

Tentative Lecture Schedule

<u>Date:</u>	<u>Topic:</u>	<u>Recommended Reading:</u>
Aug. 23	Introduction – Brief History of Microbiology	Preface & Chap 1
25	Biochemistry	Chap 2
30	Cell Membrane Structure and Function	Chap 4 Pg 85-90 & 97
Sept. 1	Review of Eukaryotic Cells - Functions of Organelles	Chap 4 Pg 94-103
6	Prokaryotic Cells	Chap 4 Pg 72-94
8	Taxonomy (Classification Trends & Criteria)	Ch. 10 & 6 Pg 150-157
13	Introduction to Archaea & Bacteria	Chaps 11, 27 and 28
15	Introduction to Fungi & Fungus-like Protista	Chap 12 Pg 320-332
20	Introduction to Algae & Protozoa	Chap 12 Pg 332-343
22	Introduction to Multicellular Parasites	Chap 12 Pg 343-353
27	Microbial Nutrition and Growth	Chap 6
*	29 Midterm Exam I (Introduction - Multicellular Parasites)	
Oct. 4	Microbial Metabolism, Enzymes & ATP	Chap 5 Pg 107-119
6	Fermentation and Cellular Respiration	Chap 5 Pg 119-133
11	Photosynthesis and Biosynthesis	Chap 5 Pg 133-143
13	DNA, RNA, and Replication	Chap 8 Pg 201-209
18	Transcription and Protein Synthesis	Chap 8 Pg 209-214
20	Regulation of Gene Expression (Genetic Control)	Chap 8 Pg 214-218
25	Genes & Mutations	Chap 8 Pg 218-225
27	Mechanisms of Genetic Exchange and Recombinant DNA Technology	Chap 8 Pg 225-233 Chap 9
Nov. 1	Introduction to Prions, Viroids and Viruses	Chap 13
3	Human Viruses and Viral Diseases	Chap 13, 19 & 21-26
8	Control of Microbes and Antimicrobial Chemotherapy	Chap 7 & 20
*	10 Midterm Exam II (Microbial Nutrition – Viruses & Viral Diseases)	
15	Nonspecific Resistance and Normal Flora	Chap 16 & Pg 390-393
17	Specific Defense and Immunology	Chap 17
22	Immunization and Hypersensitivity	Chap 18 & 19
24	Thanksgiving	
29	Epidemiology and Disease Transmission	Chap 14
Dec. 1	Pathology and Mechanisms of Pathogenicity	Chap 15
6	Review Selected Bacterial Diseases and Agents	Chaps 21- 26
*	8 Lecture Final Exam – Will occur during lecture and lab period.	

Chapter & page numbers apply to TF&C Microbiology an Introduction, Twelfth Edition.

Tentative Laboratory Schedule

Date:	Lab Ex#:	Laboratory Exercise:	Syllabus (Text):	
Aug.	23	0 Introduction to Microbiology	Pg 7-22	
		1 Significance of Handwashing	Pg 23-26	
	25	2 Microscopic Technique & Measurement	Pg 27-38 (Chap 3)	
	30	3 Culture of Microorganisms & Media Preparation	Pg 39-44 (Chap 6)	
		4 Aseptic Technique & Streak Plate Preparation	Pg 45-48 (Chap 6)	
		Begin Morphological Unknown	Pg 87-90	
Sept.	1	5 Isolation of a Pure Bacterial Culture	Pg 49-54	
		6a Staining - Direct Vs Indirect Stains	Pg 55-58 (Chap 3)	
		Bacterial Morphology – Review Observe & Illustrate	Pg 59-60 & 35-36	
	6	6b Staining - Gram Stain and KOH Test	Pg 63-70 (Chap 3)	
	8	6cd Staining - Acid-fast, Endospore & Capsule Stains	Pg 71-86 (Chap 3)	
	13	7a Introduction to Prokaryotes & Selected Bacteria	Pg 91-97 (Chap 11)	
		7b Introduction to Cyanobacteria	Pg 98-100	
			Finish Morphological Unknown (Observation & Recording)	
	15	8 Introduction to Fungi & Fungus-like Protista	Pg 101-114 (Chap 12)	
	20	9 Introduction to Microscopic Algae & Protozoa	Pg 115-126 (Chap 12)	
	22	11 Introduction to Multicellular Parasites	Pg 127-134 (Chap 12)	
	27	12 Food Microbiology - Fermented & Cultured Foods	Pg 135-150 (Chap 28)	
		25 Begin Bacteriological Examination of Water	Pg 269-272 (Chap 27)	
	29	13 Determination of Microbial Numbers	Pg 151-154 (Chap 6)	
	14 Use of Selective and Differential Media	Pg 155-162 (Chap 6)		
		Begin Physiological Unknown #1	Pg 163-170	
Oct.	4	Isolation, Purification & Staining of Unknown Cultures		
	6	15 Physiological Characteristics of Bacteria	Pg 171-194	
	11	15 Physiological Characteristics (continued)	Pg 171-194	
	13	15 Conclude Physiological Tests - Determine Identity of PUK 1 Cultures		
	18	* Laboratory Exam I (Introduction – Exercise 12)		
	20	16 Application of the Polymerase Chain Reaction	Pg 195-198 (Chap 9)	
			Begin Physiological Unknown #2	Pg 165
	25	17 Automated Nucleotide Sequencing & EPG Evaluation	Pg 199-202 (Chap 9)	
		18 Genomics, Proteomics & Bioinformatics	Pg 203-208	
	27	19 The Miniscreen: Rapid Isolation of Plasmid DNA	Pg 209-212 (Chap 9)	
Nov.	1	20 Gel Electrophoresis of DNA Samples	Pg 213-220 (Chap 9)	
	3	21 Restriction Endonuclease Digestion of DNA	Pg 221-226 (Chap 9)	
		RFLP Analysis & Bacterial Identification		
	8	22a CaCl ₂ Procedure for Making Competent Cells	Pg 227-228 (Chap 9)	
		22b Transformation of <i>E. coli</i> With Plasmid DNA	Pg 229-234 (Chap 9)	
	10	23a Introduction to Viruses and Phage Typing	Pg 235-240 (Chap 13)	
		23b Isolation and Purification of Coliphage	Pg 241-246	
	15	23c Bacteriophage Reproduction and Plaque Formation	Pg 247-252 (Chap 13)	
	17	24a Microbial Control Methods (physical & chemical)	Pg 253-262 (Chap 7)	
		24b Antimicrobial Sensitivity Testing	Pg 263-268 (Chap 20)	
	22	26 Composition of Blood and White Cell Study	Pg 273-274 (Ch 16-17)	
		27 Diagnostic Immunology	Pg 275-284 (Chap 18)	
		24 Thanksgiving		
29	Review for Lab Exam II			
Dec.	1	* Laboratory Exam II (Ex. 13-27, including Ex. 25)		
	6	Film – Epidemiology of the HIV infection and AIDS		
	8	Lecture Final Exam & Last Day to Turn in Project Cultures!		