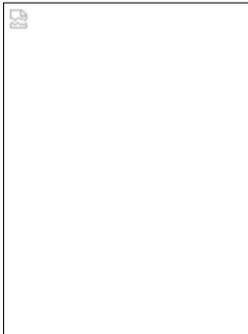


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THEME-BASED COURSES

Students are required to complete 12 credit hours within a single thematic cluster. If a student decides to change to a different thematic cluster, he/she will have to satisfy all the course requirements for the new cluster. The Dean of University Studies will consider exceptions to this rule based on individual petitions. Theme-based courses are communication intensive (oral and written) and emphasize interdisciplinary learning motivated by societal issues and problems. Course descriptions of approved thematic courses offered by departments outside of University Studies can be found in the requisite sections of the Bulletin.

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Science, Technology, and Society		
AGEN 216	ITT 385	SOWK 415
CHEM 100/110	MATH 111	UNST 201
COMP 390	MATH 112	UNST 203
ENGL 206	PHIL 266	UNST 206
ENGL 231	PHYS 101	UNST 207
ENGL 331	PHYS 105	UNST 210
ENGL 336	POLI 410	UNST 213
GEOM 210	POLI 448	UNST 219
HIST 307	SOCI 473	UNST 221

Courses in this cluster will help students understand the complex relationships between scientific discovery, technological advances, and societal change. In addition, students will debate the ethical implications of contemporary scientific research, examine how technology is portrayed in literature and the arts, and evaluate the frequently made claim that better science and technology lead to better lives.

UNST 201. Inventing America: Science, Technology, and Progress

This course explores the complex relations among scientific discovery, technological advancement, and societal change through analysis of key episodes in American history from the pre-industrial era to the Information Age. In addition, students will debate the ethical issues triggered by scientific and technological innovation, examine how technology is portrayed in literature and the arts, and evaluate the frequently made claim that more advanced science and technology lead to better lives.

UNST 203. Technology, the Real, the Fake and the Authentic

This course encourages analysis and comparison of cultural systems through case studies of real, fake, virtual, and authentic works and personal experiences studied from the standpoint of the technologies and cultural communities that produced and consumed them. These case studies include works of art, technological artifacts, and other experiences.

UNST 206. Scientific Revolutions and Social Change

This course highlights the complex connections between science, technology, scientific breakthroughs, and social, political and economic change. The experiences of and the lessons from the Industrial Revolution of the 18th Century will be used to understand the social, political, and ethical implications and challenges of the current revolution in nanotechnology. Students are led to discover the deeper relationships between seemingly unrelated events in history, and explore competing interpretations given by different disciplines.

UNST 207. Ethics and Technology

This course examines ethical issues arising from scientific and technological advancements. The central normative question students will consider is: Simply because we can do something does this mean we should? After exploring various standards of morality, students analyze issues such as reproductive technologies, cloning, genetic engineering, stem-cell research, life-span extension, genetically-modified foods, and ethical concerns within nanotechnology.

UNST 210. Ethics in Information Technology

This course will explore moral, ethical, and legal problems associated with information technologies including issues such as security and privacy. Students will critique ethical dilemmas, debate moral issues, and develop ideas for reducing ethical problems and coping with their effects.

UNST 213. Evolution and Social Implication of Technology. Theme: Technology and Progress

This course examines diverse technology systems such as biotechnology, communication, construction, manufacturing, medical, and transportation. Discussion focuses on the interaction of technology with human health, the environment, the global economy, and politics, as well as technological forecasting and assessment.

UNST 219. Technology and Public Wellness

This course describes, reviews, and challenges issues arising from the development of technology and the implications for public health policy. Students explore the relationship between the development and implementation of technology and cultural factors such as religion, politics, history, and economics. The course also examines how technology influences health and wellness in local and global contexts. In addition, students critically evaluate how technology policies of the industrialized superpowers influence the well-being of people in non-industrialized nations.

UNST 221. Thematic Writing and Speaking: Technology and Society

This course is designed to improve students' abilities to write, speak, and think critically about important issues in the contemporary world by focusing on the rhetoric of science, technology and progress. Students examine rhetoric as represented in fiction and nonfiction: essays, short stories, drama, poetry, novels, film, popular culture (including popular science writing and journalism), and speeches.

AGEN 216. Geographic Information Systems in Engineering and Natural Resources

CHEM 100/110. Physical Science/Physical Science Laboratory

This is a one semester introductory course designed to make clear the nature of science as an enterprise and illustrate by numerous examples really proceeds. Learning experiences are constructed so that they closely approximate real life situations where one has to search for clues a variety of sources. This course is not open to students who have received credit for CHEM 101, 102, 104, 105, 106, or 107. **Physical Science Laboratory**
This is a laboratory course designed to bring students into working contact with the essential aspects of scientific experiences. In this course the student develops concrete ideas about the operational meaning of the scientific method and problem solving. Corequisite: CHEM 100. This course is not open to students who have received credit for CHEM 114, 115, 116, or 117.

COMP 390. Social Implications of Computing

ENGL 206. Film and Culture

This course examines film as a legitimate form of artistic expression worthy of serious critical analysis. Consequently, film will be studied as history (including its relationship to other print and nonprint media), aesthetic theory, ideology, and cultural artifact. Particular attention will be paid to the ways in which film not only reflects, but also shapes, contemporary culture.

ENGL 231. World Literature II

This course surveys selected major world writers from about 1600 to the present, excluding English and American. Prerequisite: ENGL 101.

ENGL 331. Writing for Science and Technology

This course includes the study and practice of the basic techniques of writing and editing scientific and technical materials for both the general audience and the specialist. Prerequisite: ENGL 101.

GEOM 210. Cartography**HIST-307. The Historical Origins of Environmental Crises Credit**

This course will deal with man's changing philosophical and technological relationship with his natural environment since the start of the Industrial Revolution.

ITT 385. Economic and Social Implications of Information Technology**MATH 111. College Algebra and Trigonometry**

This course is a review of basic algebra; first and second degree equations; polynomial and rational functions-systems of equations-inequalities, right triangle trigonometry; and trigonometric identities and equations. Prerequisites: Mathematics 099 or two units of high school algebra, one unit of high school geometry and a satisfactory score on the mathematical portion of the Scholastic Aptitude Test.

MATH 112. Calculus for Non-Mathematics Majors

This course includes a brief treatment of basic concepts of differential and integral calculus with applications to business, economics, social and behavioral sciences; polynomial, rational, exponential and logarithmic functions. Prerequisite: MATH 102, 110, or 111.

PHIL-266. Contemporary Moral Problems

This course begins with an examination of various ethical theories and then applies these theories to address moral challenges faced by today's society. Topics include the environment, abortion, treatment of animals, drug use, pornography, hate speech, euthanasia, famine relief, affirmative action and the death penalty.

PHYS 101. Astronomy**PHYS 105. Physics for Non-Scientists****POLI 410. Public Policy and Technology**

This course is designed primarily for students in sciences and engineering; however, it does not exclude students in other disciplines, especially business and economics. Students will study the social, economic, human, and environmental impact of technological development. The role of scientists and technologists in selected policy choices will be examined.

POLI 448. Politics of Transportation

This course includes an analysis of the political roots of various transportation problems, such as highway location issues, mass transit issues, and the interest group struggle of transportation innovation. The working mechanisms of federal, state and local transportation related units will also be considered. Case studies of local, regional and national issues will be included. Prerequisite: Junior standing.

SOCI 473. Introduction to Population Studies**SOWK 415. Medical Sociology**

**Use of these courses as theme-cluster electives in subsequent semesters is not guaranteed.*

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