**Biology:**

BIO 124- The Biology of Women (offered during interim)

Issues of women's biology including views of the evolving female and biological determinism are examined. Core material covers anatomy, development, the biological basis of gender, reproduction, sexual response, the menstrual cycle and aging, and aspects of women's health such as eating disorders, cancers, and hormonal treatments. Students participate in significant amounts of group work and oral presentation. The course is open to both men and women. Offered during Interim. Counts toward women's and gender studies major and concentration.

BIO 233- Intermediate Genetics

Genetics examines relationships between genotype and phenotype in prokaryotic and eukaryotic organisms from classical and molecular perspectives. Lectures in this core course cover ideas and technologies contributing to understanding mechanisms of gene transmission and regulation. Laboratories utilize model organisms to investigate classical and molecular modes of inheritance. Students attend lectures plus one three-hour laboratory per week. Offered each semester. Counts as "genetics" core category. Counts toward mathematical biology, neuroscience, and biomolecular studies concentrations. Prerequisites: BIO 150, and CHEM 125 or CHEM 121/CHEM 123 or CH/BI 125; or BIO 125 and CHEM 125 or CHEM 121/CHEM 123 or CH/BI 125.

BIO 231- Microbiology

Microbiology examines the morphology, composition, metabolism, and genetics of microorganisms with emphasis on bacteria and viruses. Students examine the dynamic impact of microbes on humans, the immune response, and the role of microbes in the environment. Students attend lectures plus one three-hour laboratory per week. Offered annually. Prerequisites: BIO 143 or BIO 150, and one Chemistry course.

BIO 243- Human Anatomy and Physiology

Students journey toward greater understanding of the human body through an integrated study of the structure of the body (anatomy) and how organs such as the brain, heart, and kidney perform their remarkable functions (physiology). The course is designed primarily for students intending careers in the health sciences. Students attend lectures plus one three-hour laboratory per week. Offered annually. Counts toward exercise science major, neuroscience concentration, and biomedical studies concentration (for students through class of 2016). Prerequisite: BIO 143, or BIO 150 and BIO 227, or BIO 125, or CH/BI 227.

BIO 284- Peruvian Medical Experience

This course is a service/learning experience. Week one is spent on campus learning basic clinical techniques, examining emerging disease, and studying existing health care issues. Students spend three weeks in Cuzco, Peru, assessing patient needs in a public hospital, a homeless shelter, orphanages, and a small village. Week four involves discussion and writing reflective journals. Apply through the Office of International and Off-Campus Studies. Offered during Interim. Prerequisites: BIO 150 or BIO 126 or BIO 231, and BIO 291.

BIO 271/272 or BIO 321/322- Biology in South Indoa

India is a vast country with tremendous opportunities to study ecology and ways in which humans practice health care and interact with the environment. This fall semester program in India offers up to 10 biology and environmental studies students a chance to work on two independent research projects at several sites in southern India . Possible topics will be in the areas of rural health care, leprosy, and TB, as well as vector-borne diseases, molecular biology, agriculture, elephant/wildlife ecology, mountain ecology, medicinal plants, and sustainable development.

The program starts with a four-week study and orientation session in Chennai and a rural setting that exposes students to India and Indian life. These class sessions and field trips introduce India’s history, philosophy, religion, music, customs and current politics, as well as the practical matters of getting around and getting along in India.

The program fulfills two biology electives, MCS-G and WRI requirements. Those students wanting Environmental Studies experiental or elective credit must request permission from the Chair of Environmental Studies in writing.

BIO 363- Immunology

Immunology focuses on the structure, development and function of the immune system. The course explores the molecular and cellular basis of the immune responses. The application of immunological principles to allergy, autoimmunity, AIDS, transplantation, and cancer are included. Students attend lectures plus a two-hour discussion per week. Counts toward biomolecular science concentration. Prerequisite: BIO 227 and BIO 233, or BIO 125 and BIO 233.

**Economics:**

ECON 245- Health Care Econ

The health care sector in the U.S. is undergoing rapid change that affects patients, providers and payers. Managed care and managed competition are restructuring the delivery of health care services and reducing costs, while frustrating physicians and patients. The course examines the economic factors leading to the changes, current issues and controversies, and federal health policies. Students interested in nursing, medicine, and the sciences are encouraged to enroll. Offered annually. Counts toward American studies major. Counts toward biomedical studies concentration (for students through class of 2016). Prerequisites: one of Economics 110-121 or permission of instructor.

**Exercise Science:**

**ID:**

ID 110- Exploration in Healthcare (offered during interim)

Students are exposed to healthcare careers while they examine the science of health and wellness in relation to self-care, stress-management, sleep, rest, and nutrition. Students learn about physiological biochemical responses to stress, grief, and loss as well as the mechanisms of coping. Students use medical terminology in therapeutic communication and explore values and ethics for collaborative interprofessional practice. An overview of the healthcare system, holistic care, and evidence-based practice is provided. Counts toward nursing and exercise science majors. Offered during interim.

