

# CELL BIOLOGY 301

## Syllabus and Laboratory Handouts

Autumn Quarter, 2009

David B. Fankhauser, Ph.D., Professor of Biology and Chemistry

U. C. Clermont College, Batavia OH 45103

rvsd 17 September 1997, 20 Sept 99, 17 Sept 00, 20 Sept 01, 23 Sept 03, 19Sept04, 19Sept05, 13Sept07, 8Sept09  
page in NB:

- \_\_\_\_\_ 1 Table of Contents [Mount on first page of your Lab Notebook.]
- \_\_\_\_\_ 2 Syllabus: Cell Biology 301 [Mount inside the front cover of your textbook.]
- \_\_\_\_\_ 3 How to Take a Fankhauser Cell Biology Course
- \_\_\_\_\_ 4 Wordstems for Cell Biology, by quizzes and tests
- \_\_\_\_\_ 5 Meanings of Wordstems for Cell Biology, cumulative
- \_\_\_\_\_ 6 Study Groups: Towards Effective Peer Education
- \_\_\_\_\_ 7 Group Report Form

### FOR THE LAB NOTEBOOK:

- \_\_\_\_\_ 8 Lab Activities: Schedule for Cell Biology 301 Lab
- \_\_\_\_\_ 9 Laboratory Notebook Procedure
- \_\_\_\_\_ 10 Format Suggestions for Table of Contents
- \_\_\_\_\_ 11 Use of Contact Paper for Mounting Handouts and Specimens
- \_\_\_\_\_ 12 Notebook Illustrations
- \_\_\_\_\_ 13 Sample First Notebook Grade Sheet, from previous year
- \_\_\_\_\_ 14 Sample Second Notebook Grade Sheet, from previous year
- \_\_\_\_\_ 15 a: The Binocular Microscope: Its Features and Care
- \_\_\_\_\_ 15 b: Microscope Storage Gradesheet
- \_\_\_\_\_ 16 Using and Evaluating the Microscope
- \_\_\_\_\_ 17 a: Cell Structure in a Leaf Cross Section
- \_\_\_\_\_ 17 b: Cells: the Functional Units of Organisms
- \_\_\_\_\_ 18 Bacterial Flora of Teeth: Cells Found in Tooth Scrapings
- \_\_\_\_\_ 19 Protein Assay by Microbiuret: Standardization
- \_\_\_\_\_ 20 Sample Layout of an Experiment (Protein Conc. in Unknowns by Microbiuret)
- \_\_\_\_\_ 21 Spectrophotometer Use
- \_\_\_\_\_ 22 Graph Construction
- \_\_\_\_\_ 23 Sample Math Problems for Cell Biology
- \_\_\_\_\_ 24a Displacement Pipetters: Their Care & Use
- \_\_\_\_\_ 24b Practice Using the Pipetter's Features
- \_\_\_\_\_ 25 Enzyme Assay: Lactase
- \_\_\_\_\_ 26 Reagents, Materials and Calculations for Lactase Enzyme Assay
- \_\_\_\_\_ 27 Lactase: Comparison of Content in Brands
- \_\_\_\_\_ 28 Lactase pH Optimum
- \_\_\_\_\_ 29 Glycolysis/Fermentation with Molecular Models
- \_\_\_\_\_ 30 Krebs Cycle with Molecular Models
- \_\_\_\_\_ 31 Protocol for Lineweaver-Burk Plot: Lactase Kinetics
- \_\_\_\_\_ 32a Isolation of Chloroplasts by Differential Centrifugation
- \_\_\_\_\_ 32b Table for recording  $A_{660}$  according to times for reduction of DCIP
- \_\_\_\_\_ 33 Chloroplast Reduction of Indophenol in Light