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 02-806 App 4/15/03 App 4/29/03

Curriculum Proposal Cover Sheet - University-Wide Undergraduate Curriculum Committee

Contact Person Elizabeth Pierce	Email Address empierce@iup.edu
Proposing Department/Unit MIS and Decision Sciences	Phone 357-5773

Check all appropriate lines and complete information as requested. Use a separate cover sheet for each course proposal and for each program proposal.

1. Course Proposals (check all that apply)

- New Course                       Course Prefix Change                       Course Deletion  
 Course Revision                       Course Number and/or Title Change                       Catalog Description Change

IFMG 382 Auditing for EDP Systems                      IFMG 382 IT Audit and Control

Current Course prefix, number and full title                      Proposed course prefix, number and full title, if changing

2. Additional Course Designations: check if appropriate

- This course is also proposed as a Liberal Studies Course.                       Other: (e.g., Women's Studies, Pan-African)  
 This course is also proposed as an Honors College Course.

3. Program Proposals

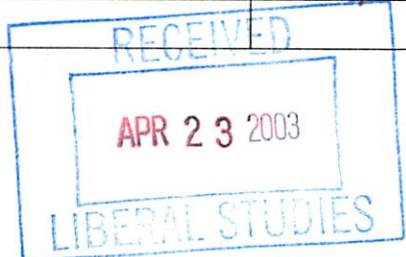
- New Degree Program                       Program Title Change                       Program Revision  
 New Minor Program                       New Track                       Other

Current program name                      Proposed program name, if changing

4. Approvals

		Date
Department Curriculum Committee Chair(s)	<i>[Signature]</i>	4/8/03
Department Chair(s)	<i>Elizabeth M. Pierce</i> <i>Laurie B. Berkey</i>	4/8/03 4/8/03
College Curriculum Committee Chair	<i>[Signature]</i>	9 Apr 03
College Dean	<i>[Signature]</i>	4/9/03
Director of Liberal Studies *		
Director of Honors College *		
Provost *		
Additional signatures as appropriate: (include title)		
UWUCC Co-Chairs	<i>Gail S. Schust</i>	4/15/03

\* where applicable



## Syllabus of Record

### I. Catalog Description

IFMG 382 IT Audit and Control

3 class hours

0 lab hours

Prerequisites: ACCT 201, COSC 220 or IFMG 230  
or equivalent programming course

3 credit hours

(3c-01-3cr)

Emphasizes the responsibility of the systems analyst to include in systems design the proper management and financial controls and audit trails in business information systems. The design of controls for application programs and systems is covered. Audit software packages are examined.

### II. Course Objectives

Students will be able to:

- Understand the job responsibilities of an IT Audit professional.
- Explain the need for control and audit of computer-based information systems.
- Describe modern IT auditing concepts and techniques with a focus on Awareness, Prevention, and Remediation.
- Describe the management control framework.
- Explain the application control framework.
- Understand how to collect and evaluate evidence.

### III. Detailed Course Outline

1. Introduction to Class, Overview of Information Systems Auditing, Conducting an Information Systems Audit (1 hour)
2. Top Management Controls, Systems Development Management Controls (3 hours)
3. Programming Management Controls, Data Resource Management Controls (3 hours)
4. Security Management Controls, Operations Management Controls (3 hours)
5. Quality Assurance Management Controls, Boundary Controls (3 hours)
6. Input Controls (2 hours)
7. Midterm I and Evaluation Testing (1.5 hours)
8. Communications Controls, Processing Controls (3 hours)
9. Database Controls, Output Controls (3 hours)
10. Audit Software, Code Review, Test Data, and Code Comparison (3 hours)
11. Concurrent Auditing Techniques, Interviews, Questionnaires, and Control Flowcharts (3 hours)

- |     |                                                                      |             |
|-----|----------------------------------------------------------------------|-------------|
| 12. | Midterm II and Evaluation Testing                                    | (1.5 hours) |
| 13. | Performance Measurement Tools                                        | (3 hours)   |
| 14. | Evaluating Asset Safeguarding and Data Integrity                     | (3 hours)   |
| 15. | Evaluating System Effectiveness, System Efficiency                   | (3 hours)   |
| 16. | Managing the Information Systems Audit Function, Careers in Auditing | (3 hours)   |
| 17. | Final Exam                                                           | (2 hours)   |

**IV. Evaluation Methods**

45% Exams (2 mid-terms & final) The equally-weighted exams will emphasize the application of concepts and techniques used to conduct an IT Audit.

40% Analysis of Case Studies

15% Project: Students will create and analyze an IT audit case of their own.

Grading Scale: A:  $\geq 90\%$  B: 80-89% C: 70-79% D: 60-69% F:  $< 60\%$

**V. Attendance Policy**

In accordance with University policy, individual faculty will denote an attendance policy on specific course syllabi

**VI. Required Textbook(s)**

Weber, Ron. Information Systems Control and Audit, Prentice Hall, Upper Saddle River, New Jersey, 1999.

**VII. Special Resource Requirements**

No special resource requirements.

**VIII. Bibliography**

Champlain, Jack J. Auditing Information Systems: A Comprehensive Reference Guide, John Wiley & Sons, 1998.

Dayton, Doug. Information Technology Audit Handbook, Prentice Hall, 1997.

Gallegos, Frederick, Allen-Senft, Sandra, & Manson, Daniel P. (Eds.). Information Technology Control and Audit, CRC Press, 1999.

[www.computerworld.com](http://www.computerworld.com) - A great site for all types of articles about Business and Technology.

**www.isaca.org** - With more than 21,000 members in more than 100 countries, the Information Systems Audit and Control Association® (ISACA™) is a recognized global leader in IT governance, control and assurance.

**www.itgoverance.org** - An offshoot of ISACA, this web site encourages the business side of the company to work more closely with technology managers. That includes building a higher profile for IT auditors.

## 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? (majors, students in other majors, liberal studies).

This course is one of the controlled electives for students in the BS in MIS & Decision Sciences. This course is not intended to be a Liberal Studies course.

- A2 Does this course require changes in the content of existing courses or requirements for a program? If catalog descriptions of other courses or department programs must be changed as a result of the adoption of this course, please submit as separate proposals all other changes in courses and/or program requirements.

This course does not require changes in the content of existing courses.

- A3 Has this course ever been offered at IUP on a trial basis (e.g. as a special topic)? If so, explain the details of the offering.

This course is usually offered every 2 years.

- A4 Is this course to be a dual-level course? If so, please note that the graduate approval occurs after the undergraduate.

This course is not intended to be dual level.

- A5 If this course may be taken for variable credit, what criteria will be used to relate the credits to the learning experience of each student? Who will make this determination and by what procedures?

This course is not intended to be taken for variable credit.

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

Many institutions offer a similar course for business students majoring in Management Information Systems. The prototype for this course is based on Dr. Ron Weber's course that he developed at the University of Queensland, Australia.

Bowling Green University: ACCT 456: Information Systems Auditing and Control  
Prerequisites: C or better in ACCT 460, MIS 421 and MIS 470, or consent of department.  
Basic concepts of information systems audit and control principles necessary to facilitate the expression of an opinion on financial statements; evaluate the effectiveness, security, and functioning of controls; prepare a meaningful management letter. Introduces a computer auditing software package and uses the software to audit computerized information.

Eastern Michigan University: ACC 448 Information Systems Auditing  
Prereq: ACC 356

A comprehensive coverage of electronic data processing (EDP) auditing from both a theoretical and pragmatic point of view with a special emphasis on control features of a system and its purpose.

Bentley College: AC 477 IT Auditing Principles and Practice

Prerequisite: AC 376, AC 37, AC372 or AC400.

The course introduces the fundamentals of information technology (IT) auditing, the core reasons for this specialized area of auditing and its principle objectives with respect to IT auditing and integrated financial or operational auditing. The course will focus in part on three typical aspects of IT audits: the audits of computerized information systems, the IT processing environment, and the process of developing and implementing information systems. Through readings, case studies, exercises, and discussion, students will learn to plan, conduct, and report on information technology and systems development audits.

