## Course Specifications

<table>
<thead>
<tr>
<th>Institution: University of Tabuk</th>
<th>Date of Report: 06/06/1435</th>
</tr>
</thead>
<tbody>
<tr>
<td>College/Department: Faculty of Computers and Information Technology / Department of Information Technology</td>
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</tbody>
</table>

### A. Course Identification and General Information

1. **Course title and code:** Database Security - CIT 464

2. **Credit hours:** 3-0-0-3

3. **Program(s) in which the course is offered.**
   (If general elective available in many programs indicate this rather than list programs)

   **Bachelor in Information Technology**

4. **Name of faculty member responsible for the course:**
   Dr. Asim Abdallah Elshiekh

5. **Level/year at which this course is offered:** Year 4 - (Elective Course)

6. **Pre-requisites for this course (if any):** CIT460-Computer and Information Security

7. **Co-requisites for this course (if any):** N/A

8. **Location if not on main campus:** ********

9. **Mode of Instruction (mark all that apply)**

   a. Traditional classroom [Yes] What percentage? 0%
   b. Blended (traditional and online) [No] What percentage? 0%
   c. e-learning [No] What percentage? 0%
   d. Correspondence [No] What percentage? 0%
   e. Other [No] What percentage? 0%

### Comments:
N/A
B. Objectives

1. What is the main purpose for this course?

- Understand the concepts and principles of the database security.
- Become familiar with concepts and principles of database auditing.
- Learn basic principles of security architectures, operating system security fundamentals, and database user administration.
- Learn how to independently research current database security topics and policies and prepare a database policy.

2. Briefly describe any plans for developing and improving the course that are being implemented. (e.g. increased use of IT or web based reference material, changes in content as a result of new research in the field)

The developing of the course being implemented will be through two issues:
- Discuss a sequence of technical papers.
- Teamwork project.
- Provide free lab hours for students.

C. Course Description (Note: General description in the form to be used for the Bulletin or handbook should be attached)

1. Topics to be Covered

<table>
<thead>
<tr>
<th>List of Topics</th>
<th>No. of Weeks</th>
<th>Contact Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Security Architecture</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>DB Security Overview</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>OS Security</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>User Admin</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>Profiles, Passwords etc</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>DB Security Models</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>Virtual Private Databases</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>DB Auditing</td>
<td>2</td>
<td>6</td>
</tr>
</tbody>
</table>
2. Course components (total contact hours and credits per semester):

<table>
<thead>
<tr>
<th></th>
<th>Lecture</th>
<th>Tutorial</th>
<th>Laboratory</th>
<th>Practical</th>
<th>Other:</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact Hours</td>
<td>45 hours</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>45 hours</td>
</tr>
<tr>
<td>Credit</td>
<td>45 hours</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>45 hours</td>
</tr>
</tbody>
</table>

3. Additional private study/learning hours expected for students per week.

4 hours

4. Course Learning Outcomes in NQF Domains of Learning and Alignment with Assessment Methods and Teaching Strategy

<table>
<thead>
<tr>
<th>NQF Learning Domains And Course Learning Outcomes</th>
<th>Course Teaching Strategies</th>
<th>Course Assessment Methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0 Knowledge</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.1 Design and implement of secure data stores.</td>
<td>Lectures.</td>
<td>First, second and final exams.</td>
</tr>
<tr>
<td>1.2 Good knowledge of multilevel security in database systems, covert channels, and security measures for relational and object-oriented database systems.</td>
<td>Homework assignments.</td>
<td>Assignments.</td>
</tr>
<tr>
<td>1.3 Describe a good database security policy.</td>
<td>Review paper.</td>
<td>Project.</td>
</tr>
<tr>
<td>2.0 Cognitive Skills</td>
<td>Supplemental notes.</td>
<td></td>
</tr>
<tr>
<td>2.1 Ability of understanding of modern issues in database security approaches.</td>
<td>In class discussions.</td>
<td></td>
</tr>
<tr>
<td>2.2 Teamwork ability.</td>
<td>Office hours.</td>
<td></td>
</tr>
<tr>
<td>2.3 Ability to manipulate and understand field</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.4</td>
<td>Ability to design and implement secure database systems.</td>
<td>• Related computer software and websites.</td>
</tr>
<tr>
<td>3.0</td>
<td>Interpersonal Skills &amp; Responsibility</td>
<td></td>
</tr>
</tbody>
</table>
| 3.1 | The ability to work independently to accomplish assigned tasks. | • Individual assignments.  
- Solving problems individually during class hours, and then discussing solutions.  
- Questions directed to all students during class hours, and then discussing answers.  
- Textbook and References.  
- Project group cooperation.  
- Group evaluation for student projects.  
- Evaluating students' individual works by homework and exams.  
- Observing encouragement of students to give answers and to discussion inside class hours. |
| 3.2 | The ability to communicate and to discuss related topics of the course with instructor inside and outside class. | |
| 4.0 | Communication, Information Technology, Numerical | |
| 4.1 | Acquaintance of using computer software related to the course. | • Lectures.  
- Handouts of supplemental materials.  
- Individual exercises.  
- In-class Discussions.  
- Textbook and References.  
- Instructor web site.  
- Student groups.  
- First, second, and final exams.  
- Assignments.  
- Project. |
| 4.2 | Acquaintance of using internet to get information related to the course. | |
| 5.0 | Psychomotor |  |

