

Microscopy

Chapter 3

Student Responsible Material

Units of measure
Metric system

Lecture Outline

- I. The Instruments
 - A. Simple
 - B. Compound
- II. Illumination
 - A. Light Microscopy
 1. Resolution
 2. Refractive index
 - a. Oil
 3. Brightfield
 4. Darkfield
 5. Phase contrast
 6. DIC
 - B. Fluorescence
 - C. Confocal
 - D. Electron Microscopy
 1. TEM
 2. SEM
 - E. Scanning probe microscopes
- III. Specimen Preparation
 - A. Staining Preparation
 1. Staining
 2. Fixing
 3. Smear
 - B. Stain composition
 1. Basic
 2. Acidic
 - C. Simple stain
 1. mordant
 - D. Differential stain
- IV. Gram stain
 - A. Procedure
 - B. gram positive
 - C. gram negative
- V. Acid-Fast stain
 - A. Procedure
 - B. Orgs
- VI. Special structure staining
 - A. Negative
 - B. Endospore
 - C. Flagella