
Data SecuriTy Applied Research Lab

www.dstar.edu.vn


# Welcome to
# Advanced Database Systems

Assoc. Prof. Dr. DANG TRAN KHANH

Vice Dean, Faculty of Computer Science & Engineering

Head, Department of Information Systems

Director, D-STAR Lab (Data SecuriTy Applied Research Lab)

http://www.cse.hcmut.edu.vn/~khanh/teaching/dbs_master14/ADBs_master14.html

# Lecturer

- Module leader: Assoc. Prof. Dr. Dang Tran Khanh
  - E-Mail: *khanh@cse.hcmut.edu.vn*
    *khanh@faw.jku.at*
  - URLs: *http://www.cse.hcmut.edu.vn/~khanh* (my HP)
    *http://www.dstar.edu.vn (D-STAR Lab)*
- Office hours:
  - Contact by email (anytime, preferable)
  - Mon, 3:00-4:00pm, CSE/HCMUT

# Module Contents

- Contact hours: 60 (45 lectures, exercises +15 coursework and administrative tasks)

- This course:
  - Revises data models and database systems (with advanced problems included)
  - Provides advances in data storage and retrieval methods, flexible query answering, transaction processing, and database security
  - Introduction to emerging database technologies and applications, as well as related research directions

# Assessments

- All OPEN-book-exams
- Mid-term exam: 30%
  - 90': test + exercises
- Assignment : 20%
  - Group up to 4 students
  - Topics: you can propose
  - Technical requirements: must be a database-related application with Oracle 12c, SQL Server, MySQL, etc.
  - Submission deadline: see the course website
- Individual comprehensive exercises: 50%
  - 90': test + exercises

Assessment Scheme

| No | Method | Number of tests | % | Notes |
|---|---|---|---|---|
| 1 | Mid-term open-book-exam (75') | 1 | 30 | |
| 2 | Presentation (*wrt. the teaching schedule or cw presentations*) | . | Bonus marks | Encouragement |
| 3 | Coursework | 1 | 20 | Group up to 4 students |
| 4 | Final open-book-exam (90') | 1 | 50 | University schedule |

# Core References

- **Core textbook:**

  [1] R. Elmasri, S.B. Navathe: *"Fundamentals of Database Systems"*, 6th Edition, Pearson Addison-Wesley, 2011, ISBN13: 978-0-136- 08620-8

- **References:**

  [2] P.A. Bernstein, E. Newcomer: "Principles of Transaction Processing", 2nd Edition, Elsevier Inc., 2009

  [3] S. Lightstone, T. Teorey, T. Nadeau: "Physical Database Design", Elsevier Inc., 2007

  [4] P.C. Zikopoulos, C. Eaton, D. DeRoos, T. Deutsch, G. Lapis: "Understanding Big Data", Mc Graw Hill, 2012

  [5] N.A. Chaudhry, K. Shaw, M. Abdelguerfi: "Stream Data Management", Springer-Verlag, 2005

  [6] C.C. Aggarwal (Ed.): "*Social Network Data Analytics*", Sringer Verlag, 2011

# Teaching Schedule

- Module website:

http://www.cse.hcmut.edu.vn/~khanh/teaching/dbs_master14/ADBs_master14.html

**Advanced Database Systems - 055002**

**Semester 1, 2014-2015**
**Master of Computer Science (incl. CS, Computer Security, and HPC themes)**
**(Sat, 18:15am-20:40am, Room: 502B4)**

**Instructor: Assoc. Prof. Dr. DANG Tran Khanh**

**Textbook:**

[1] R. Elmasri, S.B. Navathe: "Fundamentals of Database Systems", 6th Edition, Pearson Addison-Wesley, 2011

**References:**

[2] P.A. Bernstein, E. Newcomer: "*Principles of Transaction Processing*", 2nd Edition, Elsevier Inc., 2009
[3] S. Lightstone, T. Teorey, T. Nadeau: "*Physical Database Design*", Elsevier Inc., 2007
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- Notes:

→All necessary slides are available on the website and free for you to download and use in this course

→Slides are protected by passwords, which are given in the class only and will not be provided again !

# Other Notes

- Mobile: off or in vibration mode
- Question: any time
- Presentation:
  - Encouraged in this class, followed by my schedule (available on the course website)
  - Bonus marks to be added for good presentations
  - No limitation of one's presentation number (FCFS policy, however, priority will be given to students who have not presented yet)
  - Topics: you are able to suggest any new topics related to DBs/ISs (not only confined to the lecture contents)

# Q&A