

SCIENCE TECHNOLOGY STUDIES (STS)

STS 1504 - Introduction to Science, Technology, and Society (3 credits)

Examination of the interrelationship among science, technology, and society. Study of how science, technology, and medicine are defined and analyzed by the humanities and social sciences. Examination of topics, theories, and methods of the field of Science and Technology Studies. Depiction of the dynamics of scientific and technological controversies including the roles knowledge, expertise, risk, rhetoric and public understanding play in policy making.

Pathway Concept Area(s): 2 Critical Thinking Humanities, 3 Reasoning in Social Sciences, 11 Intercultural&Global Aware.

Instructional Contact Hours: (3 Lec, 0 Lab, 3 Crd)

STS 2034 - Introduction to Technology and Race (3 credits)

Examination of the relationship between technology and race. Technology such as information and communication technologies, medical and biometric technologies, transportation, and space travel in contexts of colonialism, indigenous knowledge, and globalization. Role of technology in resistance and emancipation. Assessment of inequity in the design and maintenance of sociotechnical systems including bias in design, surveillance, biopolitics, and the digital divide.

Pathway Concept Area(s): 2 Critical Thinking Humanities, 7 Identity & Equity in U.S., 11 Intercultural&Global Aware.

Instructional Contact Hours: (3 Lec, 3 Crd)

STS 2054 - Engineering Cultures (3 credits)

Development of engineering and its cultural values in historical and transnational perspectives. Explores the varying knowledge, identities, and commitments of engineers and engineering across different countries. Examines values in emergent infrastructures of engineering education and work, and the participation of engineers and engineering in evolving forms of capitalism. Helps students learn to reflect critically on their knowledge, identities, and commitments in varying curricula and a globalizing world.

Pathway Concept Area(s): 2 Critical Thinking Humanities, 3 Reasoning in Social Sciences, 11 Intercultural&Global Aware.

Instructional Contact Hours: (3 Lec, 3 Crd)

Course Crosslist: HIST 2054

STS 2154 - The Life Sciences and Society (3 credits)

Basic Science, Technology, and Society (STS) perspectives on the life sciences and the ethical issues they raise. Humanistic approaches to analyze how our values and perceptions are informed by the ways that we understand bodies, biology, and life itself. How our hopes, desires, and fears shape the practices and technologies of the life sciences.

Pathway Concept Area(s): 2 Critical Thinking Humanities, 10 Ethical Reasoning

Instructional Contact Hours: (3 Lec, 3 Crd)

STS 2254 - Innovation in Context (3 credits)

Critical examination of diverse definitions and examples of innovation. Discussion of innovation as a process of social change; as technology diffusion; as an economic engine; as an ecosystem; as an ideology; and more. Introduction to methods and ideas from the field of Science and Technology Studies including the analysis of innovation from historical, cultural, and economic perspectives, as well as the study of innovations consequences and its alternatives. Collaborative projects focused on creatively describing and critiquing local cases of innovative work.

Pathway Concept Area(s): 2 Critical Thinking Humanities, 10 Ethical Reasoning, 11 Intercultural&Global Aware.

Instructional Contact Hours: (3 Lec, 3 Crd)

STS 2354 - Humanities, Technology, and the Physical Sciences (3 credits)

Examines the value-laden issues surrounding the professional dimensions of research in the physical sciences and technology, and provides humanistic perspectives on the role and function of science in society.

Instructional Contact Hours: (3 Lec, 3 Crd)

STS 2444 - Global Science and Technology Policy (3 credits)

Introduction to issues and themes in global science and technology policy, from the perspective of Science and Technology Studies (STS). Comparison of national and international policy agents, institutions, structures, and processes. Integration of key ideas from STS into policy analysis, including regulatory cultures, cultural notions of risk and expertise, large socio-technical systems, and social shaping of technology. Emphasis on international controversies, diverse cultural perspectives, and inclusion in policy processes. Cases may include international controversies over genetically modified foods, transmissible illnesses, nuclear energy, and information security.

Pathway Concept Area(s): 2 Critical Thinking Humanities, 3 Reasoning in Social Sciences, 11 Intercultural&Global Aware.

Instructional Contact Hours: (3 Lec, 3 Crd)

STS 2454 - Science, Technology, and Environment (3 credits)

Examines the nature and causes of global environmental challenges. Focuses on the role of science and technology in the causation of environmental problems and provision of solutions. Investigates uneven impacts among different groups and nations. Explores multicultural dimensions and ethical debates in the relationship between humanity and natural world. Considers visions of alternative futures.

Pathway Concept Area(s): 2 Critical Thinking Humanities, 10 Ethical Reasoning, 11 Intercultural&Global Aware.

