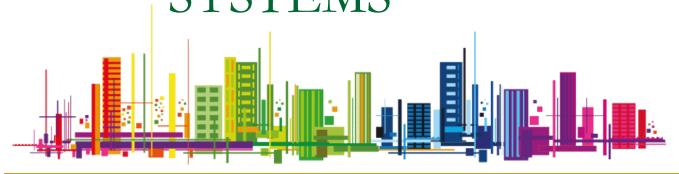
DATABASE MANAGEMENT SYSTEMS



COURSE OVERVIEW

Trong Nhan Phan, PhD

CONTACT

- Lecturer: Phan Trong Nhân, PhD
- Faculty: Computer Science and Engineering
- Department: Information Systems
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- Course site: BKeL

COURSE INTRODUCTION

- Subject: Database Management Systems
- Number: CO3021
- Credit: 3
- Period: 45
- Prerequisite: Database Systems
- Online learning: video lecture on BKeL
- Class Periods: 12 weeks

COURSE AIMS

- Describe basic concepts of a database management system.
- Identify the techniques of efficient management and access data that implemented in database management systems.
- Make sense of the query processing and optimization principles.
- Explain the issues of multi-user environment and solutions to deal with them, such as: transaction processing, concurrency control, database recovery.

REFERENCES

- 1. R. Elmasri & S.B. Navathe, AddisonWesley, Fundamentals of Database Systems, 7th Edition, 2016.
- 2. H. G. Molina, J. D. Ullman, J. Widom, Database System Implementation, Prentice-Hall, 2000.
- 3. A. Silberschatz, H.F. Korth & S. Sudarshan, Database Systems Concepts, 6th Edition, McGraw-Hill, 2006.
- 4. H.G. Molina, J.D. Ullman & J. Widom, Database Systems – The Complete Book, PrenticeHall, 2002.
- T. Connolly & C. Begg, Database Systems A Practical Approach to Design, Implementation, and Management, 6th Edition, Addison-Wesley, 2015.

OUTLINE

- Chapter 1: An overview of DBMS
- Chapter 2: Data storage and basic file structures
- Chapter 3: Data indexing
- Chapter 4: Query processing and optimization
- Chapter 5: Transaction processing
- Chapter 6: Concurrency control
- Chapter 7: Data recovery
- Chapter 8: Summary and Review

LEARNING OUTCOMES

- L.O.1: Describe basic concepts of a database management system.
- L.O.2: Identify the techniques of efficient management and access data storage implemented in database management systems.
- L.O.3: Make sense of the query processing and optimization principles.
- L.O.4: Explain the issues of multi-user environment and solutions to deal with them, such as: transaction processing, concurrency control, database recovery.

ASSESSMENT

- Midterm Test + Exer. (MT) Final Test (FT)
 - Weight: 30%
 - Duration: 45-60 mins
 - Open book
 - Multiple choice (single answer) and essay questions
 - When: Tba.
- Team Assignment (TA)
 - Weight: 20%
 - Members: 4-5
 - Tutorial

Weight: 50%

Duration: 70-90 mins

- One A4 note
- Multiple choice and essay questions

No Nullable score!

Total Score = (30% * MT) + (20% * TA) + (50% * FT) > 5.5

TUTORIAL TASKS

With a particular DBMS, you are required to present:

- Data import and export (2 points)
- Query processing with data relationships (2 points)
- 3. Data indexing (2 points)
- 4. Transaction (2 points)
- Data back up and recovery (2 points)

Note: In case the DBMS has not yet supported either task 1-5, you have to find out the reason and the alternative way for it.

SUBMISSION

- Submission to BKeL: on time with regards to the provided schedule
- Team representative submits the work on behalf of the team
- Do not forget to press "submit" button

TEAM REGISTRATION

On BKeL

QUESTIONS AND ANSWERS



 $Picture\ from:\ http://philadelphiasculpturegym.blogspot.com/2013/09/save-date-free-talk-and-q-on-affordable.html$