Document N: Course and Program Development:
IMPACT AND APPROVAL SIGNATURES

See Course and Program Development Policy and Procedures (www.ubalt.edu/provost) for instructions.

SCHOOL: LAW MSB CAS CPA

CONTACT NAME: C. Wright Brown/M. Ketel PHONE: 410-837-5004/5278

DEPARTMENT/DIVISION: Division of Science, Information Arts and Technologies

DATE PREPARED: 3/16/12

PROPOSED SEMESTER OF IMPLEMENTATION: fall spring

YEAR: 2013

TYPE OF ACTION: add (new)
deactivate modify other

LEVEL OF ACTION: noncredit undergraduate graduate other

ACTION BEING REQUESTED (select one category, either Course Actions or Program Actions):

☑ COURSE ACTIONS

Original Subject Code/Course Number:
COSC 434

Original Course Title:
Web and Database Security

☐ PROGRAM ACTIONS

Original Program Title:

Select one or multiple actions from one of the lists below (review the list of necessary documents and signatures):

<table>
<thead>
<tr>
<th>COURSE ACTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Experimental Course</td>
</tr>
<tr>
<td>2. Course Title</td>
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<tr>
<td>3. Course Credits</td>
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<tr>
<td>4. Course Number</td>
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<td>5. Course Level</td>
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<tr>
<td>6. Pre- and Co-Requisite</td>
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<tr>
<td>☑ 8. New Course</td>
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<td>9. Deactivate Course</td>
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<tr>
<td>22. Other</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PROGRAM ACTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>10. Program Requirements</td>
</tr>
<tr>
<td>11a. Undergraduate Specialization (24 credits or fewer)</td>
</tr>
<tr>
<td>11b. Master's Specialization (12 credits or fewer)</td>
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<tr>
<td>11c. Doctoral Specialization (18 credits or fewer)</td>
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<tr>
<td>12. Minor (add or delete)</td>
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<tr>
<td>13. Closed Site Program</td>
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<tr>
<td>14. Program Suspension</td>
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<tr>
<td>15. Program Reactivation</td>
</tr>
<tr>
<td>16a. Certificate Program (UG/G) exclusively within existing degree program</td>
</tr>
<tr>
<td>16b. Certificate Program (UG/G) outside of or across degree programs (12 or more credits)</td>
</tr>
<tr>
<td>17. Off-Campus Delivery of Existing Programs</td>
</tr>
<tr>
<td>18a. Undergraduate Concentration (exceeds 24 credits)</td>
</tr>
<tr>
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</tr>
<tr>
<td>18c. Doctoral Concentration (exceeds 18 credits)</td>
</tr>
<tr>
<td>19. Program Title Change</td>
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<tr>
<td>20. Program Termination</td>
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<tr>
<td>21. New Degree Program</td>
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<tr>
<td>22. Other</td>
</tr>
</tbody>
</table>

ADDITIONAL DOCUMENTATION (check all appropriate boxes of documents included; review the list of necessary documents):

☑ summary proposal (O) ☑ course definition document (P) ☐ full five-page MHEC proposal (Q)

☐ financial tables (MHEC) (R) ☐ other documents as may be required by MHEC/USM (S) ☐ other (T)

Summer 2010
IMPACT REVIEW (review the list of necessary signatures):

<table>
<thead>
<tr>
<th>Impacted Entity</th>
<th>Signature</th>
<th>Date</th>
</tr>
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<tbody>
<tr>
<td>a. Library</td>
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<td>☐ no impact</td>
<td>☐ impact statement attached</td>
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<td>b. OTS</td>
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<td>☐ no impact</td>
<td>☐ impact statement attached</td>
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<td>c. University Relations</td>
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<td>☐ no impact</td>
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<td>d. Admissions</td>
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<td>e. Records</td>
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APPROVAL SEQUENCE (review the list of necessary signatures):

<table>
<thead>
<tr>
<th>Approval Level</th>
<th>Signature</th>
<th>Date</th>
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<tbody>
<tr>
<td>A. Department/Division (Chair)</td>
<td></td>
<td>1/30/12</td>
</tr>
<tr>
<td>B. General Education (for No. 7, 8)</td>
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<tr>
<td>C. Final Faculty Review Body Within Each School (Chair)</td>
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<tr>
<td>D. Dean</td>
<td></td>
<td>11/18</td>
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<tr>
<td>E. University Faculty Senate (Chair)</td>
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<tr>
<td>F. University Council (Chair)</td>
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<tr>
<td>G. Provost and Senior Vice President for Academic Affairs</td>
<td></td>
<td>4/1/13</td>
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<tr>
<td>H. President</td>
<td></td>
<td></td>
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<td>I. Board of Regents (notification only)</td>
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<tr>
<td>J. Board of Regents (approval)</td>
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<tr>
<td>K. MHEC (notification only)</td>
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<tr>
<td>L. MHEC (approval)</td>
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<tr>
<td>M. Middle States Association notification Required only if the University's mission is changed by the action</td>
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</tbody>
</table>

1 University Council review (for recommendation to the president or back to the provost) shall be limited to curricular or academic policy issues that may potentially affect the University's mission and strategic planning, or have a significant impact on the generation or allocation of its financial resources.
Document O: Course and Program Development: SUMMARY PROPOSAL

See Course and Program Development Policy and Procedures (www.ubalt.edu/provost) for instructions.

