a prerequisite of CO 110 which our students are not likely to have taken. We ask, therefore, that the prerequisite be stated as CO 110 or equivalent to allow our students to enroll in the course.

The spirit of cooperation among the departments that led to the development of these courses strengthens our departments' programs. If you would like to discuss this further, please contact us.

c: Robert Camp, Dean, Eberly College of Business
Ken Shildt, Chair, MIS and Decision Sciences