

IIO30220 Database Management (5 ECTS)

Introduction

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<http://homes.jamk.fi/~huojo/opetus/IIO30220/>



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Objectives:

- The students understand the significance of database management, are able to support application development and database use, testing and training.
- They know
 - the structure and operation of database management systems, the duties of a database administrator (DBA)
 - how to install, manage, and administer a database;
 - how to specify users, user groups and access rights;
 - how to secure data (transaction/crash management, backups, restoring)
 - how to monitor and optimize databases



Items of Assessment

- Exam (35 points, minimum: 15 p.)
- Assignment: database prototype and management plan for chosen DBMS (10 p.) + presentation (5 p.) = 15 p.
- Report (30 p.)
 - Topic (chosen by yourself) about database management (25 p.)
 - Presentation (5 p.)
- Assignments in the learning environment (10 p.)
- Learning report (10 p.)



Assessment, Grade, and Criteria

<u>Points</u>	<u>Grade</u>	<u>Criteria</u>
0 – 24.9	Fail 😞	The student does not master the topic
25 – 39.9	1	Rather poor mastery of the sub entities
40 – 54.9	2	A fractured picture of the topic
55 – 69.9	3 😊	Good mastery of the sub entities
70 – 84.9	4	A clear overall picture of the topic
85 – 100	5 😄	Ability to apply knowledge independently



Research report

- Public report ([Creative Commons](#) licence)
- Use can use previous research reports (but original authors must be mentioned)
- Topic can be, e.g., introduction to some new DBMS (database management with X) or special theme such as migration of two databases
- Return it to Optima or use wiki or blog or ...



Assignment

- Prototype with the DBMS you have chosen containing GUI for CRUD (create, read, update, and delete data)
- Database management plan for
 - backups
 - distribution and using different disks
 - optimization (database tuning)
 - user/group rights management
 - other tasks that belong to DBA
- Can be returned together with the assignment in the Database design course



Choosing the topic and the group

- Size of the group: 2-4 persons
- Choose a topic which solves a real problem (same as in the Database design course)



Exam

- Three-hour exam contains two parts
 - First part: no support material allowed => tests your knowledge
 - Second part test your skills to apply what you have learned; you can use computer and support material
 - Short break is allowed between the two parts



Learning report

- In the beginning: your background, personal goals etc.
- Every week: what you have learned etc.
- In the end: how did you achieve your goals, what things to improve etc.
- Return it to the Optima environment
- Detailed information:
<http://homes.jamk.fi/~huojo/opetus/IIO30120/LearningReport.pdf>
- Word template
 - <http://homes.jamk.fi/~huojo/mallit/Oppimisraportti.dot>
 - <http://homes.jamk.fi/~huojo/mallit/LearningDiary.doc>

