



A. Division: Academic

Date: September 5, 1984

B. Department: Science and Mathematics

New Course:

Revision of Course

Information Form:

Contact: 5-1024

C. BIOLOGY 421

D. Cell Biochemistry

Course No. Descriptive Title

Semester/Credits

Section/CO

Biochemistry, 2nd Ed. Armstrong, F.B. Oxford University Press, New York, 1963

1963:00 11934

College: University of California, San Diego (In preparation)

Objectives: P. Course Content:

Complete Form with Entries Under the Following Headings: O. Course Objectives:

OBJECTIVES

O. COURSE OBJECTIVES

properties, and buffers

1. describe the chemistry of water, acid-base pr

2. describe the chemistry of amino acids

essential amino acids
of peptides

3. explain how protein sequence is studied, and

4. describe the structure of proteins, especially tertiary structure relates to function

5. describe what allosteric proteins are, and their importance

6. describe enzyme kinetics and enzyme regulation

P. COURSE CONTENT

The course deals with the chemical basis of life. The physical and chemical nature of the cell will be described. The importance of water in life processes will be discussed reviewing the properties of water. The dipole moment, intermolecular and thermal properties, and buffers will be reviewed. The structure and function of the cell membrane will be discussed. The structure and function of the cell wall will be discussed. The structure and function of the cell organelles will be discussed. The structure and function of the cell cycle will be discussed. The structure and function of the cell death will be discussed.

structure and mechanisms of action (inhibition,

4. The nomenclature, structure and function of enzymes

will be introduced covering thermodynamics,

5. The topic of bioenergetics will be discussed covering energy concepts, coupled reactions, and energy carriers.

carbohydrate chemistry and the role of carbohydrates as an energy source will be reviewed. The structure and function of the cell wall will be discussed. The structure and function of the cell organelles will be discussed. The structure and function of the cell cycle will be discussed. The structure and function of the cell death will be discussed.