209 The Mystery of the Physical World
Fall, Spring, Summer. 3(3-0) P: (MTH 103 or MTH 110 or MTH 116 or LBS 117 or MTH 106 or concurrently or MTH 124 or concurrently or MTH 132 or concurrently or MTH 201 or concurrently or STT 200 or concurrently or STT 201 or concurrently or designated score on Mathematics placement test.
Laws of physics through demonstrations and analyses of every day phenomena. Optics, mechanical systems and electromagnetic phenomena.

209L The Mystery of the Physical World Laboratory
Fall, Summer. 2(1-2) P: (ISP 209 or concurrently)
Physical phenomena: optics, mechanical systems and electromagnetics.

213H Navigating the Universe
Fall, 3(3-0) Interdepartmental with Physics. P: (MTH 103 or MTH 110 or MTH 116 or LBS 117 or MTH 106 or concurrently or MTH 124 or concurrently or MTH 132 or concurrently or MTH 201 or concurrently or STT 200 or concurrently or STT 201 or concurrently) or designated score on Mathematics placement test. RB: High school physics, high school algebra, and high school trigonometry.
Philosophical and biographical history of physics. Comparing physics of fields, relativity, quantum mechanics, elementary particle physics, and cosmology to art as an alternate way of understanding and representing the world.

215 The Science of Sound
Fall, Spring. 3(3-0) P: (MTH 103 or MTH 110 or MTH 116 or LBS 117 or MTH 106 or concurrently or MTH 124 or concurrently or MTH 132 or concurrently or MTH 201 or concurrently or STT 200 or concurrently or STT 201 or concurrently) or designated score on Mathematics placement test. RB: High school physics, high school algebra, and high school trigonometry.

The science of speech, communication, musical instruments, room acoustics, and analogue and digital audio. Integrating the physical, physiological, and psychological principles involved.

217 Water and the Environment
Fall, Spring, Summer. 3(3-0) P: (MTH 103 or MTH 110 or MTH 116 or LBS 117 or MTH 106 or concurrently or MTH 124 or concurrently or MTH 132 or concurrently or MTH 201 or concurrently or STT 200 or concurrently or STT 201 or concurrently)
Application of the scientific method to identification and solution of environmental problems related to water.

217L Water and the Environment Lab
Fall, Summer. 2(1-2) P: (ISP 217 or concurrently)
Application of the scientific method to identification and solution of environmental problems related to water.

221 Earth Systems: Energy
Fall, Spring, Summer. 3(3-0) P: (MTH 103 or MTH 110 or MTH 116 or LBS 117 or MTH 106 or concurrently or MTH 124 or concurrently or MTH 132 or concurrently or MTH 201 or concurrently or STT 200 or concurrently or STT 201 or concurrently) or designated score on Mathematics placement test.
Flow of energy into, through, and out of the earth's lithosphere, hydrosphere, atmosphere, and biosphere. Energy, entropy, and life processes. Global warming, greenhouse effect, and contemporary issues.

INTEGRATIVE ISS STUDIES IN SOCIAL, BEHAVIORAL AND ECONOMIC SCIENCES

Center for Integrative Studies in Social, Behavioral and Economic Science
College of Social Science

210 Society and the Individual (D)
Fall, Spring, Summer. 4(4-0)
Evolution of human behavior with an emphasis on the individual and society. Family and kinship, social organizations. Societal types, personality, and the life cycle.

215 Social Differentiation and Inequality (D)
Fall, Spring, Summer. 4(4-0)
Types, causes and consequences of stratification in human societies. Age, class, gender, race and other factors which define social position. Education, occupation, political economy.

220 Time, Space and Change in Human Society (D)
Fall, Spring, Summer. 4(4-0)
Evolutionary, ecological, and spatial theories of adaptation and change. Cultural evolution from prehistoric foraging to the post-industrial age. Continuity and change in the emergence and development of contemporary ways of life.

