General Microbiology Laboratory Program, Biological Sciences M118L

I.- General Procedure in Laboratory of Microbiology

1.1 General Safety in the Laboratory

1.2 Use and Care of the Microscope

1.3 Staining Methods:
   1.3.1 Preparation of Smears
   1.3.2 Gram Staining
   1.3.3 Negative Staining: Capsule
   1.3.4 Spore Staining
   1.3.5 Ziehl-Neelsen Staining

1.4 Culture Media:
   1.4.1 Broths
   1.4.2 Solid media: Nutrient agar, Blood agar, McConkey agar, Muller-Hinton agar, etc.

1.5 Growth and Cultivation of Microorganisms:
   1.5.1 Transfer of Bacteria: Aseptic Technique
   1.5.2 Isolation of Bacteria

1.6 Macroscopic Examination of Colonies

1.7 Microscopic Examination of Bacteria

II.- Microorganisms of Normal Flora and Disease

2.1 Bacteria of the Skin

2.2 Bacteria of the Respiratory Tract

2.3 Bacteria of the Mouth

2.4 Growth of the bacteria aerobe and strict anaerobe

2.5 Biochemical Tests for Gram + cocci:
2.5.1 Hemolysis
2.5.2 Catalase
2.5.3 Coagulase

2.6 Biochemical Tests for Gram – rods:

2. 6.1 Carbohydrate catabolism
2. 6.2 Fermentation
2. 6.3 Protein Catabolism
2. 6.4 Rapid Identification Methods: API 10S, 20E

2.7 Analysis of Antibiotic Sensitivity: Disk-Diffusion Method

2.8 Identification of an Unknown from a Clinical Sample

III.- Viruses

3.1 Isolation and Titration of Bacteriophages

IV.- Fungi

4.1 Yeasts

4.2 Molds