CSC 453 – Database Technologies

This is an introductory graduate course in database design and implementation.

Term	Winter 2015 – 2016
Section	801 (22393)
	CDM 00218 (Loop Campus)
	Wednesday 5:45PM - 9:00PM
Section	811 (22396) : Online Learning
Instructor	Nirajan Khadga
Office Hours	Thursdays 5:30 PM – 7:00 PM
Office Location	CDM 430 (Desk 1)
Skype	nkhadga (*Include CSC 453 in the Skype contact request*)
Email	nkhadga@cdm.depaul.edu
Course Web Site	http://d2l.depaul.edu/
Required Text	Fundamentals of Database Systems, **7th edition**
	Elmasri & Navathe, Addison-Wesley/Pearson, 2016. ISBN: 978-0133970777
Prerequisite	CSC 403 Data Structure II

Grading

There will be assignments given most weeks. Late assignments are not accepted.

Assignment	Given most weeks	35%
Mid-Term	Feb 10th	30%
Final Project	Due on March 16th	30%
Extra Credit (Participation)		5%

A >= 90%	B >= 80%	C >= 70%	D >= 60%	F < 60%

Regarding Academic Integrity

You are expected to be familiar with and to adhere to DePaul's Academic Integrity Policy, which is available on-line at http://academicintegrity.depaul.edu/AcademicIntegrityPolicy.pdf. Violations of the Academic Integrity Policy will be dealt with decisively; penalties may range up to an automatic F in the course and possible expulsion.

Plagiarism includes, but is not limited to: Turning in another person's work as your own (including hiring someone else to complete an assignment for you); Starting with another person's work and modifying it to turn in as your own; Cutting and pasting, or otherwise copying, sections of another person's work into your assignment; Allowing another person (such as a tutor) to write any part of your assignment; and so on. (Obviously, any examples that I post qualify as "another person's work".) Supplying such assistance to another student or working closely enough with another student that identical solutions are reached and submitted are also considered violations of the policy. In general, you may feel free to discuss the assignments with other students at a general level. However, when it comes to actually completing your assignment, you must work independently. Your assignments must be entirely your own individual work. If you have any questions or doubts about what plagiarism entails, you should consult me.

Other Tools

D2L (http://d2l.depaul.edu/)	This is the course homepage. Students are encouraged to post discussion questions here. All lectures, assignments, and other resources will be available here as well.
CDM Oracle Account	Activate your account at https://accountactivate.cdm.depaul.edu
Oracle SQL Developer	Download the Oracle SQL Developer from here.

	CALENDAR	

Week 1   January 6th
- Relational DBMS
- E/R Model
- Design Considerations

Week 2   January 13th
- Relational Model
- Converting E/R diagrams to relations
- Database Design Theory

Week 3   January 20th
- Normalization
- Decomposition
- Relational Algebra
- SQL

Week 4   January 27th
- Multi Relation SQL Queries
- Subqueries
- Aggregation
- Modifications

Week 5   February 3rd
- Joins, Subqueries and Aggregation
- Views
- Indexing
- Constraints
- Midterm Exam Information

Week 6	**Midterm Exam**	**February 10th**

Week 7   February 17th
- Transaction Management
- Authentication and Authorization
- Database Programing
- PL/SQL
- Java Database Connectivity (JDBC)

Week 8   February 24th
- JDBC Programming
- Web system architecture
- PHP

Week 9   March 2nd
- More on PHP
- SQL Injection

Week 10   March 9th
- NoSQL
- Big Data

Week 11	**Final Project Due**	**March 16th**