| 5. Schedule of Assessment Tasks for Students During the Semester |  |

N/A  
N/A  
N/A
<table>
<thead>
<tr>
<th>Assessment task (e.g. essay, test, group project, examination, speech, oral presentation, etc.)</th>
<th>Week Due</th>
<th>Proportion of Total Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Home works and assignments</td>
<td>2-14</td>
<td>20 %</td>
</tr>
<tr>
<td>2 First Exam</td>
<td>7</td>
<td>15 %</td>
</tr>
<tr>
<td>3 Second Exam</td>
<td>12</td>
<td>15 %</td>
</tr>
<tr>
<td>4 Project</td>
<td>13</td>
<td>10 %</td>
</tr>
<tr>
<td>5 Final Exam</td>
<td>17 or 18</td>
<td>40 %</td>
</tr>
</tbody>
</table>

**D. Student Academic Counseling and Support**

1. Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice. (include amount of time teaching staff are expected to be available each week)

   **6 office hours per week**

**E. Learning Resources**

1. List Required Textbooks


2. List Essential References Materials (Journals, Reports, etc.)


3. List Recommended Textbooks and Reference Material (Journals, Reports, etc)

4. List Electronic Materials (eg. Web Sites, Social Media, Blackboard, etc.)

- www.msdn.microsoft.com
- Instructor site of the Faculty (Dr. Asim Abdallah Elshiekh page)
- Websites on the internet that are relevant to the topics of the course

5. Other learning material such as computer-based programs/CD, professional standards or regulations and software.

N/A

F. Facilities Required

Indicate requirements for the course including size of classrooms and laboratories (i.e. number of seats in classrooms and laboratories, extent of computer access etc.)

1. Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)

- Lecture room with at least 35 seats.
- Personal computer with necessary software such as Oracle and/or Windows SQL Server.
- Data show.

2. Computing resources (AV, data show, Smart Board, software, etc.)

- Computer lab room containing at least 35 systems for free lab hours.
- Data show.

3. Other resources (specify, e.g. if specific laboratory equipment is required, list requirements or attach list)

N/A

G. Course Evaluation and Improvement Processes

1. Strategies for Obtaining Student Feedback on Effectiveness of Teaching

1- Questionnaires of:

- Course evaluation.
2- Recommendations of performance indicators.

2. Other Strategies for Evaluation of Teaching by the Program/Department Instructor

- Instructors questionnaire by students.
- Annual reports which prepared by the department.
- Discussions within the group of faculty teaching the course.
- Departmental internal review of the course.
- Outside review of the course.

3. Processes for Improvement of Teaching

- Providing computer labs containing up-to-date computers and softwares.
- Conducting and attending workshops given by experts on the teaching and learning methodologies.
- Periodical departmental and outside revisions of its methods of teaching.
- Monitoring of teaching activities by senior faculty members.

4. Processes for Verifying Standards of Student Achievement (e.g. check marking by an independent member teaching staff of a sample of student work, periodic exchange and remarking of tests or a sample of assignments with staff at another institution)

- Reviewing exam questions and a sample of corrected papers from a departmental committee and outside reviewers.

5. Describe the planning arrangements for periodically reviewing course effectiveness and planning for improvement.

- The course material and learning outcomes are periodically reviewed internally and externally.
- Comparing course content and teaching methodologies with similar courses offered at other departments.
- Studying the outcomes of the students' evaluation of the course and using these outcomes to improve teaching the course.

Faculty or Teaching Staff: Dr. Asim Abdallah Elshiek

Signature: ____________________________ Date Report Completed: _______________

Received by: ___________________________ Dean/Department Head
Signature: _______________________________  Date: _______________