225 Power, Authority, and Exchange (D)
Fall, Spring, Summer. 4(4-0)

310 People and Environment (I)
Fall, Spring, Summer. 4(4-0) P: (ISS 210 or ISS 215 or ISS 220 or ISS 225)
Contemporary issues related to the interaction of socio-cultural and ecological systems. Global, regional, national and local environmental problems and responses.

315 Global Diversity and Interdependence (I)
Fall, Spring, Summer. 4(4-0) P: (ISS 210 or ISS 215 or ISS 220 or ISS 225)

320 World Urban Systems (I)
Fall, Spring, Summer. 4(4-0) P: (ISS 210 or ISS 215 or ISS 220 or ISS 225)
Patterns of urbanization in various areas of the world over time. Linkage within and between urban centers. Economic, political and social/behavioral accommodation and adaptation to urban growth and change.

325 War and Revolution (I)
Fall, Spring, Summer. 4(4-0) P: (ISS 210 or ISS 215 or ISS 220 or ISS 225)

330A Africa: Social Science Perspectives (I)
Fall, Spring, Summer. 4(4-0) P: (ISS 210 or ISS 215 or ISS 220 or ISS 225)
Comparative study of geography, cultures, politics, and economies of Africa. Diversity and change.

330B Asia: Social Science Perspectives (I)
Fall, Spring, Summer. 4(4-0) P: (ISS 210 or ISS 215 or ISS 220 or ISS 225)
Comparative study of geography, cultures, politics, and economies of Asia. Diversity and change.

330C Latin America: Social Science Perspectives (I)
Fall, Spring, Summer. 4(4-0) P: (ISS 210 or ISS 215 or ISS 220 or ISS 225)
Comparative study of geography, cultures, politics, and economies of Latin America. Diversity and change.

335 National Diversity and Change: United States (N)
Fall, Spring, Summer. 4(4-0) P: (ISS 210 or ISS 215 or ISS 220 or ISS 225) SA: ISS 335A
Racial, ethnic, class, gender, and other forms of diversity in the United States. Systems of dominant-minority relations and forms of prejudice and discrimination. Scope of responses to group inequalities.

336 Canada: Social Science Perspectives (I)
Spring, 4(4-0) P: (ISS 210 or ISS 215 or ISS 220 or ISS 225) SA: ISS 335B

INTERNAL MEDICINE

Department of Internal Medicine
College of Osteopathic Medicine

400 Introduction to Emergency Medicine Research
Fall, Spring. 1 to 4 credits. A student may earn a maximum of 8 credits in all enrollments for this course. P: Completion of Tier I writing requirement. RB: Pre-professional health science. R: Approval of department. Research experience in data collection, data entry, statistical analysis and manuscript preparation. Opportunity for work with an emergency medicine resident and faculty member on a single research project.

401 Clinical Emergency Medicine Research
Fall, Spring. 4(2-4) A student may earn a maximum of 8 credits in all enrollments for this course. RB: Pre-professional health science. R: Open only to juniors or seniors. Approval of department. Research experience in data collection, data entry, and statistical analysis at an off-campus hospital involving multiple projects.

590 Special Problems in Internal Medicine
Fall, Spring, Summer. 1 to 24 credits. A student may earn a maximum of 48 credits in all enrollments for this course. RB: Pre-professional health science. R: Open only to graduate-professional students in the College of Osteopathic Medicine. Approval of department. Students work under faculty direction on an experimental, theoretical, or applied problem.
602 Primary Care Ambulatory Clerkship  
Fall, Spring, Summer. 1 to 36 credits. A student may earn a maximum of 36 credits in all enrollments for this course. Interdepartmental with Osteopathic Medicine; Osteopathic Surgical Specialties; Pediatrics; Psychiatry; Family and Community Medicine. Administered by College of Osteopathic Medicine. RB: Successful completion of the preclerkship requirements in College of Osteopathic Medicine Units I and II.

