1. Catalog Description
   a) Course number: TEC 5363
   b) Title: Database Security and Reliability
   c) Meeting times and credit: 2-2-3
   d) Term to be offered: On Demand
   e) Short title: Dbase Security
   f) Course description: Study of principles and practices of implementing computer database security in modern businesses and industries, including database security principles, database auditing, security implementation and database reliability.
   g) Prerequisite: TEC 5323, or equivalent.
   h) Initial term of course offering: Summer 2006

2. Student Learning Objectives and Evaluation
   a) Student learning objectives of the course:
      EIU graduates will:
      • Demonstrate understanding of current database technology and typical database products.
      • Demonstrate understanding of security architecture in modern computer systems in a typical enterprise.
      • Formulate a working definition of database security and administration.
      • Identify contemporary practices of operating system security.
      • Demonstrate the knowledge and skills for administration of user, profiles, password policies, privileges and roles.
      • Manage database security on application level.
      • Conduct database auditing for security and reliability.
      • Implement typical security projects on enterprise systems.

   b) Student assessment and grades:
      Student achievement will be assessed and grades will be given according to class participation, class exercise, homework, database security project, mid-term test and final exam. Laboratory experience will be emphasized throughout the entire course. Grades will be determined upon the following distribution:

      | Component                        | Percentage |
      |----------------------------------|------------|
      | Class participation and exercise | 10%        |
      | Homework                         | 20%        |
      | Database lab security projects and reports | 50% |
      | Mid-term test                    | 10%        |
      | Final exam                       | 10%        |

   c) Technology-Delivered Format:
      (1) This course deals with enterprise computer systems. Delivering the course through asynchronous mode will enable those professionals working in the field to
gain access to the course.

(2) Homework and security projects will be submitted through WebCT. The integrity of the course will be the same as face-to-face courses in terms of homework and projects.

(3) Mid-term test and final exam will be administered online with strict time limits. The time limit will restrict students from consulting references or other individuals. Moreover, homework and projects carry much more weight than mid-term test and final exam.

(4) Active interactions among students and between students and instructor will be maintained through emails, WebCT discussion boards, on-line problem-solving community, chat room, and presentations. Virtual office hours will be planned, as appropriate or as requested, using MSN Messenger.

3. Outline of the Course
   a) Introduction: Security issues faced by enterprises 1
   b) Installing a typical database product 1
      Project I
   c) Security architecture 1
      Project II
   d) Operating system security principles 2
      Projects III
   e) Administration of users 2
      Project IV
   f) Profiles, password policies, privileges and roles 2
      Project V
      Project VI
   g) Database application security models 1
      Project VII
   h) Database auditing models 2
      Project VIII
   i) Application data auditing 2
      Project IX
   j) Practices of database auditing 1
      Project X

The above content was designed on a typical 15-week term. It will remain the same regardless if the course is instructed via the Web or face-to-face modality.

4. Rationale
   a) Purpose and need:
   This course will introduce students to the principles and practices of implementing computer database security in modern businesses and industries. Major content include database security principles and practice, database auditing, security implementation and database reliability.

   On September 11, 2001, it became clear to every Illinois citizen that the very fabric of the
and organization. This course is being developed as a part of our “Technology Security” graduate certificate program, in response to the call of Homeland Security Educational Initiative by IBHE.

Databases are the nerve center of our economy. Every piece of personal or proprietary information is stored in databases – for example, medical records, bank accounts, employment history, pensions and auto registrations. Database attacks are potentially crippling and relentless. It is essential for all organizations to have sound security practices and readiness that can protect their data assets and can respond to data losses due to disasters or other emergencies.

b) Justification of the course level:
A graduate-level course is suitable for students who prepare to become managers in industry. The proposed course will provide graduate students with knowledge and skills to effectively manage database security in industry. With this foundation, students will be able to develop more advanced skills and gain additional experience to become effective leaders in technology security.

c) Similarity to existing courses: None.

d) Impact on Program(s):
This course will be a required core for the graduate certificate program of “Technology Security.” In addition, graduate students can take this course as an elective for Master of Science in Technology degree, and/or an elective for “Computer Technology” graduate certificate program. This course will enhance the offerings of the graduate programs in Technology.

5. Implementation
a. Faculty: Graduate faculty in the School of Technology.
b. Additional costs to students: None. Students are required to have a high performance laptop or desktop microcomputer that can host Oracle 10g database products. Students need to have regular access to the Internet.
d. Term to be first offered: Summer 2006.

6. Community College Transfer: Not applicable.

7. Date approved by the School of Technology Curriculum Committee: 10/21/05

8. Date approved by Lumpkin College of Business and Applied Sciences Curriculum Committee: 11/14/05

9. Date approved by Council of Graduate Studies: 12/6/05