

# Database Systems – CMPP 307

**Instructor:** Rodney Rambally (Dr)  
**Class Schedule:** 7 credits (7 hours / week)  
**Location:** Classroom 4  
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**Course URL:** [www.u.tt/ict](http://www.u.tt/ict)

This course deals with the design, development and processing of databases. The ER model is used to study the design of relational databases, and ORACLE is used to exemplify all the concepts discussed. SQL and PL/SQL are used to process the data, while the C interface to ORACLE is used to study embedded SQL.

**Prerequisite** Data Structures & Algorithms (DSAL210B)

## Assessment

Assignment 1 (ER)	5%	<b>TOTAL (Assignments)</b>	<b>35%</b>
Assignment 2 (SQL)	10%	<b>Mid-term Exam:</b>	<b>30%</b>
Assignment 3 (PL/SQL)	10%	<b>Final Exam:</b>	<b>35%</b>
Assignment 4 (C Interface)	10%		

## Reference Material

- The instructor will recommend some reference textbooks. Also, reference materials on most of the topics covered will be made available to you in electronic form.

## Course Schedule

Date	Topics and Reading
Week 1, Sept. 8,10,11	Intro. To ER, Terminology, Resolving Relationships
Week 2, Sept. 15,17,18	Entity-Relationship Diagrams
Week 3, Sept. 22,24,25	Developing tables, Collect Assignment 1 Altering Tables, Dropping Tables Retrieving Data – Single Table Retrieval
Week 4, Sept. 29, Oct.1 Oct. 2	Retrieving Data (functions, pattern matching, etc.) Advanced Retrievals (joins, subselects)
Week 5, Oct. 6,8,9	Advanced Retrievals (correlated queries, EXISTS) Advanced Retrievals (Group By & Having) Handling Dates, Negatives
Week 6, Oct. 13,15,16	Handout Assignment 2 Intro. To PL/SQL PL/SQL – validating data Collect Assignment 2 PL/SQL – enforcing business logic
Week 7, Oct. 20,22,23	PL/SQL – enforcing business logic (continued) <b>Midterm Exam</b> PL/SQL – Stored Procedures
Week 8, Oct. 27,29,30	PL/SQL – Functions, Collect Assignment 2 Return/Discuss Midterm Exam Hand out Assignment 3 Use of Precompilers
Week 9, Nov. 3,5,6	Use of Precompilers (Continued) Review of C Programming, Collect Assignment 3 Oracle – C program to retrieve/format data
Week 10, Nov. 10,12,13	Program to retrieve / format data (continued) Oracle – C program to input / validate data
Week 11, Nov. 17,19,20	Embedded Procedures, Embedded Functions
Week 12, Nov. 24, 26,27	Review of Embedded SQL