

BIO 336: Microbial Physiology
Lab Syllabus
First semester 2021



LABORATORY SCHEDULE

Dates	Topics	Experiments
Sep 1	Introduction to the lab- Safety and lab practices	
Sep 8	Measuring Microbial Growth	1- Measuring Microbial Growth by Dry Weight method. 2- Measuring Bacterial Growth by Turbidity
Environmental Effects on Microbial Growth		
Sep 15	Physical Factors-1	1- Estimation of microbial growth optimal temperatures 2- Thermal Death Point Measurement.
Sep 22	Physical Factors-2	1- Study the effect of ultraviolet radiation on microbial growth 2- The Effects of Free-Oxygen on Growth
Sep 29	Physical Factors-3	1- The Effects of pH on Growth 2- The Effects of Osmotic pressure on Growth
Oct 6	Biological Factors + First Exam	1- 1-Study the effect of Fungal growth on Bacteria 2- 2- Study the effect of Fungal growth on other fungi
Oct 13	Chemical factors	1- Study the effect of Antibiotics on microbial growth 2- Study the effect of Disinfectants on microbial growth 3- Study the effect of organic and inorganic inhibitors on fungal 4- Study the effect of Heavy Metals on microbial growth
Growth and Metabolism		
Oct 27	I-Microbial Enzymes	1- Starch hydrolysis 2- 2-Gelatin Liquefaction 3- 3- Hydrolysis of Casein
Nov 3	II- Microbial Enzymes	4- Catalase production test 5- Oxidase enzyme test 6- Lipid hydrolysis 7- Enzymatic Hydrolysis of Cellulose
Nov 17	The Effect of Adding Different Nutrients Sources on Fungal Growth	1- Study The effect of adding different Carbon sources on fungal growth 2- Study The effect of adding different Nitrogen sources on fungal
	Final Exam	

