

## Schedule Databases 2025

Version 20250317 16:30, changes to last version will be marked.

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Week date	Topics	Clips	Exercises	Assignment	Book
<b>6 tue Feb 4</b>	Intro; Relational model		<a href="#">Defining your data</a>		1; 2.1-2.3; 7.1.1
<b>6 thu Feb 6</b>	Relational algebra	<a href="#">RA1</a> <a href="#">RA2</a>	Ex 1-5 (for SQL DDL: see slide model-ra:10) <a href="#">Algebra</a>		4 - 4.6; rest of 2;
<b>7 tue Feb 11</b>	ERD FD: concept	<a href="#">FD1</a> erratum[16]: C -> B does not hold	Ex 6-9 <a href="#">FDs</a> ;		3 - 3.1
<b>7 thu Feb 13</b>	More FDs: lossless decomposition, BCNF	<a href="#">FD2</a>	Ex 10-12 <a href="#">Lossless decompositions</a>	<b>Deadline HW 1</b>	3 - 3.3, not 3.2.8
<b>8 tue Feb 18</b>	SQL	<a href="#">SQL1.1</a> <a href="#">SQL1.2</a>	<a href="#">Queries</a>		6 - 6.5; 7-7.2, <7.3>, 7.4
<b>8 thu Feb 20</b>	Further normalization: 3NF, DP	<a href="#">NORM1</a> <a href="#">NORM2</a>	Ex 15-19 Lab1		3.4 (with <3.4.2>), 3.5,
<b>9 tue Feb 25</b>	4NF, indexing		<a href="#">Qualities of decompositions</a> Ex 20-22		3.6 - 3.6.2, 3.6.4; 8.3
<b>9 thu Feb 27</b>	Constraints, triggers, view		Lab 1 Ex 25		7 - 7.5; 8; 10.1;
<b>10 tue Mar 4</b>	<i>Break: no classes</i>		Lab 1	<b>Deadline HW 2</b>	
<b>10 thu Mar 6</b>	<i>Break: no classes</i>		Lab 1		
<b>10 fri Mar 7</b>				<b>Deadline lab 1</b>	

Two more pages

<b>11 tue Mar 11</b>	TP: concurrency	<a href="#">CC1</a> <a href="#">CC2</a>	Ex 26-32		18 - 18.3, 18.4.1, 18.4.2, <remainder of 18.4>
<b>12 tue Mar 18</b>	TP: recovery	<a href="#">REC1</a> <a href="#">REC2</a> <a href="#">REC3</a>	Ex 35-38 <a href="#">Recovery</a>		19.2.1, 19.2.2; 17, 19.-19.1.5;
<b>12 thu Mar 20</b>	2PC; Query processing (algebraic rewriting)	<a href="#">2PC</a> <a href="#">QP1</a>	Ex 39-40, 44	<b>HW3</b>	20.5; 15.1, 15.1.3, 15.1.4, 15.3 - 15.3.4 15.4.6, <15.6.1 - 15.6.3>
<b>13 tue Mar 25</b>	Query processing (algorithms)	<a href="#">QP2</a> <a href="#">QP3</a> <a href="#">QP4</a>	<a href="#">Session 6</a> <a href="#">Query processing</a>		<16.1>, 16.2, 16.3 (with<16.3.2>)
<b>13 thu Mar 27</b>	NO-SQL focus: MapReduce		Lab 2	<b>Deadline HW 3</b>	
<b>14 tue Apr 1</b>	Guest lecture by Yannis Velegrakis		Lab 2		
<b>14 thu Apr 3</b>	Example examination		Lab 2	<b>Deadline lab 2</b>	

## **Assorted topics**

Information Integration: An Introduction

<https://medium.com/cracking-the-data-science-interview/an-introduction-to-big-data-data-integration-40715baa7961>

Data Cleaning:

<https://www.youtube.com/watch?v=GMxCL0PBHzA>

RDF (Adding Semantics to your data)

[https://www.europeandataportal.eu/sites/default/files/d2.1.2\\_training\\_module\\_1.3\\_introduction\\_to\\_rdf\\_sparql\\_en\\_edp.pdf](https://www.europeandataportal.eu/sites/default/files/d2.1.2_training_module_1.3_introduction_to_rdf_sparql_en_edp.pdf)

Big Data:

<https://www.youtube.com/watch?v=bAyrObl7TYE>

NoSQL Databases:

[https://www.youtube.com/watch?v=uD3p\\_rZPBUQ](https://www.youtube.com/watch?v=uD3p_rZPBUQ)

[https://www.youtube.com/watch?v=ql\\_g07C\\_Q5I&t=30s](https://www.youtube.com/watch?v=ql_g07C_Q5I&t=30s)