

Planning and Quality Assurance Affairs

Form (A)

Course Specifications

General Information

|                            |               |
|----------------------------|---------------|
| Course name                | Biology Lab   |
| Course number              | BIOL1102      |
| Faculty                    |               |
| Department                 |               |
| Course type                | College Needs |
| Course level               | 1             |
| Credit hours (theoretical) | 0             |
| Credit hours (practical)   | 1             |
| Course Prerequisites       |               |

Course Objectives

- 1 - Safety in lab
- 2 - Commitment to laboratory standards
- 3 - Identification methodology of study in the lab and that will be different from lectures
- 4 - Identification biology courses by practical studies
- 5 - Identification theoretical subjects and concentration on the practical parts
- 6 - Improve work group skills for students

## Intended Learning Outcomes

|                                    |  |
|------------------------------------|--|
| <b>Knowledge and Understanding</b> | <ul style="list-style-type: none"><li>* Distribution of students in groups</li><li>* Identification and usage of tools and equipment with right methodologies</li><li>* Usage of light microscope in a mastery way for examined samples</li><li>* Students must be cautious from used chemicals and equipment</li></ul>  |
| <b>Intellectual Skills</b>         | <ul style="list-style-type: none"><li>* Selection proper tools for each test</li><li>* Enabling students to do microscoping examination of samples according to magnification power</li><li>* Ability to diagnostic and knowledge the cells and tissue using microscope</li><li>* Students must be cautious from used chemicals and equipment of experiment</li><li>* Ability for reading and analysis results</li></ul> |
| <b>Professional Skills</b>         | <ul style="list-style-type: none"><li>* Usage of light microscope</li><li>* Identification of magnification power of samples</li><li>* Mastery working of plant and animal slides</li><li>* Conducting of biochemistry tests and appearing results</li><li>* Dealing with tools and equipment in cautious way</li></ul>  |
| <b>General Skill</b>               | <ul style="list-style-type: none"><li>* Systematic scientific thinking to study in the laboratory</li><li>* Comparison between results of experiments</li><li>* Presentation and analysis of results</li></ul>   |

## Course Contents

|   |
|---|
| 1 - Safety in laboratory  |
| 2 - Recognition of tools, equipment used in lab especially light microscope       |
| 3 - Recognition types and examination of cells in all organisms                   |
| 4 - Types of animal tissues (epithelia, connective, muscles, nerves)              |
| 5 - Types of plant tissues (meristematic, permanent)                              |
| 6 - Morphology and anatomy of plants (Roots - stem - leaves)                      |
| 7 - Classification of algae   |
| 8 - Classification of fungi   |
| 9 - Macromolecules of cells (Inspection of protein, lipids and fat, carbohydrate) |

## Teaching and Learning Methods

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| 1 - Theoretical explanation for experiments      |
| 2 - Microscopic examination of cells and tissues |
| 3 - Conducting experiments practically           |
| 4 - Reading, analysis and discussion of results  |
| 5 - Report writing for experiments               |
| 6 - Discussion of results                        |

## Teaching and Learning Methods for the Disabled Students

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| 1 - Preparing the lab with required equipment, tools and techniques proper to disabled students |
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## Students Assessment

| <u>Assessment Method</u> | <u>TIME</u> | <u>MARKS</u> |
|--------------------------|-------------|--------------|
| Mid-term exam            | 1Hour       | 30           |
| Attendance and reports   |             | 20           |
| Final exam               | 1Hour       | 50           |

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## Books and References

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|---|---------------------------------|
| Course note   | Practical general biology note  |
| Other References<br>(Periodical, web sites,<br>.... etc.) | Webs related to general biology |