ID 245- Integrated Science/Society

This course explores the intersection of science, scientific knowledge, and contemporary social problems. Through sustained inquiry into a specific issue or topic, it shows students the strengths and potential overlap of different research methods and perspectives from the social and natural sciences. Depending on the topic, students may also investigate the impact of the legal and political context on such work, and the complexities of representing research to the larger public. Offered periodically. May be repeated if topic is different. Prerequisite: junior or senior standing; a limited number of sophomores will be allowed to enroll

**Nursing:**

NURS 140- Health Social Inequality (offered during interim)

Health begins where we live, work and play. Students are immersed in public, private, and community-based organizations in Northfield (rural) and Minneapolis-St. Paul (urban) to gain an understanding of the social determinants of health (environmental conditions, resources and supports) and the relationship to individual health outcomes through service learning. A special emphasis is placed on the impact of socioeconomic status, geographic location, and disability on health disparities. Prerequisites: one course in sociology/anthropology, women's and gender studies, social work, family studies, economics, political science, environmental studies, or nursing. Offered during Interim.

**Philosophy:**

PHIL 250- Biomedical Ethics

This course clarifies central concepts and distinctions developed in the literature of moral philosophy and applications of those concepts and distinctions to concrete moral problems that arise in the practice of medicine. Issues may include euthanasia, abortion, medical paternalism, allocation of scarce medical resources, culturally sensitive medical care, pandemics, and conflicts of loyalty in managed care. Readings are drawn from both philosophical and medical discussions. Offered annually. Counts toward biomedical studies concentration (for students through class of 2016) and neuroscience concentrations. Prerequisite: completion of BTS-T or permission of instructor.

PHIL 259- Global Health Ethics

This seminar seeks a culturally respectful ethical framework for developing health policies for the increasingly interdependent world, a world of widening disparities in wealth and health. In relation to issues of health, how might relationships between individuals, institutions ,and nations be structured to reduce injustice and improve prospects for well-being, peace, and security? How might different cultural, political, and industrial conditions around the world affect western conceptions of bioethics? Offered periodically. Counts towards philosophy major. Prerequisite: BTS-T or permission of instructor

**Psychology:**

PSYCH 241- Developmental Psychology

This course helps students better understand human development from the moment of conception and across the life span. The course focuses on biological and environmental factors that shape human development. Major changes in physical, cognitive, personality and social development are discussed. Offered each semester. Counts toward exercise science, nursing, social work, and women's and gender studies majors and educational studies, family studies, and women's and gender studies concentrations. Prerequisite: PSYCH 125.

PSYCH 249- Social Psychology

Why are people prejudiced and how can we reduce prejudice? Why do people help others? What is self-esteem and how do we defend it? How does romantic attraction develop? What are emotions and how do they influence us? In this introduction to the ways people interact and think about each other, students design their own theories of social behavior. Offered annually. Counts toward management studies concentration. Prerequisite: PSYCH 125.

PSYCH 378- Health Psychology

What is the mind-body connection? This course explores the major issues, theories, and interventions in health psychology. Students review evidence for the impact of psychological and behavioral factors on the immune system and health. Psychosocial approaches to the major diseases, their rationale, and the evidence supporting these interventions are examined. Offered periodically. Prerequisite: PSYCH 230, plus PSYCH 244 or PSYCH 247

**Sociology and Anthropology:**

SOAN 267- Medical Anthropology

How do people understand illness and healing? How does social inequality shape health? These are among the questions explored by medical anthropology. In this course students examine the ways people in different societies experience their bodies, by looking at AIDS in Haiti, old age in India, and childbirth in the United States. Students investigate diverse understandings of health, different means of promoting healing, and the role of power in providing medical care. Offered annually in the fall or spring semester. Counts toward biomedical studies concentration (for students through class of 2016).

**Social Work:**

SWRK 122- Global Challenges (offered only during interim)

Students explore seven major challenges affecting the world's people including population, resource management, economic integration, information, technology, conflict/security, and governance with an emphasis on their relation to global citizenship and human rights. This course examines issues from social science and global problem-solving perspectives with particular attention to how culture and place affect human experience. Students engage in discussions, forums, a global village activity, and an action project. Offered occasionally during Interim.

SWRK 258- Social Policy

Social welfare policies exemplify how society's values and needs translate into policies and programs. Social workers create, implement, and evaluate policies in health, employment, housing, and child welfare. Students study policy formation and analysis that reflect interests and powers of diverse groups as well as economic and social realities of certain populations at risk of poverty and discrimination. The course emphasizes policy impact on women, people in poverty, African-Americans, gay men and lesbians, and Latinos, and empowerment in policy practice. Open to non-majors by permission of instructor. Offered annually in the spring semester. Counts toward American studies major, biomedical studies concentration (for students through class of 2016), and management studies concentration

**Statistics:**

STAT 212- Statistics for Science

A first course in statistical methods for scientists, this course addresses issues for proposing/designing an experiment, as well as exploratory and inferential techniques for analyzing and modeling scientific data. Topics include probability models, exploratory graphics, descriptive techniques, statistical designs, hypothesis testing, confidence intervals, and simple/multiple regression. Offered each semester. Enrollment limited for seniors. STAT 110, STAT 212, and ECON 263 all provide an introduction to statistics and students should not take more than one; they all can serve as a prerequisite for further courses. Counts toward environmental studies major (natural science and social science emphases), exercise science major, and management studies and mathematical biology concentrations; and biomedical studies concentration (for students through class of 2016).

STAT 302- Biostatistics

The course investigates issues in health-related settings using a quantitative, research-oriented perspective. Course material focuses on global and public health issues, study design, methods for analyzing health data, and communication of research findings. Design topics include controlled trials, case-control, cohort and other observational studies. Methods include survival analysis and causal inference for observational studies. Communication emphasizes writing up findings and interpreting published research. Prerequisite: completion of STAT 272 or permission of the instructor. Counts toward mathematical biology concentration. Offered during fall semester 2014-15 and alternate years.