

Schedule Databases 2020-2021

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Week date	Topics	Clips	Exercises	Assignment	Book
6 tue Feb 9	Intro; Relational model		No session		1; 2.1-2.3
6 thu Feb 11	Relational algebra	RA1 RA2	Defining your data; Algebra		2; 7-7.1.1
7 tue Feb 16	ERD FD: concept	FD1 erratum[16]: C -> B does not hold	Session 1 (for SQL DDL: see slide model-ra:10)		4 - 4.6; 3 - 3.1
7 thu Feb 18	More FDs: lossless decomposition, BCNF	FD2	Identification; Lossless decompositions		3 - 3.3, not 3.2.8
8 tue Feb 23	SQL	SQL1.1 SQL1.2	Session 2		6 - 6.5; 7-7.2, <7.3>, 7.4
8 thu Feb 25	Further normalization: 3NF, DP	NORM1 NORM2	Queries		3.4 (with <3.4.2>), 3.5,
9 tue Mar 2	4NF, indexing		Session 3 Lab1		3.6 - 3.6.2, 3.6.4; 8.3
9 thu Mar 4	Constraints, triggers, view		Qualities of decompositions	Deadline group registration	7 - 7.5; 8; 10.1;
10 tue Mar 9	Break: no classes		Session 4 Lab 1	Deadline HW 1	
10 thu Mar 11	Break: no classes		Lab assistance		
10 fri Mar 12				Deadline lab 1	
11 tue Mar 16	TP: concurrency	CC1 CC2	Session 5		18 - 18.3, 18.4.1, 18.4.2, <remainder of 18.4>,
11 thu Mar 18	TP: recovery	REC1 REC2	Recovery		19.2.1, 19.2.2; 17, 19.- 19.1.5;
12 tue Mar 23	2PC; Query processing (algebraic rewriting)		Session 6	Deadline HW2	20.5; 15.1, 15.1.3, 15.1.4, 15.3 - 15.3.4 15.4.6, <15.6.1 - 15.6.3>
12 thu Mar 25	Query processing (algorithms)		Query processing		<16.1>, 16.2, 16.3 (with<16.3.2>)
13 tue Mar 30	Quizzes		Session 7 Lab 2		
13 thu Apr 1	Yannis Velegarakis: <i>The world of databases outside SQL</i>	Guest lecture		Deadline HW3	
14 tue Apr 6	Example examination				
14 thu Apr 8	spare			Deadline lab 2	

- means "up to and including"; < > means "additional reading"

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

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=ql_g07C_Q5I&t=30s