



A. Division: Academic

Date: September 5, 1984

B. Department: Science and Mathematics

New Course:

Revision of Course

Information Form:

Contact: 5102 Seymour St. 4291

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, 1983

1983-00 11983

College of Education, 1983-84, Study Guide (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 dipole moment, acid-base properties

and the structure and function of the cell membrane. The structure and function of the cell membrane will be reviewed.

structure and mechanisms of action (inhibition, and the nomenclature, structure and function of enzymes.

will be introduced covering thermodynamics, and the topic of bioenergetics will be discussed.

the free energy concept, coupled reactions, and energy carriers. The structure and function of ATP will be described.

carbohydrate chemistry and the role of carbohydrates as an energy source will be reviewed. The structure and function of the cell membrane will be reviewed.