CPIT-345 Syllabus

Catalog Description

CPIT-345 Database Administration
Credit: 3 (Theory: 3, Lab: 0, Practical: 1)
Prerequisite: CPIT-240
Classification: Department Required

The objective of this course is to explore a variety of topics in Database Administration. Using hands-on training, students will learn about installation, configuration, administration, performance, security, backup and recovery, and enterprise services of databases. Additional topics include an introduction to DBMS, schemas objects, partitioned tables and indexes, built in data types, backup and recovery, enterprise tools, services and connectivity, locking, and concurrency.

Class Schedule

Meet 50 minutes 3 times/week or 80 minutes 2 times/week

Lab/Tutorial 90 minutes 1 times/week

Textbook

Craig Mullins, , "Database Administration", Addison-Wesley Professional;(2002)

ISBN-13 9780201741292 **ISBN-10** 0201741296

Grade Distribution

Week	Assessment	Grade %
3	Graded Lab Work 1	1
4	Graded Lab Work 2	1
5	Graded Lab Work 3	1
6	Graded Lab Work 4	1
7	Graded Lab Work 5	1
8	Exam 1	15
8	Graded Lab Work 6	1
10	Graded Lab Work 7	1
11	Graded Lab Work 8	1
12	Graded Lab Work 9	1
12	Exam 2	20
14	Graded Lab Work 10	1
14	Group Project	10
15	Formal Presentation	10
16	Exam	35

Last Articulated

December 18, 2017

Relationship to Student Outcomes

a	b	c	d	e	f	g	h	i	j	k	l	m	n
	x	x								x			

Course Learning Outcomes (CLO)

By completion of the course the students should be able to

1. Identify the roles and tasks associated with a DBA. (k)
2. Create an environment for production database using appropriate DBMS, Architecture and Hardware components. (k)
3. **Examine storage and space management and various storage techniques. (k)**
4. Design metadata for the requirement classifications using data gathering technologies. (c)
5. Examine database connectivity techniques. (k)
6. **Apply database security in user level, object level and access level using privileges, auditing and job scheduling. (k)**
7. **Apply various backup copies and apply various recovery techniques. (c)**
8. Implement an alternative replica of production database using standby databases and or mirroring. (c)
9. Design remote environment prepared for disaster management. (b)
10. **Evaluate database performance using various performances monitoring and tuning tools. (b)**
11. Evaluate system configuration with OS, allied agents, memory conception and system catalog. (c)
12. **Analyze data movement using load, export and bulk data movement techniques. (k)**
13. Develop distributed database environment to balance data distribution. (c)

Coordinator(s)

Dr. Suhair Alshehri, Associate Professor

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Topics Coverage Durations

Topics	Weeks
What is a DBA	1
Creating database environment	1
Data & Storage Management	2
Metadata Management	1
Database Connectivity	1
Database Security	2
Database Backup and Recovery	2
Disaster Planning	1
Performance Management	1
System Performance	1
Data Movement and Distribution	1