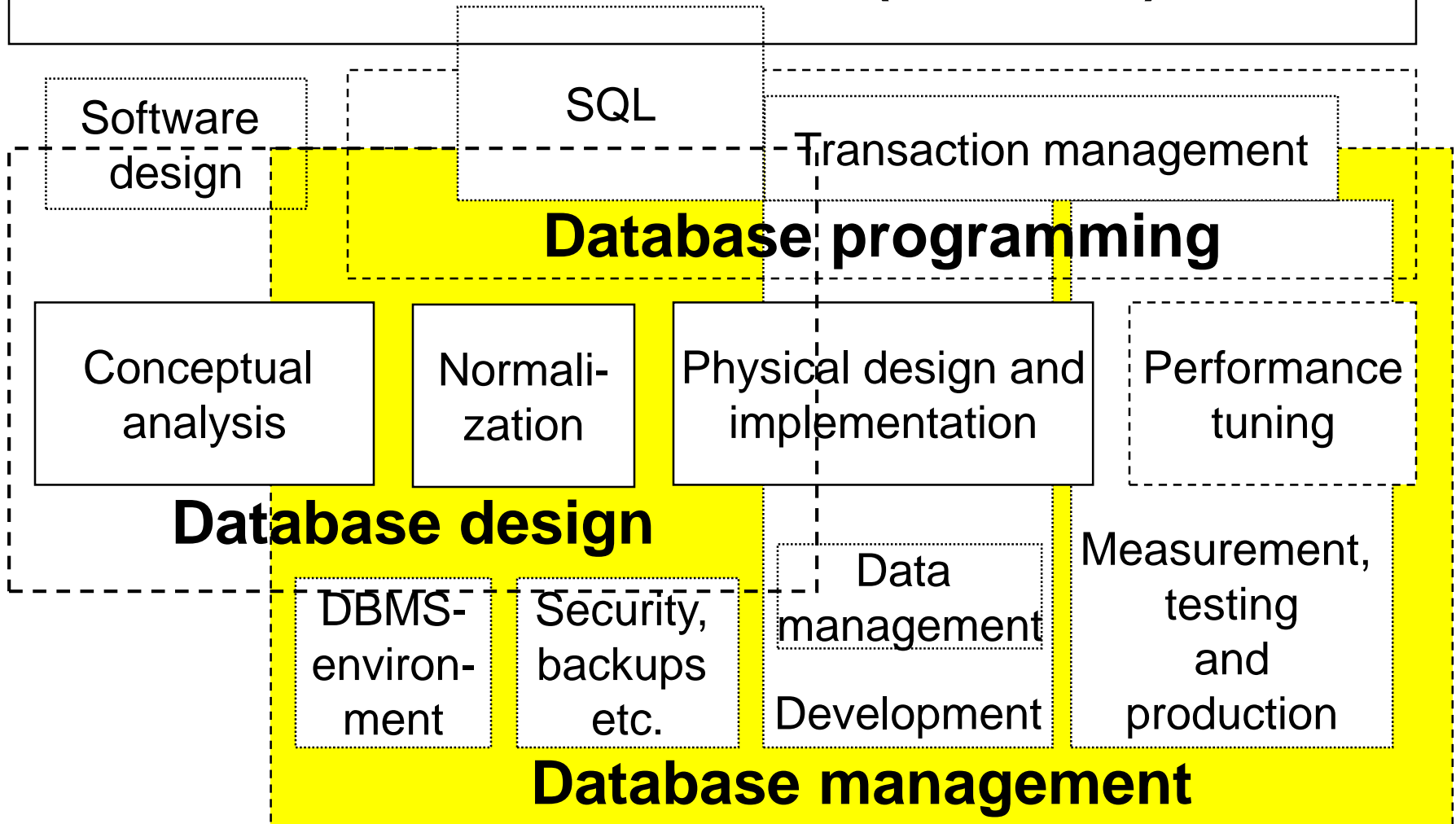


Learning material

- Slides (both in Schedule pages and in Optima)
- Tietokantojen suunnittelu & indeksointi (Hovi, Huotari, Lahdenmäki, Docendo) part I (chapters 10-) and part II
- Craig S. Mullins: Database Administration
The Complete Guide to Practices and Procedures, 2002
- Books24x7 ([Nelliportaali](#))
- Connolly & Begg: [Database Systems](#)

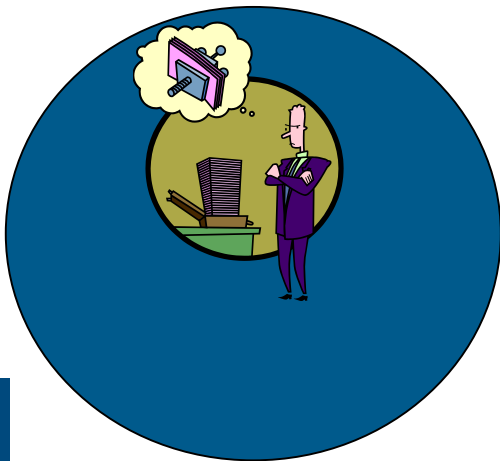


Basics of Databases (IIZO3030)



IIO30Z Databases

• IIO30120 <u>Database design</u>	5 ECTS
• IIO30220 <u>Database management</u>	5 ECTS
• <u>IIO31100 XML Techniques</u>	5 ECTS
Total	15 ECTS



Note:

- Partly virtual
- If you have already passed XML Techniques , it can be replaced with another course, e.g., IIM92Z Valinnainen erikoistyö

Rules and suggestions (agreed together)

- Mobile phones in silent mode; if you must answer the phone do it outside of the class room
- Coffee cups etc. => trash
- Peer review
 - Change your work with another group
 - Give honest feedback: what is good and what should be improved
- Save energy (shutdown the computer if there is no teaching after the labs)



Links

- Schedule: <http://homes.jamk.fi/~huojo/opetus/IIO30220/>
- Ellibs: <http://library.ellibs.com/login/?library=90&book=951-846-714-5&language=fi>
- Delicious: <http://delicious.com/jouni.huotari/database>
- Creative Commons: <http://creativecommons.fi/> tai <http://creativecommons.org/international/fi/>