- 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? If so, please provide documentation.

Although not required, this course is useful for MIS students as an elective.

### **Section B: Interdisciplinary Implications**

- B1 Will this course be taught by instructors from more than one department? If so, explain the teaching plan, its rationale, and how the team will adhere to the syllabus of record.

This course will not be team-taught.

- B2 What is the relationship between the content of this course and the content of courses offered by other departments? Summarize your discussions (with other departments) concerning the proposed changes and indicate how any conflicts have been resolved. Please attach relevant memoranda from these departments which clarify their attitudes toward the proposed change(s).

The content of this course does not overlap with any other at the University.

- B3 Will this course be cross-listed with other departments? If so, please summarize the department representatives' discussions concerning the course and indicate how consistency will be maintained across departments.

This course will not be cross-listed.

- B4 Will seats in this course be made available to students in the School of Continuing Education?

Seats will be made available to Continuing Education students meeting the prerequisites.

### **Section C: Implementation**

- C1 Are faculty resources adequate? If you are not requesting or have not been authorized to hire additional faculty, demonstrate how course will fit into the schedules of current faculty. What will be taught less frequently or in fewer sections to make this possible? Please specify how preparation and equated workload will be assigned for this course.

Faculty resources are adequate for teaching this course.

- C2 What other resources will be needed to teach this course and how adequate are the current resources? If not adequate, what plans exist for achieving adequacy?

\*Space - The course will utilize existing Eberly labs and class rooms.

\*Equipment - Course will not require special equipment.

\*Laboratory Supplies and other Consumable Goods - Not required.

\*Library Materials - Library holdings are adequate.

\*Travel Funds - Not required.

- C3 Are any of the resources for this course funded by a grant? If so, what provisions have been made to continue support for this course once the grant has expired? (Attach letters of support from Dean, Provost, etc.)

No resources are funded by grant sources.

- C4 How frequently do you expect this course to be offered? Is this course particularly designed for or restricted to certain seasonal semesters?

Once every year to two years depending on demand.

- C5 How many sections of this course do you anticipate offering in any single semester?

One section.

- C6 How many students do you plan to accommodate in a section of this course? What is the justification for this planned number of students?

Approximately 30 students will be accommodated in a section of the course.

- C7 Does any professional society recommend enrollment limits or parameters for a course of this nature? If they do, please quote from the appropriate documents.

No professional society recommends enrollment limits or parameters for this course.

- C8 If this course is a distance education course, see the Implementation of Distance Education Agreement and the Undergraduate Distance Education Review Form in Appendix D and respond to the questions listed.

Presently, this course is not a distance education course.

#### **Section D: Miscellaneous**

1. **A summary of the proposed revisions.**

- A. Title Change
- B. Syllabus of Record Change

2. **Justification/rationale for the revision.**

The proposed revision is meant to bring the syllabus of record in line with what is currently being taught in the course. Because students are already learning materials based on the new syllabus of record, there will be no discontinuity between students who took the course under its old title and students taking the course in the future.

3. **Old Syllabus of Record Format: IM 382 Auditing for EDP Systems**

This course is so old that we could not locate a syllabus of record; see current syllabus.

**IFMG 382: Auditing for EDP Systems**

**Spring 2001**

**3 Credits**

**Instructor:** Dr. Elizabeth Pierce      **Email:** empierce@grove.iup.edu  
**Phone:** (724) 357-5773      **Fax:** (724) 357-4831  
**Office:** 207-H ECOB      **Office Hours:** (Appointment Avail.)  
Mon & Wed: 2:15 - 3:15 pm  
Tues & Thur: 9:45 - 11:15 am

**Required Textbook:** Information Systems Control and Audit by Ron Weber, Prentice-Hall, 1999.

**Course Description:** This course emphasizes the responsibility of the systems analyst to include in systems design the proper management and financial controls and audit trails in business information systems. The design of controls for application programs and systems is covered. Audit software packages are examined.

