

- 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, Spring, 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 designated score on Mathematics placement test.
 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. 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, Spring. 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)
 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 STUDIES IN SOCIAL, BEHAVIORAL AND ECONOMIC SCIENCES

ISS

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)
 Power, authority, and exchange in organizing societies. Costs and limitations of power. Institutionalization of authority. Systems of exchange: planned vs. market economies.
- 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)
 Contemporary issues in global political economy. Social forces and competing ideologies in a world context. Global resource distribution and development strategies. National identities and transnational linkages. First and Third World dichotomies.
- 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)
 Social conflict, wars and revolutions. Patterns of individual and collective action. Violence and conflict resolution.

- 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 and 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
 Canadian political, economic, and social institutions. Ethnic and other forms of diversity in Canada. North American national comparisons.

INTERNAL MEDICINE IM

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. 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.

Internal Medicine—IM

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, Summer. 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. RB: (IM 618) R: Open only to graduate-professional students in the colleges of Osteopathic 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.

Inpatient and outpatient clinical gastroenterology. GI diseases. Patient evaluation and management. Behavioral science and patient care.

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.

Diagnosis, staging, and treatment methods of solid tumors and other neoplasms. Pharmacology of cytotoxic agents. Issues in nutrition. Behavioral approaches to the terminally ill patient.

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.

102 Elementary Italian II

Fall, Spring. 4(4-1) P: (ITL 101)

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

201 Second-Year Italian I

Fall. 4(4-0) P: (ITL 102)

Intermediate-level review and development of aural comprehension, speaking, reading, and writing skills. Topics in Italian culture.

202 Second-Year Italian II

Spring. 4(4-0) P: (ITL 201)

Further review and development of aural comprehension, speaking, reading, and writing skills. Topics in Italian culture.

290 Independent Study

Fall, Spring. 1 to 4 credits. A student may earn a maximum of 4 credits in all enrollments for this course. R: Approval of department.

Special projects arranged by an individual student and a faculty member in areas supplementing regular course offerings.

320 Advanced Grammar and Composition

Fall. 3(3-0) P: (ITL 202)

Composition in a variety of styles and modes. Review of grammar. Extensive practice in writing.

330 Italian Culture and Civilization

Spring, Summer. 3(3-0) Summer: Given only at Florence, Italy. A student may earn a maximum of 6 credits in all enrollments for this course. P: (ITL 202)

Diverse aspects of political, social, economic, intellectual, artistic, and literary life of Italy. Class discussion in Italian of readings, films, television programs, and musical selections.

350 Introduction to Italian Literature

Fall. 3(3-0) P: (ITL 330)

Italian literature from its origins to the present. Reading and discussion in Italian of representative works from all genres.

360 Topics in the Italian Language and Culture

Summer. 3(3-0) Given only at Florence, Italy. A student may earn a maximum of 6 credits in all enrollments for this course. P: (ITL 330)

Aspects of Italian culture or language as manifested in art, literature, music, and film.

490 Independent Study

Fall, Spring. 1 to 4 credits. A student may earn a maximum of 9 credits in all enrollments for this course. R: Not open to freshmen or sophomores. Approval of department.

Special projects arranged by an individual student and a faculty member in areas supplementing regular course offerings.

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.