SCHOOL: LAW MSB CAS CPA

CONTACT NAME: C. Wright Brown/M. Ketel PHONE: 410-837-5004/5278

DEPARTMENT/DIVISION: Division of Science, Information Arts and Technologies DATE PREPARED: 3/16/12

PROPOSED SEMESTER OF IMPLEMENTATION: fall spring YEAR: 2013

ACTION BEING REQUESTED (select one category, either Course Actions or Program Actions):

COURSE ACTIONS

Original Subject Code/Course Number: COSC 434

Original Course Title: Web and Database Security

Select one or multiple actions from one of the lists below (review the list of necessary documents and signatures):

- 1. Experimental Course
- 2. Course Title
- 3. Course Credits
- 4. Course Number
- 5. Course Level
- 6. Pre- and Co-Requisite
- 7. Course Description
- 8. New Course
- 9. Deactivate Course
- 22. Other

PROGRAM ACTIONS

Original Program Title:

PROGRAM ACTIONS

10. Program Requirements
11a. Undergraduate Specialization (24 credits or fewer)
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19. Program Title Change
20. Program Termination
21. New Degree Program
22. Other

For changes to existing courses:

OLD TITLE ______________________
SUBJECT CODE/COURSE NO. ________ CREDITS ________
NEW TITLE ______________________
SUBJECT CODE/COURSE NO. ________ CREDITS ________
DESCRIBE THE REQUESTED COURSE/PROGRAM ACTION (additional pages may be attached if necessary):

To create a new course COSC 434 Web and Database Security which is a course requirement for the Applied Information Technology (AIT) students in the Applied Information Assurance (AIA) track and essential to the 4 year program in Science, Information Arts and Technologies.

SET FORTH THE RATIONALE FOR THIS PROPOSAL:

Presently only two courses exist in the AIA track which are COSC 432 and COSC 433. This course will fill a learning gap in the current curriculum and provide a complementary course for AIT majors who are interested in the AIA track. As well as students interested in web and database security or computer security. This course would provide fundamentals needed in computer information security for advanced study.
1. DATE PREPARED
March 16, 2012

2. PREPARED BY
Cecelia Wright Brown/Mohammed Ketel

3. DEPARTMENT/DIVISION
Division of Science, Information Arts and Technologies

4. COURSE NUMBER(S) with SUBJECT CODE(S)
COSC 434

5. COURSE TITLE
Web and Database Security

6. CREDIT HOURS
3

7. CATALOG DESCRIPTION
Introduces the security challenges and threats in database/Web-based systems. Students learn how to describe and apply security principles and technologies and how to implement them across various database/Web systems. In addition, advanced topics related to database/Web-based systems such as e-commerce security, security problems in data warehousing and data mining are introduced. Lab fee required. **prerequisites:** COSC 332, COSC 356 and MATH 201

8. PREREQUISITES
COSC 332, COSC 356, and Math 201

9. COURSE PURPOSE (how the course is to be used in the curriculum; e.g., required for the major, elective, etc.)
This course will serve as a required course in Applied Information Technology for majors in the Applied Information Assurance track and as a general elective for all other Science, Information Arts and Technologies majors.

10. GENERAL EDUCATION AREA (if applicable; e.g., social sciences, humanities, mathematics, etc.)
Not Applicable

11. COURSE TYPE/COMPONENT (clinical, continuance, discussion, field studies, independent study, laboratory, lecture, practicum, research, seminar, supervision, thesis research, tutorial or workshop; **this must match PeopleSoft 9.0 coding, so check with your dean’s office if you are unsure of the correct entry)**
Lecture

Summer 2010
12. FACULTY QUALIFIED TO TEACH COURSE
Cecelia Wright Brown and Mohammed Ketel

13. CONTENT OUTLINE

1. Security Fundamentals
2. Browser Security Principles: The Same-Origin Policy
4. Defenses Against Browser Attacks
5. Server-Side Inclusion Vulnerabilities
6. SQL Injections Attacks
7. Denial of Service Attacks
8. Defenses Against Server-Side Attacks
9. Profiles, Password Policies, Privileges, and Roles
10. Database Application Security Models
11. Database Auditing Models
12. Auditing Database Activities

14. LEARNING GOALS
At the conclusion of this course, the students will be able to:

• Identify risks and vulnerabilities from a web and database perspective.
• Apply security fundamentals to database/Web-based systems.
• Evaluate a Web-based system with respect to its security requirements.
• Implement security mechanisms to secure a Web-based application.
• Evaluate and implement administration policies.
• Initiate and use the controls of servers.
• Assess and compare database security models.
• Apply auditing fundamentals.
• Demonstrate knowledge of e-commerce: privacy, security, and control.
• Identify and apply database mining and warehousing tools.

15. ASSESSMENT STRATEGIES
Assessments will include: exams, drills, essays, laboratory exercises, individual or group research projects

16. SUGGESTED TEXT(S) and MATERIALS (e.g. textbooks, equipment, software, etc., that students must purchase)

   By Bryan Sullivan and Vincent Liu
2) Database Security, 1st Edition
   By Alfred Basta and Melissa Zgola

17. SPECIAL GRADING OPTIONS (if applicable)
N/A

18. SUGGESTED CLASS SIZE
20

19. LAB FEES (if applicable)
$45 per course

Laboratory fees cover additional instructional costs incurred in the operation of computer laboratories necessary for teaching these courses and for students' preparation of classwork, including maintenance and routine upgrades to software and hardware, as well as the renewal of yearly software licenses.