Course Specification

A- Basic Information

Programme(s) on which the course is given:	MSc of General Physiology
Department responsible for offering the course:	Zoology
Department responsible for teaching the course:	Zoology
Academic year:	2012-2013
Course title and code:	Instruments and microanalysis Z6118
Contact hours (credit hours):	Lecture: 2 hrs Practical: 2hrs Total: 3 hrs
Course coordinator:	Dr. Hany. M. Ibrahim

B- Professional Information

The course aim and intended learning outcomes are based on that mentioned in the programme specifications, with more course-related specific details.

1- Overall Aims of Course: By the end of this course, the student should be able to

* List some techniques of sampling of body fluids.
* List some techniques of sampling of body tissues.
* Describe how to store and preserve body fluids and tissues.
* Outline some recent techniques used in biology like centrifugation, spectroscopy, chromatography, electrophoresis, preparation of different solutions and reagents and adjustment of their pH ranges.

2- Intended Learning Outcomes of Course (ILOs):

a- Knowledge and Understanding:

a1- Define the different sampling techniques

a2- Identify the different apparatus and instruments.

b- Intellectual Skills:

b1- Measure the student capability to identify the different samples.

b2- List the different methods and microanalysis.

c- Professional and Practical Skills:

c1- Demonstrate skills in identification of sampling save and store.

c2- Use new instruments and practice new techniques useful in studying biology

d- General and Transferable Skills:

d1- Measure the scientific writing ability.
d2- Utilize the oral communication skills.
d3- Use appropriate lab equipment.
d4- Use the appropriate technology such as (Internet) for scientific research.
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3- Course Contents

Topic	No. of hours	Tutorial/ Practical	Lecture
Introduction	**3**	**2**	**2**
Sampling techniques	**3**	**2**	**2**
Preparation & adjustment of pH of solutions & reagents	**3**	**3**	**2**
Uses of centrifuges	**3**	**2**	**2**
Uses of photometers	**6**	**3**	**2**
Electrophoresis	**3**	**2**	**2**
Chromatography	**3**	**2**	**2**
RIA technique	**3**	**2**	**2**
ELISA technique	**3**	**2**	**2**

4- Teaching and Learning Methods

- Lectures.
- Practical sessions.
- Writing essays.
- Oral presentation.

5- Student Assessment Methods

- Essays
- Oral exms
- Written exams.
- Practical exams.
- Quizzes.

Assessment schedule

Assessment 1	Essay	Week 1 essay/term
Assessment 2	Oral exam	Twice/term
Assessment 3	Mid-term exams	Week 7
Assessment 4	Semester Work Exam	Week 10
Assessment 5	Final term exam	Week 14

Weighting of assessments

Mid-term examination	20%
Final-term examination	40%
Oral examination	10%
Practical examination	20%
Semester work	10%
Total	100%

6- List of references

6. 1- List of references

* Textbooks of Practical Physiology and Biochemistry.

6. 2- Recommended books

* Laboratory Techniques.
* Practical Biochemistry.

7- Facilities required for teaching and learning

* Dark room equipped with overhead and LCD projector.
* Laboratory slides and specimens.
* Librarian facilities.
* Computers with internet Access**.**

Course coordinator: Dr. Hany. M. Ibrahim
Head of Department: Prof. Saber Sakr
Date: 15/1/ 2013