



MCAP

Program Description

To prepare capable and interested high school students for futures in medical-related professions, a collaborative program has been designed by the University of Michigan Flint and the Lapeer County Education and Technology Center. This program is to begin in Fall 2011 and is managed by the College of Arts & Sciences at UM-Flint. The courses offered in this program are taught by UM-Flint faculty.

A cohort of no more than 25 students is anticipated; the students will be enrolled in all five classes offered during the academic year.

Qualifications

Selected high-ability, highly motivated senior students from the six public high schools in Lapeer County will be eligible to enroll in the MCAP program. A selection process and criteria will be developed by the school districts in cooperation with the Education & Technology Center and UM-Flint. Applicants are expected to have an interest in post-secondary study in a medical career.

- Successful completion of 3 years of HS English
- Successful completion of 1 year of HS Biology (AP or Honors or close equivalent course that covers genetics at an introductory level)
- Successful completion of 1 year of HS Chemistry or 1 year of HS Physics (AP or Honors level preferred)
- Concurrent enrollment in mathematics coursework beyond Algebra II
- A record of excellent attendance in high school courses

Courses Offered:

Fall

UNV 100-First Year Experience-Microbes & Our World (3 Credits)

This course will survey the microbial world and explore the effects of microbial life on mankind. Discussion will involve the study of microbes not only from a health related view, but as interactive organisms, very much intertwined with our existence. Units of study will explore the microbial effect, advantageous or otherwise, on Industry, local economy, daily activity and cultural practices, and the arts; examples will be drawn from the past as well as the present

HCR 201-Introduction to Health Careers (1 credit)

Overview of health careers including job functions and responsibilities, academic prerequisites; designed to assist students in making appropriate health field career choices.

BIO 328- Genetics (4 credits)

Principles of inheritance from molecular through population levels. Gene action, cytoplasmic inheritance, parthenogenesis, mutation, and homeostasis. In addition, to scheduled class time, students should be prepared to allocate 9 + hours/week of serious study for this course.

Winter

PHL 168- Philosophy of Bioethics (3 Credits)

Introduction to classical ethical theories and their application to contemporary bioethical issues, such as neuroethics, ethics of nanotechnology, stem-cell research, bioterrorism, cloning as well as a broad range of health care issues such as health system reform, international health research, social Inequalities in health and the allocation of scarce resources.

BIO 472-Topics in Medical Genetics (3 Credits)

Basic medical genetic concepts and role of genes in human disease processes and susceptibilities. Students learn to appreciate the high incidence and broad spectrum of human genetic diseases, learn the technique and grasp the importance of taking a family history, and understand procedures and tools used for diagnosing genetic diseases. In addition to scheduled class time, students should be prepared to allocate 9+ hours/week of serious study for this course.

Dual Enrollment:

Students who participate in this program will be dual-enrolled in their home high schools and UM-Flint. Credit earned will be recorded on official UM-Flint transcripts as regular UM-Flint courses. Students completing the program will earn a total of 13 UM-Flint credits, applicable to degree programs at UM-Flint and other institutions.

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