A 24-week ambulatory care continuity experience involving 12 weeks in a multidisciplinary environment (family medicine, pediatrics, and internal medicine), 4 weeks in family medicine and 8 weeks in specialty areas (internal medicine, surgery, pediatrics, and obstetrics and gynecology). Didactic sessions are scheduled concurrently.

618 Clinical Tropical Medicine  
Fall. 2(2-0) SA: CMS 618

Selected topics such as African AIDS, malaria, onchocerciasis, tuberculosis, and schistosomiasis. Pathophysiology, treatments, epidemiology, current research, and controversies.

620 Directed Studies  
Fall, Spring. 1 to 30 credits. A student may earn a maximum of 48 credits in all enrollments for this course. R: Open only to graduate-professional students in the College of Osteopathic Medicine upon completion of Units I and II. Individual or group work on special problems in medicine related to internal medicine.

621 Clinical Tropical Medicine Clerkship  
Spring. 1 to 20 credits. Spring: Malawi, Central Africa. A student may earn a maximum of 20 credits in all enrollments for this course. R: (IM 618) R: Open only to graduate-professional students in the College of Osteopathic Medicine and Human Medicine in final year. SA: CMS 621

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.

650 Medicine Clerkship  
Fall, Spring, Summer. 1 to 20 credits. A student may earn a maximum of 20 credits in all enrollments for this course. R: Open only to graduate-professional students in the College of Osteopathic Medicine upon completion of Units I and II.

Clinical exposure in osteopathic medicine. Program developed to achieve proficiency in motor skills and aptitudes; comprehension of concepts and principles; patient evaluation; diagnosis; management; therapy.

651 Cardiology Clerkship  
Fall, Spring, Summer. 1 to 20 credits. A student may earn a maximum of 30 credits in all enrollments for this course. R: Open only to graduate-professional students in the College of Osteopathic Medicine upon completion of Units I and II.

Intensive experience in bedside diagnosis and care of patients with the more frequently seen cardiac problems.

652 Gastroenterology Clerkship  
Fall, Spring, Summer. 1 to 20 credits. A student may earn a maximum of 30 credits in all enrollments for this course. R: Open only to graduate-professional students in the College of Osteopathic Medicine upon completion of Units I and II.


653 Oncology and Hematology Clerkship  
Fall, Spring, Summer. 1 to 20 credits. A student may earn a maximum of 30 credits in all enrollments for this course. R: Open only to graduate-professional students in the College of Osteopathic Medicine upon completion of Units I and II.


654 Pulmonary Disease Clerkship  
Fall, Spring, Summer. 1 to 20 credits. A student may earn a maximum of 30 credits in all enrollments for this course. R: Open only to graduate-professional students in the College of Osteopathic Medicine upon completion of Units I and II.

Evaluation and treatment of patients with common pulmonary diseases including acute and chronic respiratory failure, primary and metastatic lung tumors, various bacterial and non-bacterial pneumonias.

655 Nephrology Clerkship  
Fall, Spring, Summer. 1 to 20 credits. A student may earn a maximum of 30 credits in all enrollments for this course. R: Open only to graduate-professional students in the College of Osteopathic Medicine upon completion of Units I and II.

Clinic and hospital based experience to develop basic skills in evaluation and management of patients with renal disease. Integration of renal physiology and pathophysiology.

657 Emergency Medicine Clerkship  
Fall, Spring, Summer. 1 to 20 credits. A student may earn a maximum of 30 credits in all enrollments for this course. R: Open only to graduate-professional students in the College of Osteopathic Medicine upon completion of Units I and II.

Acute evaluation and management of patients in the hospital emergency room and other locations.

ITALIAN ITL

Department of French, Classics, and Italian  
College of Arts and Letters

101 Elementary Italian I  
Fall, Spring. 4(4-1) RB: No previous experience in Italian or approval of department.

Practice in using and understanding Italian to develop listening, speaking, reading, and writing skills. Pronunciation, grammar, vocabulary, and cultural topics.