

(Pattern Recognition)

A- Basic Information

1. **Title and Code** Pattern Recognition / IT311
2. **Programme(s) on which this course is given** Information Technology
3. **Academic year / Level of Programme** 3rd year / 2nd Semester
4. **Units/Weekly hours**

Lecture Tutorial/Practical Total

1. Names of lecturers contributing to the delivery of the course

- Prof. Moawad Ibrahim Dessoky

Course co-ordinator : Prof. Moawad Ibrahim Dessoky

External evaluator : Not assigned yet.

B- Statistical Information

No. of students attending the course:

No. of students completing the course:

Results:

Passed: Failed:

Grading of successful students:

Excellent: Very Good:
Good: Pass:

C- Professional Information

1 – Course Teaching

Topics actually taught	No. of hours	Lecturer
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1 Introduction to Pattern Recognition <ul style="list-style-type: none"> • Introduction. • Components of a Pattern Recognition Systems. • Features and Patterns. • Classifiers. • A realistic Pattern Recognition System. • Pattern Recognition Approaches. 	12	Prof. Moawad Ibrahim Dessoky
2 Recognition and Learning by a Computer <ul style="list-style-type: none"> • Recognition by a Computer. • Representation and Transformation in Recognition. • Learning by a Computer. • Representation and Transformation in Learning. • Example of Recognition and Learning. 	12	Prof. Moawad Ibrahim Dessoky
3 Probability and Statistics <ul style="list-style-type: none"> • Introduction. • Conditional Probability. • Random Variables. • Probability Densities. • Bayesian Decision Theory. 	12	Prof. Moawad Ibrahim Dessoky
4 Parameters Estimation and Dimensionality Computation <ul style="list-style-type: none"> • Introduction. • Supervised Learning. • Maximum Likelihood Estimation. • Log Likelihood Estimation. • Hidden Markov Model. • Density Estimation. 	12	Prof. Moawad Ibrahim Dessoky
5 Classification and Discriminate Functions <ul style="list-style-type: none"> • Introduction. • Nearest Neighbor Rule. • K- Nearest Neighbor Rule. • Linear Discriminate Functions. 	12	Prof. Moawad Ibrahim Dessoky
6 Unsupervised Learning and Clustering <ol style="list-style-type: none"> 1- Introduction. 2- Unsupervised Classification. 3- Data Description and Clustering. 4- K-means Algorithm. 	12	Prof. Moawad Ibrahim Dessoky
7 Neural Networks <ul style="list-style-type: none"> • Introduction. • Algorithms • Example 	12	Prof. Moawad Ibrahim Dessoky

Topics taught as a percentage of the content specified:

≥90 ✓

70 %

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2- Teaching and Learning Methods:

Lectures:	<input checked="" type="checkbox"/>
Practical Training/ Laboratory	<input checked="" type="checkbox"/>
Seminar/Workshop:	<input checked="" type="checkbox"/>
Class Activity:	<input checked="" type="checkbox"/>
Case Study:	<input checked="" type="checkbox"/>
Other Assignments/Homework:	<input type="checkbox"/>

3- Student Assessment:

Method of Assessment	Percentage of total
Written examination	60
Oral examination	10
Mid term exam	10
Practical examination	10
Other Assignments/class work	10
Total	100 %

Members of Examination Committee

Prof. Moawad Ibrahim Dessoky

Mr. Mina Ibrahim

Mr. Sameh Zarif

Role of external evaluator:

External evaluator not assigned yet.

4- Facilities and Teaching Materials:

Totally adequate	<input type="checkbox"/>
Adequate to some extent	<input checked="" type="checkbox"/>
Inadequate	<input type="checkbox"/>

5- Administrative Constraints

- Insufficient Class rooms and Halls.
- One lab for more than one course.
- Insufficient maintenance team.
- Number of PCs is not matched with student number.

6- Student Evaluation of the course: Response of Course Team

- More Practical needed.
- Need detailed book instead of slides.
- Need more new algorithms in course

- Increase Number of projects.
- Add details to chapters in the book
- Add new algorithms to course.

7- Comments from external evaluator(s):

External evaluator not assigned yet.

8- Course Enhancement:

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

This is the first year and there is no previous action plan.

Course Coordinator: Prof. Moawad Ibrahim Dessoky

Signature:

Date: