COMMUNITY MEDICINE

College of Osteopathic Medicine

510. Health, Medical Care and Society
Fall, Winter, Spring. 2 to 5 credits. Admission to a college of medicine or approval of department.
The role of social, cultural and psychological variables in health and illness and in health care delivery. Special attention to patient/physician behavior and health maintenance, health education and patient compliance.

511. Interpersonal Relationships in Health Care
Fall. 2 to 5 credits. Admission to a college of medicine or approval of department.
Developing the communication and interpersonal skills needed in health care delivery. Emphasis on the doctor-patient relationship. Use of videotaped interactions among students, and between students and simulated patients.

512. Epidemiology and Biostatistics
Winter. 2 to 5 credits. Admission to a college of medicine or approval of department.
Epidemiology and biostatistics in clinical medicine and health care delivery. Evaluation of medical investigations. Applicability to preventive medicine and health maintenance. Field experiences and seminars in community medicine.

513. Medical Jurisprudence
Spring. 2 to 5 credits. Admission to a college of medicine or approval of department.
Basic concepts of the legal process and the health care system. Law suits, malpractice, statutory and case law, insurance and tax considerations. Continuing field experiences and seminars in community medicine.

514. Topics and Issues in Health Care Delivery I
Summer. 2 to 5 credits. Admission to a college of medicine or approval of department.
Medical economics, health care financing and organization, manpower utilization, resource allocation, health services administration, patterns of medical practice, politics of health care. Continuing field experiences and seminars in community medicine.

515. Topics and Issues in Health Care Delivery II
Fall. 2 to 5 credits. Admission to a college of medicine or approval of department.
Continuation of 514.

516. Field Experience in Community Medicine I
Winter. 1 to 5 credits. Admission to a college of medicine or approval of department.
Continuation of 515 field experiences and seminars.

517. Field Experience in Community Medicine II
Spring. 1 to 5 credits. Admission to a college of medicine or approval of department.
Continuation of 516 field experiences and seminars.

590. Special Problems in Community Medicine
Fall, Winter, Spring, Summer. 1 to 8 credits. May re-enroll for a maximum of 32 credits. Approval of department.
Each student will work under direction of a faculty member on an experimental, theoretical or applied problem.

620. Directed Studies in Community Medicine
Fall, Winter, Spring, Summer. 1 to 6 credits. May re-enroll for a maximum of 24 credits. Approval of department.
Individual projects on special problems related to community medicine.

COMPUTER SCIENCE

College of Engineering

110. Introduction to Computer Programming
Fall, Winter, Spring. 3(3-0) 110 or 120; MTH 108 or 111.
A computer science course in programming. Topics; computer philosophy, computer arithmetic, storage, organization and control. Programming in FORTRAN, ALGOL, and PASCAL. The use of a computer. Machine language vs. higher level languages. Use of the FORTRAN language.

120. Computer Programming for Engineers and Scientists
Fall, Winter, Spring. 3(3-0) Students may not receive credit in both 110 and 120.
FORTRAN programming, number systems and basic computer structure. Applications from various areas including business and social science.

124. APL-Computer Programming for Scientists
Fall, Winter, Spring. 3(3-0) LBC 112 or concurrently. Interdepartmental with and administered by Lyman Briggs College.
APL programming; interactive programming techniques; arithmetic, logical, and extended APL operators; functions, applications to concurrent topics in mathematics; principles of operation of time-shared computers.

130. Computers in Society
Fall. 3(2-1)
A non-technical introduction to computers, programming, applications and to the computer revolution. Topics: automation, data banks, privacy, the engineered society.

255. Computer Models in Science and Engineering
Spring. 3(2-0) 110 or 120 or equivalent FORTRAN. Interdepartmental with and administered by the Department of Mechanical Engineering.
Problem-solving; development of student's ability to formulate computational models based on finite physical elements, examples from statics, dynamics, electrical resistance, and conduction heat transfer.

295. Independent Study
Fall, Winter, Spring. 1 credit. May re-enroll for a maximum of 4 credits in 295 and 495 combined. Approval of department.
Independent undergraduate research in computer science.

300. Computer Programming
Fall, Winter, Spring. 3(3-0) 110 or 120; MTH 108 or 111.
Development and implementation of numeric and non-numeric algorithms using FORTRAN. Number systems, storage, organization of data. Concepts of storage, processors and compilers.

305. List Processing Languages
Winter. 3(3-0) 200 or approval of department.
Development and implementation of computer programs in string and list processing languages. Emphasis upon non-numeric applications. Structure of a simple list processing language. Comparison of list processing languages.

308. COBOL Programming
Spring. 3(3-0) 110 or 120.
The mechanics of COBOL, a business data processing language, presented with illustrative problems.

311. Assembly Language and Machine Organization
Fall, Winter. 4(3-1) 300. MTH 113 or concurrently, or approval of department.

312. Generative Coding and Information Structures
Winter. 4(3-1) 311. MTH 214 or concurrently or approval of department.
Macro facilities, conditional assembly, interaction with monitor, assembly language I/O. Use of buffer, stack, queue, deque, tree and list data structures. Interpreters, recursive routines.

313. Introduction to System Programming
Fall, Spring. 4(3-1) 312.
Loaders and operating systems. Study of existing batch and time-sharing systems. Design and implementation of part of an operating system. Segments, overlays, multi-processing and multiprogramming.

321. Introduction to Discrete Structures
Fall. 3(3-0) 300, MTH 113.

322. Introduction to Theory of Computing
Winter. Spring. 3(3-0) 321, MTH 213 or 314.
Finite-state machines, stack automata, Turing machines. Effective procedures and computability. Introduction to recursive functions. Symbol manipulation systems.

341. Computer Aided Manufacturing
Spring. 4(3-2) 110 or 120. Interdepartmental with and administered by the Department of Mechanical Engineering.
Numerical control, Computer-Aided Numerical Control, Direct Numerical Control, and adaptive control applied in present day manufacturing. Use of the APT language to control NC machines.