Curriculum Proposal Cover Sheet - University-Wide Undergraduate Curriculum Committee

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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)

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

IFMG 368 E-commerce Security

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,
_____ This course is also proposed as an Honors College Course.	Pan-African)

3. Program Proposals

	_____ Catalog Description Change	_____ Program Revision
_____ New Degree Program	_____ Program Title Change	_____ Other
_____ New Minor Program	_____ New Track	

Current program name   *Proposed* program name, if changing

4. Approvals

		Date
Department Curriculum Committee Chair(s)	*R.MBono*	4/8/03
	Elizabeth M Price	4/8/03
Department Chair(s)	*Louise B. Burky*	4/8/03
College Curriculum Committee Chair	*(signature)*	9 Apr 03
College Dean	*R Camp*	4/9/03
Director of Liberal Studies *		
Director of Honors College *		
Provost *		
Additional signatures as appropriate: (include title)		
UWUCC Co-Chairs	*Gail S. Sechrist*	4/15/03

* where applicable

Syllabus of Record

I. **Catalog Description.**

IFMG 368 E-commerce Security   3 class hours
                                                                 0 lab hours
Prerequisite: IFMG 352   3 credit hours

                                                                 (3c-0l-3cr)

Introduces the security concepts, operating systems security, network security, database, web
server, and communication security. Public and common practices of procedures and regulations
regarding e-commerce security will be explored. Writing information security policies will be
introduced.

II. **Course Objectives.**

Students will be able to:

1. Obtain the knowledge of basic Information Systems security concept.
2. Understand the need, the establishment and how to maintain the Information Systems
   security.
3. Explore the possible characters, policies, and procedures that promote or deter the
   organization and/or corporate Information Systems security.
4. Analyze the organizational, hardware, software, network, human resource, and other
   environment resources necessary to establish the Information Systems security.
5. Write and maintain the organizational or corporate Information Systems policies.

III. **Detailed Course Outline.**

1. Information Security Concepts   (4 hours)
   Explain what is security. Show that security has several facets and explain
   the issues that need to be addressed to create a trusted system. Explain the
   risks of operating with Internet technologies, and how to manage those risks.

2. Operating Systems Security Environment   (4 hours)
   Show that the operating systems security provides a defense against
   unauthorized access to the system's resources to address the different
   security requirements demanded by different organizations.

3. Network Security   (4 hours)
   Investigate the problems of networked computers and show how to protect
   systems from any attacks of unauthorized users.

4. Midterm I and Evaluation Testing   (2 hours)

5. Web Server Security   (4 hours)
   Investigate the commercial web application server. Examine the key
   concepts in configuring the web sites to keep the content and application
   secure. Explain how to identify and authenticate web users.

6   Secure Channel   (4 hours)
Explain how to establish a network connection that offers end-point authentication, non-repudiation, message encryption, and message authentication. Discuss the digital certificates and other methods for secure channel.

7.   Web Database Security   (4 hours)
Show how to protect a web database so that access is provided at suitable levels appropriate to the particular web visitor.

8.   Midterm II and Evaluation Testing   (2 hours)

9.   Directory Services   (4 hours)
Discuss the fundamentals of directory services and show the advantages they provide when managing a community of web users.

10.   Membership Server   (3 hours)
Discuss how to build large-scale systems that track and profile millions of users, automate the identification of users, and protect areas of the sites that have confidential contents.

11.   Active User Object   (3 hours)
Discuss how to use the information in the user's profile in order to enable customized web content and make the available information more fitting by providing personalized pages.

12.   Writing and Maintaining the Policies   (4 hours)
Explore how to write the security policies for physical security, authentication and network security, Internet and email security, viruses, encryption, and software development policies. Investigate the acceptance use policies and how to meet compliance and enforcement policies.

13.   Final examination.   (2 hours)

IV.   Evaluation Methods.

1.   20%   Homework assignments, class-work, and quizzes. These will be based on material discussed in class.
2.   40%   Programming projects. About three to four projects of varying complexity based on material discussed during the semester.
3.   40%   Examinations. The examinations consist of what-if questions, short-essays, analysis, and explanations. Three exams (10%, 10%, and 20%) will be administered during the semester.