**Course Objectives:** This course has two main objectives. (1) Expose students to modern IT auditing concepts and techniques with a focus on Awareness, Prevention, and Remediation. (2) Give students practice in using the case method to apply what they have learned about IT auditing.

**Course Methodology:** The course will be taught using a combination of discussion and casework. Assignments and exams are used to develop students' skills in (1) understanding IT concepts, (2) applying theory to practical situations, and (3) presenting the results of case analysis. Exams will be closed book and no notes.

**Attendance/Late Assignment Policy:** Attendance at all class sessions is necessary for full assimilation of course content. Should you miss a class, be sure to obtain a copy of the notes and handouts from a responsible classmate. Keep in mind that assignments must be handed in when due. Each day that an assignment is late will cost one penalty point. Assignments more than 2 weeks late will not be accepted at all.

**Course Grade Determination:** Your overall course grade is calculated as follows:  
Home Work Average = (HW Points Earned/Total HW Points) x 40 = \_\_\_\_\_ (A)  
Exam Average = (Exam Points Earned/Total Exam Points) x 50 = \_\_\_\_\_ (B)  
Case Paper Average = (Paper Points Earned/Total Paper Points) x 10 = \_\_\_\_\_ (C)  
Total Points = (A) + (B) + (C) = \_\_\_\_\_

Your letter grade will be assigned based on your Total Points. If your Total Points are between 90 and 100 => A, 80 and 89 => B, 70 and 79 => C, 60 and 69 => D, 59 or Less => F

**Tentative Course Schedule:** (Note: All Dates are Subject to Change)

<b>Week Beginning</b>	<b>Topics to be Covered</b>
Jan. 17	Introduction to Class, Overview of Information Systems Auditing, Conducting an Information Systems Audit
Jan. 22	Top Management Controls, Systems Development Management Controls
Jan. 29	Programming Management Controls, Data Resource Management Controls
Feb 5	Security Management Controls, Operations Management Controls
Feb. 15	Quality Assurance Management Controls, Boundary Controls
Feb. 19	Input Controls

\*\*\*\*\* Exam I (Parts I and II) - Feb. 21 \*\*\*\*\*



Feb. 26            Communications Controls, Processing Controls  
 Mar. 5             Spring Break  
 Mar. 12           Database Controls, Output Controls  
 Mar. 19           Audit Software, Code Review, Test Data, and Code Comparison  
 Mar. 26           Concurrent Auditing Techniques, Interviews, Questionnaires, and Control Flowcharts  
 Apr. 2             Performance Measurement Tools

\*\*\*\*\* Exam II (Parts III and IV) - Apr. 11 \*\*\*\*\*

Apr. 9            Evaluating Asset Safeguarding and Data Integrity  
 Apr. 16           Evaluating System Effectiveness, System Efficiency  
 Apr. 23           Managing the Information Systems Audit Function, Careers in Auditing  
 Apr. 30           Case Presentation

Final Exam on Parts V & VI as announced in University Final Exam Schedule, May 3-10

**Important web sites for class**

**www.isaca.org** - With more than 21,000 members in more than 100 countries, the Information Systems Audit and Control Association® (ISACA™) is a recognized global leader in IT governance, control and assurance.

**www.itgovernance.org** - An offshoot of ISACA, this web site encourages the business side of the company to work more closely with technology managers. That includes building a higher profile for IT auditors.

**www.computerworld.com** - A great site for all types of articles about Business and Technology.

**Case Description**

- The case paper is worth 10% of your final grade and should represent a significant investigative and writing effort. (i.e. 5 pages single space or 10 pages double space, use 10 or 12 point font)
- Select the focus of your case paper from one of the following:
  - Real Life Audit Exposure that has recently been reported in the news
  - One of the topics covered in text book.
  - One of the topics from the ISACA web site.
  - Some other topic that has been approved by the instructor.
- Use at least 5 different sources for your case paper.
- Use appropriate grammar and style. Each paper should consist of:
  - Title, Your Name, and Date
  - Abstract
  - Introduction
  - Clear, concise coverage of your case.
  - Summary
  - Bibliography
- Case is due the last day of class. It may be turned in earlier if you wish.