BU 160 Introduction to Data Processing (3)

An orientation course designed to introduce the terminology and concepts of automated data processing. Topics include history, punched card equipment, digital computers, data representation, file organization, computer programming languages, and management information systems.

Hours of class per week - 2 hours lecture, 1 hour lab

BU 161 Unit Record Principles (3)

A survey of punched card systems, illustrating the need for machine processable solutions to accounting and record keeping problems, along with the concept, power and flexibility of unit record. Unit record equipment as an independent system is discussed and studied as well as its use and support for computers. Laboratory exercises are executed, involving planning and wiring a range of unit record equipment.

Hours of class per week - 2 hours lecture, 2 hours lab

BU 162 Programming Computers (3)

A basic course in applying principles of data processing to standard business applications. This course is problem oriented and utilizes Report Program Generator as the major programming language. Emphasis is on report preparation, programming procedures, file organization and maintenance, and introduction to utility programs. Laboratory exercises are provided on the Univac 9200 Computer.
PREREQUISITE: BU 160, MA 160*
Hours of class per week - 3 hours lecture, 2 hours lab

* Will become prerequisite upon implementation 9/70

BU 163 Programming Computers (3)

An advanced course in applying the principles of data processing to standard business applications. Emphasis is on advanced file organization and maintenance, and programming alhorithms. The course is procedure oriented and utilizes FORTRAN and COBOL programming languages. Laboratory experience is provided on the Univac 9200 Computer.

PREREQUISITE: BU 162 MA 167*

Hours of class per week - 3 hours lecture, 1 hour lab

* Will become prerequisite upon implementation 9/70

BU 165 Programming Computers (3)

An advanced course in applying business problems. The processing language is a machine oriented language called "Basic Assembler Language". Topics include the BAL programming language, file organization, and maintenance and programming algorithms.

PREREQUISITE: BU 163 or MA 162*

Hours of class per week - 3 hours lecture, 2 hours lab

BU 167 Data Processing Systems (3)

A study of data processing systems, including analysis of various existing data processing hardwares and applications in Business and Industry. Includes a study of integrated or total management information systems. Problems of the EDP Department are discussed. Emphasis is given to analysis of management decision needs and control requirements, as well as to the critical understanding of the total environment in which EDP must serve and support. Problems in EDP systems are undertaken by the student.

PREREQUISITE: BU 162

Hours of class per week - 3 hours lecture, 2 hours lab.

BU 164 Computer Programming Techniques (3)

Computer programming fundamentals designed to provide the non-data processing major with a basic understanding of control techniques for modern digital computers. Includes the basics of computers, program documentation, basic disk file concepts, the writing and use of programs. Major programming language is FORTRAN and laboratory experience will be provided on the Univac 9200 computer.

PREREQUISITE: MA 151

Hours of class per week - 3 hours lecture, 2 hours lab

BU 170 Data Processing Fundamentals (3)

A basic course for non-data processing majors in the preparation and manipulation of data prior to computer processing. This course is machine oriented and deals with the keypunch, verifier, sorter, interpreter, reproducing punch, and collator. Laboratory experiences are provided on the above equipment.

PREREQUISITE: None

Hours of class per week - 2 hours lecture, 2 hours lab

* Will become prerequisite upon implementation 9/70.

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PREREQUISITE: BU 163 or MA 162*

Hours of class per week - 3 hours lecture, 2 hours lab

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PREREQUISITE: None

Hours of class per week - 2 hours lecture, 2 hours lab

* Will become prerequisite upon implementation 9/70.

AR 150 Basic Design 3 s.h.

This program and course of study will introduce students to the principles and practices in two and three dimensional design. (no prerequisites)

MA 152 TOPICS FROM FINITE MATHEMATICS 3 s.h.

(Prerequisite(s) required and/or desirable, if any) The course will cover number and numeration systems, logic, set theory, Boolean algebra, matrices, and linear programming from an intuitive point of view.

PREREQUISITE: Intermediate Algebra, Math 11, or MA 151

MA 153 STATISTICS 3 s.h.

(Prerequisite(s) required and/or desired, if any) A course designed to give a basic foundation in statistics for students with a limited background in mathematics and who wish to pursue careers in such areas as Business, Social Sciences, Science, and Data Processing. Topics include: Calculators, frequency distributions, measures of central tendency and variability, probability, binominal distributions, normal distributions.

PREREQUISITE: Math 11, Intermediate Algebra or MA 151

MA 250 MATHEMATICS 2

(Prerequisite(s) required and/or desirable, if any) A sequence to MA 150, this course includes study of some of the same topics in greater depth, as well as topics selected from the following: Geometries, Relations, Functions and Graphs, Axiomatics and Proof, Mathematics, Number Theory, and Finite Systems.

PREREQUISITE: (Elementary Algebra or MA 050) and MA 150

MA 254 ABSTRACT ALGEBRA 3 s.h.

Topics: sets, mappings, morphisms, groups, rings, integral domains, and fields. Recommended for Mathematics and Science majors.

PREREQUISITE: MA 157: concurrent registration in MA 158 or MA 257 desired.

SC 147 UNIVERSE OF MAN # 3 s.h.

An introductory course designed to give the non-science major an overview of science, emphasizing the evolutionary nature of matter. The subject of "matter" will be discussed from its subatomic-particle state to the creation of submicroscopic level, and finally through the evolutionary process to modern man and beyond. The course will integrate the disciplines of physics, chemistry, and biology and with an overall philosophical viewpoint stress the unity of the living and the non-living nature of the universe. Lectures and discussions will be reinforced with class demonstrations. For non-science majors: hours of class per week: 2 hours Hours of lab per week: 3 hours.

SC 149 BACTERIOLOGICAL TESTING OF WATER 3 s.h.

This is the second in a series of experimental courses designed to introduce students to the bacteriological elements in water. This course will include examination of coliforms, microscopic techniques for recognition, water supplies, waste water and treatment, collection of water samples, techniques of water testing, and field trips and visits to water and sewage plants.

Summer Course in
Pollution Technology

June--July, 1970 at

Fulton-Montgomery Community College

BACTERIOLOGICAL TESTING OF WATER

I. Introduction

A. Coliforms and other fecal bacteria

B. Microscopic techniques for identification -- gram stain, etc.

II. Water supplies

III. Waste water and treatment

IV. Collection of water samples

V. Testing of water

A. Multiple tube technique (MPN)

B. Membrane filter technique

C. Plate count

D. Use of differential and selective media

VI. Field trips and visits to water and sewage plants