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

V.   Course Attendance Policy.

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

VI. Required Textbook(s), Supplemental Books and Readings.

Required:
Harrison, <u>ASP/MTS/ADSI Security</u>, Prentice Hall PTR, 1999.

Supplemental:
Fors & Baum, <u>Secure Electronic Commerce</u>, 2nd Edition, Prentice Hall PTR, 2001.

Reading:
Hatch, Lee, & Kurtz, <u>Hacking Linux Exposed: Linux Security Secrets & Solutions</u>, Osborne/McGraw-Hill, 2001.

VII. Special Resource Requirements.

No special resource requirements.

VIII. Bibliography.

1. Allen, <u>CEERT Guide to System and Network Security Practices</u>, Addison Wesley, 2001.
2. Barman, <u>Writing Information Security Policies</u>, New Riders, 2002.
3. Furnell, <u>Cybercrime: Vandalizing the Information Society</u>, Addison Wesley, 2002
4. Hatch, Lee, & Kutrz, <u>Hacking Linux Exposed: Linux Security Secrets & Solutions</u>, McGraw-Hill, 2001.
5. Kaufman, Perlman, & Speciner, <u>Network Security: Private Communication in Public World</u>, Prentice Hall, 2002.
6. McClure, Shah, & Shah, <u>Web Hacking: Attacks and Defense</u>, Addison Wesley, 2003.
7. Mel & Baker, <u>Cryptography Decrypted</u>, Addison Wesley, 2001.
8. Rubin, Geer, Marcus, & Ranum, <u>Web Security Sourcebook</u>, Addison Wesley, 1997.
9. Skoudis, <u>Counter Hack: A Step by Step Guide to Computer Attacks and Effective Defenses</u>, Prentice Hall, 2002.
10. Stallings, <u>Cryptography and Network Security</u>, Prentice Hall, 1999.

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). Explain why this content cannot be incorporated into an existing course.

This course is an elective for students in the B.S. in MIS program. It is not required by any other major nor intended for inclusion in the Liberal Studies program.

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 any other courses or programs.

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 has never been offered at IUP.

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 to be taken for variable credit.

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

Arizona State University: CIS 425 Electronic Commerce Strategy
Key business strategies and technology elements of contemporary electronic commerce. Covers Web design and interactions between Web pages and databases. Prerequisite: professional program business student majoring in Computer Information Systems or Accountancy. Prerequisite with a grade of "C" or higher: CIS 420.

Georgia Tech. College of Computing: COMP-703 E-commerce Security
This hands-on course will provide you with the choices and tools necessary to every e-commerce site.

University of California, Berkeley Extension: X488.3 Internet Business Technologies
The course presents key IT infrastructure strategy and technology concepts and frameworks. Topics include: IT strategy alignment with business strategies; infrastructure design, development, and deployment processes and tools; convergent engineering; how application architecture and behavior affects infrastructure architectures; infrastructures for B2C, B2B, supply chain, portal, and exchanges; hosting strategies; ASP; outsourcing; HA strategies; capacity

planning; RFP process; Internet security and firewalls; Internet access and backbone structures and technologies, including wireline, wireless, cable, satellite, and Internet in the sky; Internet governance; bandwidth management and QoS; innovations in router technology; emerging technologies such as storage area networks; and vendor landscape.

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).

Although other departments may offer courses with similar topics, this course is specifically designed for the needs, interests, and context required for our MIS majors. This is an introduction course that will introduce many topics on e-commerce security from the business perspective including laws and regulations on electronic business transactions, the information technology infrastructure and e-commerce security technologies being used, and how to develop the policy based on the laws, regulations, technologies, organization, and management of the business. The emphasis is not on how to develop the e-commerce security technologies, but on how to apply the available and emerging technology into the current business environment.

B3   Will the 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 is not 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 prerequisite.

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?

Faculty resources are currently adequate.

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? Reply in terms of the following:
*Space: Current space allocations are adequate to offer this course.
*Equipment: The department will use the computer facilities available at Eberly.
*Laboratory Supplies and other Consumable Goods: The department budget is sufficient to purchase supplies for this course.
*Library Materials: Adequate.
*Travel Funds: Not needed.

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 grant funds are associated with this course.

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 this 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

Include any additional information valuable to those reviewing this new course proposal.

No additional information is needed.