

## Templates for Annual Course Reports

**University:** El Fayoum      **Faculty:** Computers and Information Systems  
**Department:** Information System

### Course Report

#### A- Basic Information

- 1. Title and code:** Analysis and Design of Algorithms - CSC 340
- 2. Programme(s) on which this course is given:** B.Sc degree in Computer Science
- 3. Year/ Level of programmes:** Third year – First term

**4. Units/Credit hours:** 3 hrs/ week  
Lectures Tutorial/Practical Total: 7 hrs/ week

#### 5. Names of lecturers contributing to the delivery of the course

Lecturer: Dr. Hisham A. Kholidy  
Lecturer Assistants: Eng. Abdelrhman El Shafaei and Eng. Ahmed Salama

Course co-ordinator: Eng. Abdelrhman El Shafaei

External evaluator: .....

#### B- Statistical Information (Academic Year 2015 – 2016)

No. of students attending the course:    No.            98.8%  
No. of students completing the course: No.            98.8%

#### Results:

Passed: 89%            Failed: 11 %

#### Grading of successful students:

Excellent: 4 %      Very Good: 10.8 %

Good: 25.6 %      Pass: 59.4 %

## C- Professional Information

### 1 – Course teaching

W	Topics actually taught	No. of hours	Lecturer
1	Algorithm concept.	7	Dr. Hisham A. Kholidy + Lecturer Assistants
2	Analysis and complexity.	7	Dr. Hisham A. Kholidy + Lecturer Assistants
3	Design methods: Divide and conquer: The general method,	7	Dr. Hisham A. Kholidy + Lecturer Assistants
4	Binary search, merge sort, quick sort, selection, matrix multiplication.	7	Dr. Hisham A. Kholidy + Lecturer Assistants
5	Greedy method: The general method, minimum spanning Trees.	7	Dr. Hisham A. Kholidy + Lecturer Assistants
6	Dynamic programming: The general method, shortest paths. traveling salesman problem.	7	Dr. Hisham A. Kholidy + Lecturer Assistants
7	Mid Term	1	
8	Backtracking: The general method, the 8-queens Problem.	7	Dr. Hisham A. Kholidy + Lecturer Assistants
9	Optimization Algorithms: Particle Swarm Optimization (PSO).	7	Dr. Hisham A. Kholidy + Lecturer Assistants
10	NLP (Natural Language Processing) Algorithms: Global, Local, Semi-Global Alignment Algorithms.	7	Dr. Hisham A. Kholidy + Lecturer Assistants
11	Security Algorithms: Symmetric and Asymmetric Encryption Algorithms.	7	Dr. Hisham A. Kholidy + Lecturer Assistants
12	Probabilistic and Stochastic Algorithms: Markov Model (MM), Hidden Markov model (SVM).	7	Dr. Hisham A. Kholidy + Lecturer Assistants
13	Practical Exam	1	Dr. Hisham A. Kholidy + Lecturer Assistants
14	Final Exam	3	

### Topics taught as a percentage of the content specified:

>90 %      70-90 %      <70%

### 2- Teaching and learning methods:

Lectures: 13

Practical training/ laboratory: 13 + 2 hours Section

Class activity: 2

Case Study: 3

Other assignments/homework: 3

**3- Student assessment:**

Method of assessment	Percentage of total
Written examination	65%
Practical/laboratory work	15%
Other assignments/class work	10%
Total	100%

Members of examination committee

**Dr. Hisham A. Kholidy + Lecturer Assistants**

Role of external evaluator:

Evaluate the quality of the course materials and investigate the matching between the course contents and the desired learning objectives.

**4- Facilities and teaching materials:**

- a) Lectures
- b) Tutorials
- c) Computer-lab Sessions
- d) Practical lab work
- e) Class discussions
- f) Internet searches
- g) Independent Work
- h) Group projects
- i) Problem-based Learning
- j) Books:
  - Essential Books (Text Books):  
T.H. Cormen, C.E.Leiserson and R.L.Rivest: "Introduction to Algorithms", MIT Press, Cambridge, MA.
  - Recommended Books:  
Thomas Cormen, Charles Leiserson, Ronald Rivest and Clifford Stein, Introduction to Algorithms, MIT Press.

**5- Administrative constraints**

List any difficulties encountered

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**6- Student evaluation of the course: Response of course team**

List any criticisms:

Students asked for more practical tutorials and we considered their request.

**7- Comments from external evaluator(s): Response of course team**

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**8- Course enhancement:**

**Progress on actions identified in the previous year's action plan:**

**Action State whether or not completed and give reasons for any non-completion**

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**9- Action plan for academic year 2015 – 2016**

**Actions required      Completion date      Person responsible**

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**Course coordinator:**

**Signature:**

**Date: 11/12 /2016**