COMMUNITY HEALTH SCIENCE CMS

512*.   Biostatistics and Epidemiology
Summer. 2(3-0)
R: Open only to graduate and graduate-professional students in the Colleges of Osteopathic Medicine, Human Medicine, and Nursing or approval of department.
Medical literature to illustrate statistical reasoning and research design. Emphasis on analysis rather than computation. Prospective or retrospective studies. Sensitivity, specificity, and predictive values. Epidemiologic terminology.
QA: CMS 512

513*.   Health Law, Health Policy, and Health Care
Fall. 2(02-00)
R: Open only to graduate and graduate-professional students in the Colleges of Osteopathic Medicine, Human Medicine, and Nursing or approval of department.
Legal processes related to health care systems. Law suits, malpractice, statutory and case law. Insurance and tax considerations. Continuing field experiences and seminars in community medicine.
QA: CMS 513

515*.   Issues in Minority Health
Fall, Spring, Summer. 3(03-00)
R: Open only to graduate and graduate-provessional students in the Colleges of Osteopathic Medicine, Human Medicine, and Nursing or approval of department.
Patterns of health and illness in minority populations.

521*.   Evaluation of Health Services
Spring. 3(03-00)
R: Approval of department.
Experimental and quasi-experimental designs. Cost benefit and efficiency models. Assessment of health services delivery.
QA: CMS 521

522*.   Principles of Gerontology for Medical Practice
Spring. 3(03-00)
R: Open only to graduate-professional students in the Colleges of Osteopathic and Human Medicine or approval of department.
Lectures, readings, tapes, small group seminars, and home visits related to normal aging epidemology. Major chronic diseases and other issues of geriatric care.
QA: CMS 522

590*.   Special Problems in Community Medicine
Fall, Spring, Summer. 1 to 8 credits.
R: Approval of department; application required.
Each student works under faculty direction on an experimental, theoretical, or applied problem.
QA: CMS 590

600*.   Preventive Medicine and Public Health Clerkship
Fall, Spring, Summer. 2 to 12 credits in increments of 2 credits.
R: Open only to colleges of Human Medicine and Osteopathic Medicine students with successful completion of two years of medical school; approval of department.
Clinical and community experiences in personal and community health services, environmental health, and other health and medical programs which meet health needs of various population groups.
QA: CMS 600

605*.   Occupational Health Clerkship
Fall, Spring, Summer. 6 to 12 credits in increments of 6 credits.
R: Open only to colleges of Human Medicine and Osteopathic Medicine students with successful completion of two years of medical school; approval of department.
Industrial setting delivery of medical care to workers. Treatment of industrial accident injuries. Review of safety and preventive medicine programs.
QA: CMS 605

610*.   Primary Care Geriatrics Clerkship
Fall, Spring, Summer. 6 to 12 credits in increments of 6 credits.
R: Open only to colleges of Human Medicine and Osteopathic Medicine students with successful completion of two years of medical school; approval of department.
Clinical and community experiences including taking patient's history, assessment, development and use of management and care plan, and use of community resources for the long-term care of the aged.
QA: CMS 610

618*.   Clinical Tropical Medicine
Fall. 2 to 4 credits in increments of 2 credits.
R: Approval of department.
Selected topics such as African AIDS, malaria, onchocerciasis, tuberculosis, and schistosomiasis. Pathophysiology, treatments, epidemiology, current research, and controversies.
QA: CMS 618

620*.   Directed Studies in Community Medicine
Fall, Spring, Summer. 1 to 6 credits.
May reenroll for a maximum of 24 credits.
R: Approval of department.
Individual projects on special problems related to community medicine.
QA: CMS 620

621*.   Clinical Tropical Medicine Clerkship
Spring. 8 to 16 credits in increments of 8 credits.
P: CMS 618. R: Open only to graduate-provessional students in the colleges of Osteopathic and Human Medicine in final year.
Supervised clinical experiences in a large African teaching hospital and its outpatient clinics; students must spend at least six weeks on site. Small group discussions led by MSU faculty.

COMPUTER SCIENCE CPS

100.   Using Computers
Fall, Spring, Summer. 3(2-2)
R: Freshmen and sophomores only. Not open to students in the College of Engineering and the College of Natural Science.
Applications of computation. Computer hardware, software, communication and networks. Impact of computation and computers on the individual and society. Hands-on application exercises. Databases, files, systems, graphics, spreadsheets, word processing.
QA: CPS 100

130.   Introduction to Computing
Fall, Spring, Summer. 3(2-2)
R: Freshmen and sophomores only.
Computer Aided Software Engineering for design. Structured, modular BASIC for programming. Selection, loops, arrays, sequential and direct files, character and pixel graphics, and spreadsheets. Applications from business, science and humanities.
QA: CPS 115

131.   Introduction to Technical Computing
Fall, Spring. 3(2-2)
P: MTH 132 or concurrently.
Computing systems and applications. Design and implementation of programs using FORTRAN. Examples from engineering, mathematics and science.
QP: MTH 109 ORMTH 111   QA: CPS 112

230.   Algorithms and Computing
Fall, Spring. 4(3-2)
P: MTH 132.
Computer systems and problem solving. Software development. Structured design and implementation of algorithms. Procedural and object-oriented programming. Compilation and linking.
QP: MTH 112   QA: CPS 251 CPS 252

260.   Discrete Structures in Computer Science
Fall, Spring. 3(3-0)
P: MTH 133.
Propositional and first order logic. Equivalence, inference. Mathematical induction, diagonalization principle. Set operations, relations, functions. Lattices, Boolean algebras. Truth tables and minimization of Boolean expressions. Applications to CPS.
QP: MTH 214 CPS 252   QA: CPS 321

290*.   Independent Study in Computer Science
Fall, Spring. 1(-) May reenroll for a maximum of 3 credits.
R: Approval of department; application required.
Supervised individual study in an area of computer science.
QA: CPS 295

291*.   Selected Topics in Computer Science
Fall, Spring. 1 to 4 credits. May reenroll for a maximum of 8 credits.
R: Approval of department.
Topics selected to supplement and enrich existing courses and lead to the development of new courses.
QA: CPS 292

320.   Computer Organization and Assembly Language Programming
Fall, Spring. 4(3-2)
P: CPS 230. R: Not open to students with credit in EE 331.
Machine representation of data and instructions. Machine organization, primary storage, registers, arithmetic logic unit, control unit, operations. Assembly language programming, interface to high level languages. Assemblers and loaders.
QP: CPS 252 MTH 214   QA: CPS 311

330.   Data Structures and Programming Concepts
Fall, Spring. 4(3-2)
P: CPS 230, CPS 260. R: Open only to Computer Science, Computer Engineering, Computational Mathematics, Electrical Engineering, and LBS Computer Science students.
Data types and structures. Algorithms including searching, sorting and hashing. Program correctness, program analysis. Abstract data types including stacks, queues, and trees. Object-oriented programming, introduction to various program libraries.
QP: CPS 311 CPS 252CPS 321   QA: CPS 333