COURSE SPECIFICATION

(Forensic Chemistry)

Faculty of Medicine- Mansoura University

(A) Administrative information

(1) Programme offering the course:	**Postgraduate Master degree of Forensic Medicine and Clinical Toxicology/ FNST 500**
(2) Department offering the programme:	**Forensic Medicine & Clinical Toxicology Department**
(3) Department responsible for teaching the course:	**Forensic Medicine & Clinical Toxicology Department.**
(4) Part of the programme:	**First part**
(5) Date of approval by the Department`s council	**25/7/2016**
(6) Date of last approval of programme specification by Faculty council	**9/8/2016**
(7) Course title:	**Forensic Chemistry**
(8) Course code:	**FNST 519 FC**
(9) Credit hours	**1.5 hours / week**
(10) Total teaching hours:	**30 hours/15 week (15 hours lectures and15 hours practical)**

(B) Professional information

(1) Course Aims:

The broad aims of the course are as follows:

1. To prepare our candidates to acquire basic knowledge, competencies, skills related to detection of different drug in body tissue and fluids using different techniques

(2) Intended Learning Outcomes (ILOs):

On successful completion of the course, the candidate will be able to:

A- Knowledge and Understanding:

A1. Enumerate types of samples collected for detection of drugs in body tissues and fluids and describe proper time for collection and methodology of its proper preservation
A2. Describe the technique for extraction of alkaline drugs, acidic drugs, neutral drugs, cannabis, and pesticide and detection using thin layer chromatography
A3. Describe the technique for extraction and detection of alcohols
A4. Describe the principle and technique for detection of different drugs using immunoassay techniques
A5. Describe the principle for detection of different drugs using high performance liquid chromatography, gas chromatography, and gas chromatography mass spectrometry.
A6. Describe the technique for detection of different drugs using high performance liquid chromatography.

B- Intellectual skills:

B1: select the proper sample for detection of different drug in the suitable time
B2. Select the proper technique for detection of different drugs.

c- Professional/practical skills

C1. Perform extration of alkaline drugs, acidic drugs, neutral drugs, cannabis, and pesticide and detection in urine using thin layer chromatography
C2. Perform extraction and detection of alcohols in urine
C3. Detect different drugs using immunoassay techniques
C4. Perform detection of alkaline drugs, acidic drugs, neutral drugs, cannabis using high performance liquid chromatography.

(3) Course content:

a. Lectures:

Subjects	Lectures
Sample collection	1.5
Extraction of and detection of neutral drugs by TLC	1
Extraction of and detection of acidic drugs by TLC	1
Extraction of and detection of alkaline drugs by TLC	1

Extraction of and detection of opiates and Tramadol by TLC	١
Extraction of and detection of cannabis by TLC	١
Extraction of and detection of alcohols	1
Extraction of and detection of pesticides by TLC	1.5
Principles of detection of drugs by immunoassay techniques	1.5
Detection of drugs by immunoassay techniques	1.5
Principles of detection of drugs by HPLC, GC,GCMS techniques	1.5
Detection of drugs by HPLC techniques	1.5
Total hours	**15**

b. Practical:

Subjects	**Laboratory**
Extraction of and detection of neutral drugs by TLC	1
Extraction of and detection of acidic drugs by TLC	2
Extraction of and detection of alkaline drugs by TLC	2
Extraction of and detection of opiates and Tramadol by TLC	2
Extraction of and detection of cannabis by TLC	١
Extraction of and detection of alcohols	1
Extraction of and detection of pesticides by TLC	2
Detection of drugs by immunoassay techniques	2
Detection of drugs by HPLC techniques	2
Total hours	**15 h**

(4) Teaching methods:

4.1: Lectures

4.2: laboratory work

(5) Assessment methods:

5.1:Written exam for assessment of A1, B1.

5.2: Structured oral exam for assessment of A1, B1.

5.3: Practical exam for assessment of C1.

Assessment schedule:

Final exam at 6th month from admission to Master degree with total of 300 marks

Percentage of each Assessment to the total mark:

Written exam: 180 marks represent 60% (144 marks written and 36 (20%) marks MCQ).

Practical exam : 60 marks represent 20%

Structured oral exam : 60 marks represent 20%

Other assessment without marks: Logbook activities

(6) References of the course:

Text books:

- **Basic Analytical Toxicology, WHO**
- **Analytical Toxicology, Prof.Dr. Abdel-Aziz Abo El-foutoh Ghanem.**

(7) Facilities and resources mandatory for course completion:

Lecture halls and data show.
Laboratory

Course coordinator:

Prof. Dr. Sahar Abdelaziz El Dakroory
Prof. Dr. Amal Abd El- Salam Al Bakary

Head of the department:
Prof. Dr. Sahar Abdelaziz Eldakroory

Date: