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Syllabus Details

Syllabus ID:	2382
Syllabus Name:	**Database Systems**
Subject Code:	**DBI202**
NoCredit:	3
Degree Level:	Bachelor
Time Allocation:	Class hours: 30 slots - 1slot =90' Lectures: 15 slots Tutorials: 15 slots Home study: 60 slots
Pre-Requisite:	
Description:	- Knowledge about database systems has become an essential part of an education in computer science because database management has evolved from a specialized computer application to a central component of a modern computing environment. - The content of this course includes aspects of database management basic concepts, database design, database languages, and database-system implementation. Basing on these contents, the course emphasizes on how to organize, maintain and retrieve efficiently data and information from a DBMS.
StudentTasks:	- Students must attend more than 80% of contact slots in order to be accepted to the final examination. - Student is responsible to do all exercises given by instructor in class or at home and submit on time - Constantly follow announcements on intranet/LMS at http://lms.fpt.edu.vn for up-to-date course information regarding assignment submission and feedback on assignments and project work.
Tools:	Microsoft SQL Server
Scoring Scale:	10
DecisionNo:	1293/QĐ-ĐHFPT
IsApproved:	**True**
Note:	1) On-going Assessment - At least 2 progress tests: 10% - Labs (5): 10% - 1 assignment: 20% - 1 practical exam: 30% 2) Final exam (60'): 30% 3) Final Result: 100% Completion Criteria: 1) Every on-going assessment component >0 2) Final Exam Score >=4 & Final Result >=5
MinAvgMarkToPass:	5
IsActive:	True
Approved Date:	2/12/2020

5 material(s)

First Course in Database Systems		9780136006374				Jeffrey D. Ullman	Prentice Hall		Third edition
Database Management System		978-8131769591				Raghu ramakrishnan	Mc Graw-Hill		Third edition
Database Management System (DBMS): A Practical Approach		9788121932455				Rajiv Chopra	SChand Publications		
Course slides (.pptx)									

Labs & assignment									

7 LO(s)

LO1	Understand thedatabase concepts and database management system software
LO2	Understand the relation model of data and Algebraic Query Language
LO3	Understand data normalization and apply normalization techniques in database design
LO4	Be able to model an application’s data requirements using conceptual modeling tools like ER diagrams and design database schemas based on the conceptual model.
LO5	Be proficient in structure query language including Data Definition Language(DDL) and Data Manipulation Language(DML)
LO6	Understand PL/SQL concepts and manipulate with View, Cursors, Stored Procedures, Functions, Database Triggers
LO7	Apply the Index in database design and query optimization

Download All Teacher Material | Download All Student Material | 30 sessions (90'/session)

1	Chapter 1. The Worlds of Database Systems 1.1 The Evolution of Database Systems 1.2 Overview of Database Management System 1.3 Outline of Database-System Studies Assignment Introduction (individual)	LO1	I	Textbook, slides	DBI202	Textbook, slides	DBI202	Read chapter 1 in text book, focus on 1.1 and 1.2		
2	Chapter 2. The Relational Model of Data 2.1 An Overview of Data Models 2.2 Basics of the Relational Model	LO2	I,T	Textbook, slides	DBI202	Textbook, slides	DBI202	Read chapter 2 in text book, focus on 2.1 and 2.2		
3	2.4 An Algebraic Query Language	LO2	I,T	Textbook, slides		Textbook, slides		Read chapter 2 in text book, focus on 2.4		
4	Lab1 assistance	LO1, LO2	U	Textbook, slides, lab's questions		Textbook, slides, lab's questions		Do lab 1 as homework		

5	Chapter 3. Design Theory for Relational Databases 3.1 Functional Dependencies 3.2 Rules About Functional Dependencies	LO3	I, T	Textbook, slides		Textbook, slides		Read chapter 3 in text book, focus on 3.1 and 3.2		
6	3.3 Design of Relational Database Schema	LO3	I, T	Textbook, slides		Textbook, slides		Read chapter 3 in text book, focus on 3.3		
7	3.5 Normal Forms	LO3	I, T	Textbook, slides		Textbook, slides		Read chapter 3 in text book, focus on 3.5		
8	Lab 2 assistance	LO3	U	'Textbook, slides, lab's questions		'Textbook, slides, lab's questions		Do lab 2 as homework		
9	Progress test 1 (<=30') Assignment assistance	LO1, LO2, LO3	I, U	Textbook, slides,assignment's questions		Textbook, slides,assignment's questions		Do assignment as homework		
10	Chapter 4. High-Level Database Models 4.1 The Entity / Relationship Model 4.2 Design Principles 4.3 Constraints in the E / R Model	LO4	I, T	Textbook, slides		Textbook, slides		Read chapter 4 in text book, focus on 4.1, 4.2 and 4.3		
11	4.4 Weak Entity Sets 4.5 From E / R Diagrams to Relational Models 4.6 Converting Subclass Structures to Relations	LO4	I, T, U	Textbook, slides		Textbook, slides		Read chapter 4 in text book, focus on 4.4, 4.5 and 4.6		
12	Lab 3 assistance	LO4	U	Textbook, slides, lab's questions		Textbook, slides, lab's questions		Do lab 3 as homework		
13	Assignment assistance	LO1, LO2, LO3, LO4	U	Textbook, slides,assignment's questions		Textbook, slides,assignment's questions		Do assignment as homework		
14	Chapter 6. The Database Language SQL 6.1 Data Definition Lanaguage (DDL)	LO5	I,T	Textbook, slides		Textbook, slides		Read chapter 6 in text book, focus on 6.1 and 6.2		

15	6.2. Implement constraints on attributes with MS SQL Server (Keys and Foreign Keys, UNIQUE, CHECK,..)	LO5	I,T	Textbook, slides		Textbook, slides		Read chapter 7 in text book, focus on 7.1 and 7.2		
16	6.3 DML introduction & Basic of SQL Queries	LO5	I,T	Textbook, slides		Textbook, slides		Read chapter 6 in text book		
17	6.4 Query on more one relation	LO5	I,T	Textbook, slides		Textbook, slides		Read chapter 6 in text book		
18	6.5 Nested Queries in SQL	LO5	T,U	Textbook, slides		Textbook, slides		Read chapter 6 in text book		
19	6.6 Aggregation Queries in SQL	LO5	T,U	Textbook, slides		Textbook, slides		Read chapter 6 in text book		
20	6.7 Database Modifications (INSERT, UPDATE, DELETE statement)	LO5	T,U	Textbook, slides		Textbook, slides		Read chapter 6 in text book		
21	Chapter 7. Practical Issues of database application 7.1. Index	LO7	I,T, U	Textbook, slides		Textbook, slides		Read chapter 6 in text book		
22	7.2. Transaction, View and Query Optimization	LO6, LO7	I,T, U	Textbook, slides		Textbook, slides		Read chapter 6 in text book		
23	Lab 4 assistance	LO5, LO6, LO7	U	Textbook, slides, lab's questions		Textbook, slides, lab's questions		Do lab 4 as homework		
24	Assignment assistance (focus on query)	LO1, LO2, LO3, LO4, LO5, LO7	U	'Textbook, slides,assignment's questions		'Textbook, slides,assignment's questions		Do assignment as homework		
25	Chapter 8. Constraints and T-SQL Programming 8.1 Triggers 8.2 Constraint with triggers	LO6	T,U	Textbook, slides		Textbook, slides		Read chapter 7 in text book, focus on 7.5		
26	8.3 View, Function	LO6	T	Textbook, slides		Textbook, slides		Read chapter 7 in text book		

27	8.4 Cursors 8.5 Implement stored procedure with MS SQL Server	LO6	T	Textbook, slides		Textbook, slides		Read chapter 9 in text book		
28	Progress test 2 Lab 5 assistance	LO4, LO5, LO6, LO7	U	Textbook, slides, lab's questions		Textbook, slides, lab's questions		Do lab 5 as homework		
29	Assignment review	LO1, LO2, LO3, LO4, LO5, LO6, LO7	U	'Textbook, slides,assignment's questions		'Textbook, slides,assignment's questions		Do assignment as homework		
30	Practical Exam (85')	LO3, LO4, LO5, LO6, LO7	U							

5 assessment(s)

Assignment	on-going	1	20	>0	28 slots			N/A	All subjects in syllabus	in class, by teacher	
Lab	on-going	5	10	>0	90'			N/A		in class, by teacher	
Practical Exam	on-going	1	30	>0	90			N/A		In class, by teacher	
Progress test	on-going	2	10	>0	30'		Multiple choices; Marked by Computer or a suitable format	20		in class, by LMS system	Instruction and schedules for Progress Tests must be presented in the Course Implementation Plan approved by director of the campus. Progress test must be taken right after the last lectures of required material. Instructor has responsibility to review the test for students after graded. Progress test must be taken right after the last lectures of required material. Instructor has resposibility to review the test for students after graded.
Final exam	final exam	1	30	4	60			50	All subjects in syllabus	Exam room	The exam questions must be updated or different at least 70% to the previous ones.