

LIS 9731 DATABASE MANAGEMENT SYSTEMS

Term: Fall 2019

Instructor: Dr. Liwen Vaughan

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Class time: Friday 9-11:50am. Location: FNB 2230

Office: FNB 4085. Phone: 661-2111 ext. 88499

Office hours: Friday 12:30pm-2:30pm or by appointments

Course Description

Data modelling and database structures and their application to information retrieval and processing. Analysis of data requirements and implementation of systems using a relational DBMS. Mounting a database on the Web. Programming or scripting for database applications.

Course-Level Learning Outcomes

Upon successful completion of readings, assignments, and class participation, students will be able to:

- Understand data modelling and database structures and their application to information retrieval and processing (Program-Level Learning Outcome 6).
- Analyze data requirements and implementation of systems by means of a relational database management system (Program-Level Learning Outcome 6, 8).
- Understand the concepts of Web access to databases and have the basic skills of mounting a database on the Web (Program-Level Learning Outcome 4, 6).

Course Texts (on reserve in GRC)

Course Textbook

Coronel, C & Morris, S. (2014). Database Systems: Design, Implementation, & Management, 11th ed. Stamford, CT, USA: Cengage Learning. ISBN-10: 1285196147. ISBN-13: 978-1285196145.

Lab Workbook

Shellman, M. & Vodnik, S. (2016). New Perspectives Microsoft® Office 365 & Access 2016: **Intermediate**, Boston, MA, USA: Cengage Learning. ISBN-10: 1305880293. ISBN-13: 978-1305880290.

Recommended Reading (also on reserve in GRC)

Hernandez, M. J. (2013). Database Design for Mere Mortals: A Hands-On Guide to Relational Database Design, 3rd ed. Boston, MA, USA: Addison-Wesley. ISBN-10: 0321884493.

Eckstein, J. & Schultz, B. R. (2018). Introductory Relational Database Design for Business, with Microsoft Access, Hoboken, NJ, USA: John Wiley & Sons. ISBN-10: 1119329418.

Forta, B., Camden, R. & Arehart, C. (2010). Adobe Coldfusion 9 Web application construction kit, Volume 1: Getting Started. Berkeley, CA, USA: Peachpit Press. ISBN-13: 9780321660343.

Course Outline

DATE	TOPIC	READINGS	ASSIGNMENTS
Sept 6	Introduction to the course. Defining a database	Lab Workbook Module 1	
Sept 13	Data validation	Lab Workbook Module 2 Lab Workbook Module 5 AC 245-249 and AC 270-286	
Sept 20	Entity integrity. Queries and forms	Textbook Chapter 2.4.3, Chapter 3 up to and include Chapter 3.3 Lab Workbook Module 3 and Module 4	
Sept 27	Referential integrity. Database reports	Lab Workbook Module 7 (skip AC 430 on)	
Oct 4	Entity Relationship Modeling I	Textbook Chapter 2 up to and include Chapter 2.5.3, Chapter 3 from 3.5 on	Assignment 1 due 9am, Oct 4
Oct 11	Entity Relationship Modeling II	Textbook Chapter 4, Chapter 5.3	
Oct 18	Research week, no class		
Oct 25	Database normalization	Textbook Chapter 6 (Skip Chapter 6.6)	
Nov 1	Structured Query Language	Textbook Chapter 7 (skip Chapter 7.2, 7.3, 7.5)	Assignment 2 due 9am, Nov 1
Nov 8	Web database – basic concepts	Textbook Appendix J	Assignment 3 due 9am, Nov 8
Nov 15	Web database – queries	Textbook Appendix J	
Nov 22	Web database – operation of records	Textbook Appendix J	
Nov 29	Project demonstration. Advanced scripting techniques	Textbook Appendix J	
Dec 6	Project demonstration		Project report due 9am, Dec 6

Evaluation

Content	Grade
Assignment 1	20%
Assignment 2	25%
Assignment 3	10%
Project demonstration	5%
Project implementation and project report	25%
Class participation	15%

Course Website

OWL

Academic Policy

It is a MLIS academic policy that late assignments will receive lower grades. The amount of penalty for this course is 5% grade reduction per late day. No assignment will be received after the assignments by the rest of the class have been graded and returned. Assignments must be submitted in print other than the database files of assignment 1 and the project. Email submission will not be accepted unless prior approval has been obtained from me for special circumstances.

It is also a MLIS academic policy that class attendance is required. Students will be excused from a class **only** for serious illness, family emergencies, inclement weather, attendance at professional/scholarly conferences or job interviews. Absence for any other reason will result in a lower grade. If you will miss a class for a conference or job interview, you should discuss the matter with me prior to the absence. Attendance requirements also include punctual arrival at classes.

Mere attendance does not guarantee participation marks. Students are expected to actively participate in class activities including class discussion and lab exercises. Positive participation, e.g. ongoing contribution of useful ideas or asking meaningful questions, will be rewarded while negative participation, e.g. using laptops for non-class related activities, will result in a lower grade.

Scholastic offences are taken seriously and students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence, at the following Web site: http://www.uwo.ca/univsec/pdf/academic_policies/appeals/scholastic_discipline_grad.pdf. Students are expected to complete assignments without collaborating with others. Unauthorized collaboration is also an academic offence.

Support Services

Students who are in emotional/mental distress should refer to Mental Health@Western http://www.uwo.ca/health/mental_wellbeing/index.html for a complete list of options about how to obtain help.