

COMMUNITY MEDICINE C M

College of Osteopathic Medicine

510. *Health, Medical Care and Society*

Summer. 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 consideration. 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 CPS

College of Engineering

110. *Introduction to Computer Programming*

Fall, Winter, Spring, Summer. 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.

120. *Computer Programming for Engineers and Scientists*

Fall, Winter, Spring, Summer. 3(3-0) MTH 111 concurrently. Students may not receive credit in both 110 and 120.

FORTRAN programming, number systems and basic computer structure. Applications from engineering, mathematics and physical 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 operators 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(3-0) 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 computable models based on finite physical elements, examples from statics, dynamics, electrical resistance, and conduction heat transfer.

295. *Independent Study*

(290.) Fall, Winter, Spring, Summer. 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, Summer. 3(3-0) 110 or 120; MTH 108 or 111.

Development and implementation of numeric and non-numeric algorithms using FORTRAN. Number systems and representations of data. Concepts of storage, processors and compilers.

305. *List Processing Languages*

Winter. 3(3-0) 300 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.

306. *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.

Machine structure, registers and operations. Programming in assembly language. Discrimination of assembler, loader and execution tasks. Comparison with interpretive processing. Introduction to program and data structures. Subprogram linkage.

312. *Generative Coding and Information Structures*

Winter, Spring. 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, Summer. 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 multi-programming.

321. *Introduction to Discrete Structures*

Fall, Winter. 3(3-0) 300, MTH 113.

Set operations, relations, functions and mappings. Boolean algebra, Boolean matrices, truth tables, minimization. Propositional and predicate calculus, well formed formulas, precedence relations, quantifiers. Applications to computer science.

322. *Introduction to Theory of Computing*

Winter, Spring. 3(3-0) 321, MTH 215 or 334.

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.