

Lecture Plan

Date	Week	Learning goal	Content	Preparation
2.9. (3.9.)	36	Refresh knowledge about data modelling and SQL	We work with central subjects within data modelling and SQL. Introduction to Microsoft SQL Server.	[T-SQL2012] ch 1-2 [MSDN1] Pluralsight: If you have little experience with SQL, you need to watch this before the first class: [INTROSERVER] (2h 9m)
9.9. (10.9.)	37	Complex data modelling Advanced SQL	Data modeling: normalization, participation and constraints. SQL: Embedded SE-LECTs, Views	[MSDN1] [T-SQL2012] ch 3 [VIEW] Pluralsight: If you have little experience with normalization: [DATAMODEL] - Clones! R[Deplicants! The Importance of Normalization (26 m)
16.9. (17.9.)	38	Advanced SQL	Stored Procedures and Functions	[T-SQL2012] pages 362-370 [STORED] [DUMMY]
23.9. (24.9.)	39	Advanced SQL	Transactions and Triggers	[T-SQL2012] Ch. 9 [TRAN]
30.9. (31.9.)	40	Advanced SQL	Mandatory Assignment 1	[SIMPLY] Uploading the video-part of Mandatory Assignment 1
7.10. (8.10)	41	Advanced SQL	Video feedback, SQL feedback etc	Mandatory Assignment 1 hand in 9.10 at 23.59.
14.10. (15.10)	42	Fall break		
21.10 (22.10)	43	Data structures	JSON format	[MONGO] pages 7-11 and 16-20 with focus on what JSON can be used for. Pluralsight: [GOOGLEAPI] (1h 55m)
28.10 (29.10)	44	Data structures	JSON format	
4.11. (5.11)	45	Data structures	Introduction to the XML family (the XML document and XSLT)	Mandatory Assignment 2 hand in 6.11 at 23.59 [XML] Pluralsight: [XMLFUND] - Following Examples - What is XML - XML Structure

				<ul style="list-style-type: none"> - Document Type Definition and Parsed Entities - Content and Markup - (2h 17m)
11.11. (12.11)	46	NoSQL data-bases	MongoDB	[NOSQL] ch 2, 9, 13, 15 [MONGO] ch 1-4 MongoDB.org Pluralsight: [INTROMONGO] <ul style="list-style-type: none"> - Introduction - Introduction to MongoDB - The Mongo Shell - (1h 3m)
18.11. (19.11)	47	NoSQL data-bases	MongoDB	Pluralsight: [INTROMONGO] <ul style="list-style-type: none"> - Saving Data - Finding Documents - Indexing - (1h 24m)
25.11 (26.11)	48	Mandatory Assignment	No lecture – guidance on project available	
2.12 (3.12)	49	Mandatory Assignment	No lecture – guidance on project available	
9.12 (10.12)	50	Mandatory Assignment	No lecture – guidance on project available	
16.12 (17.12)	51	Repetition	Repetition and preparation for the exam	

Literature

[T-SQL2012]: SQL Server 2012 T-SQL Fundamentals by Itzik Ben-Gan

[NOSQL]: NoSQL Distilled by Pramod Sadalage

[MONGO]: MongoDB by Kristina Chodorow

Articles at Fronter:

[TRAN]: Beginning C# 2008 Databases – Transactions

[XML]: Beginning C# 2008 Databases – XML

[STORED]: Beginning T-SQL – Stored Procedures

[VIEW]: Beginning T-SQL – Views

[SIMPLY]: Chapter 5-6 (GROUP BY and HAVING) Simply SQL

[DUMMY]: SQL Server 2008 for Dummies – Functions, Stored Procedures, Triggers

Videos at Pluralsight:

Note: not all of these will be on the lecture plan, and sometimes only one or two chapters from the courses will be needed. Suggestions will be added to the lecture plan approximately one-two weeks in advance.

[INTROSQL]: [Introduction to SQL](#) (3h 22m) by Jon Flanders

[INTROSERVER]: [Introduction to SQL Server](#) (2h 9m) by Dan Sullivan

[HACK]: [Ethical Hacking: SQL Injection](#) (5h 25m) by Troy Hunt

[WEBAPI]: [Web API Design](#) (2h 17m) by Shawn Wildermuth

[GOOGLEAPI]: [Google Maps API: Get Started](#) (1h 55m) by Mark Lewin

[XMLFUND]: [XML Fundamentals](#) (4h 51m) by Dan Sullivan
[XMLSYNT]: [XML Syntax Fundamentals](#) (5h 23m) by Ken Holman
[XMLTOOLS]: [XML tools by Example](#) (54m) by Dan Sullivan
[INTRONOSQL]: [Understanding NoSQL](#) (2h 40m) by Andrew Brust
[INTROMONGO]: [Introduction to MongoDB](#) (2h 27m) by Nuri Halperin
[MONGOASP]: [Using MongoDB with ASP.NET MVC](#) (3h 12m) by Wes Higbee
[MONGOADM]: [MongoDB Administration](#) (7h 20m) by Nuri Halperin
[DATAMODEL]: [Practical Data Modeling With C# and SQL](#) Server (2h 33m) by Jason Sauer

Articles on the internet:

[MSDN1]: [Tutorial: Writing Transact-SQL Statements](#)

Supplementary:

[DDRT]: Database Design and Relational Theory