



<b>Topic</b>	<b>No. of Hours</b>	<b>Lecture</b>	<b>Tutorial/Practical</b>
<b>Measurement of microbial numbers, biomass and activities (General)</b>	<b>4</b>	<b>2</b>	<b>2</b>
<b>Sample collection, sample processing</b>	<b>4</b>	<b>2</b>	<b>2</b>
<b>Determination of microbial numbers (different methods)</b>	<b>4</b>	<b>2</b>	<b>2</b>
<b>Determination of microbial biomass and biochemical assays</b>	<b>4</b>	<b>2</b>	<b>2</b>
<b>Measurement of microbial metabolism</b>	<b>4</b>	<b>2</b>	<b>2</b>
<b>Effects of abiotic factors and Env. Extremes on microorganisms (General)</b>	<b>4</b>	<b>2</b>	<b>2</b>
<b>Environmental physical determinants</b>	<b>8</b>	<b>4</b>	<b>4</b>
<b>Environmental chemical determinants</b>	<b>4</b>	<b>2</b>	<b>2</b>
<b>Microorganisms in their natural habitats (General)</b>	<b>4</b>	<b>2</b>	<b>2</b>
<b>The atmosphere as a habitat and medium for microbes</b>	<b>4</b>	<b>2</b>	<b>2</b>
<b>The hydro-ecosphere&amp;litho-ecosphere</b>	<b>4</b>	<b>2</b>	<b>2</b>

#### 4- Teaching and learning methods

- 4.1- Lectures.
- 4.2- Oral discussion.
- 4.3- Practical demonstration.

#### 5- Student Assessment methods

- 5.1- Med term written exam exam to assess understanding competencies.
- 5.2- Med term practical exams to assess laboratory performance.
- 5.3- semester short exams to assess understanding&experience.
- 5.4- Final written exam to assess performance and comprehension.
- 5.5- Final written exam to assess experience and professionalism.

#### Assessment schedule

Assessment 1 Mid term	week	7
Assessment 2 Semester activities	week	4 and 10
Assessment 3 Final term practical exam	week	13
Assessment 4 Final term written exam	week	14

#### Weighting of Assessments

Mid-Term Examination (written+ practical)	20%
Final-Term Examination (Written+Practical)	60%
Oral Examination	10%

Semester Short exams	10%
Total	100

6- List of references

6.1- Course Notes

Lectures in (Microbial Ecology) Botany Department.

6.2- Essential Books (Text Books)

Microbial Ecology Text Books

6.3- Recommended Books

Microbial Ecology

6.4- Periodicals, Web Sites, ....etc

7- Facilities Required for Teaching and Learning

Lab. Equipments e.g microscopes, incubators, Laminar flow hood,  
glassware,  
Chemicals.

Course Coordinator : Dr. Mohamed Tawfik Shaaban

Head of Department : Prof. Dr. Mohamed Ali Afifi

Date: /1/2012.