

## CSC 311 (Spring 2013)

### Course Syllabus

**Course title:** Design and Analysis of Algorithms

**Instructors:**

- Dr. Mohamed Maher Ben Ismail ([mбенismail@ksu.edu.sa](mailto:mбенismail@ksu.edu.sa))

**Credit hours:** 4

**Web site:** <http://staff.ksu.edu.sa/mбенismail>

**Office hours:** Check the web site of the course.

**Goals of the course:** This is an introductory level course on the design and analysis of algorithms. The aim of the course is to provide a solid background in designing and analyzing algorithms. It is hoped that a student will be able to analyze and compare algorithms based on their efficiency, and also design efficient algorithms using several algorithm design paradigms.

**Recommended textbooks:**

- Cormen, Leiserson, Rivest and Stein, Introduction to Algorithms, 2/e, MIT Press, 2009.

**Topics (tentative):**

Mathematical preliminaries, asymptotic notations, practical complexities, common design techniques and examples: brute force, divide and conquer, greedy algorithms, dynamic programming, graphs, introduction to NP theorem.

**Evaluation:**

- **Assignments:** 5 points
- **Group Term Project:** 15 points
- **Midterm exams (2):** 20 + 20 points
- **Final exam:** 40 points

**Notes for email communication**

- Your email header must start with \*CSC311\*
- Send your email to mбенismail@KSU.edu.sa email address.
- Please write your name and your ID at the end of the email

### **Collaboration and attendance policies**

- Discussions about the course material are highly recommended. However, the student is not allowed to look at or copy any part of any homework or exam of other students. Plagiarism or any kind of cheating will not be tolerated and a student caught with that will end up having a grade of F.
- A student with an absence rate more than 25% will be denied from attending the final exam. An excuse for being absent is accepted only if it is legitimate and submitted within one week of the absence date.