Instructional Contact Hours: (3 Lec, 3 Crd)

STS 2464 - Religion and Science (3 credits)

Exploration of the relationships between religion and science in the western tradition. Basic frameworks for relationships between religion and science in historical and cultural context, types of human knowledge and truth, similarities and differences between science and religion, evolution, the origins of the creationist movement, and contemporary moral and ethical issues.

Pathway Concept Area(s): 3 Reasoning in Social Sciences, 10 Ethical Reasoning

Instructional Contact Hours: (3 Lec, 3 Crd)

Course Crosslist: RLCL 2464

STS 2604 - Introduction to Data in Social Context (3 credits)

Examines the use of data to identify, reveal, explain, and interpret patterns of human behavior, identity, ethics, diversity, and interactions. Explores the historical trajectories of data to ask how societies have increasingly identified numerical measures as meaningful categories of knowledge, as well as the persistent challenges to assumptions about the universality of categories reducible to numerical measures.

Pathway Concept Area(s): 2 Critical Thinking Humanities, 5F Quant & Comp Think Found., 10 Ethical Reasoning, 11 Intercultural&Global Aware.

Instructional Contact Hours: (3 Lec, 3 Crd)

Course Crosslist: HIST 2604, SOC 2604

STS 2664 - Technology Ethics (3 credits)

Critical, interdisciplinary exploration of ethical considerations regarding human engagements with technology, including technological development, use, success and failure. History and fundamental concepts of normative ethics and their application to specific technologies and technological systems. Emphasis on conceptualizations and representations of technology with respect to various social, cultural, and historical perspectives on nature, human nature, and technological artifacts.

Pathway Concept Area(s): 2 Critical Thinking Humanities, 7 Identity & Equity in U.S., 10 Ethical Reasoning

Instructional Contact Hours: (3 Lec, 3 Crd)

STS 2715 - History of Technology (3 credits)

Development of technology and engineering in their social and cultural contexts. Examines the interaction of people, cultures, technologies, and institutions such as governments, religious bodies, corporations, and citizens groups. 2715: Examines the creation and modification of technologies to establish the basic structures of civilization, from prehistory to the Industrial Revolution (about 1800). 2716: Examines the nature of technological change and consequences in society, from about 1800 to present.

Pathway Concept Area(s): 3 Reasoning in Social Sciences, 11 Intercultural&Global Aware.

Instructional Contact Hours: (3 Lec, 3 Crd)

Course Crosslist: HIST 2715

STS 2716 - History of Technology (3 credits)

Development of technology and engineering in their social and cultural contexts. Examines the interaction of people, cultures, technologies, and institutions such as governments, religious bodies, corporations, and citizens groups. 2715: Examines the creation and modification of technologies to establish the basic structures of civilization, from prehistory to the Industrial Revolution (about 1800). 2716: Examines the nature of technological change and consequences in society, from about 1800 to present.

Pathway Concept Area(s): 3 Reasoning in Social Sciences, 11 Intercultural&Global Aware.

Instructional Contact Hours: (3 Lec, 3 Crd)

Course Crosslist: HIST 2716

STS 2724 - Introduction to Displacement Studies (3 credits)

Examines key concepts, ideas, and technologies in global population displacement, including categorization, distribution and governance of displaced groups. Introduces displacement drivers such as natural disaster, climate change, civil unrest, infectious disease, and forced relocation. Identifies digital infrastructures used for, by, and against displaced populations. Describes experiences of displaced people.

Pathway Concept Area(s): 3 Reasoning in Social Sciences, 7 Identity & Equity in U.S., 11 Intercultural&Global Aware.

Instructional Contact Hours: (3 Lec, 3 Crd)

Course Crosslist: ENGL 2724, HIST 2724, LAHS 2724

STS 2974 - Independent Study (1-19 credits)

Instructional Contact Hours: Variable credit course

STS 2974H - Independent Study (1-19 credits)

Instructional Contact Hours: Variable credit course

STS 2984 - Special Study (1-19 credits)

Instructional Contact Hours: Variable credit course

STS 3104 - Science and Technology in Modern Society (3 credits)

Examination of science and technology as social and cultural activities in the modern world. The relationship of science and technology to their social and cultural contexts. Institutions and values in science and technology. The changing relationship of technology to science. Discuss how the domain and objects of scientific investigation have been shaped by changing concepts of nature and the natural.

Pathway Concept Area(s): 2 Critical Thinking Humanities, 10 Ethical Reasoning

Instructional Contact Hours: (3 Lec, 3 Crd)

STS 3124 - Societal Health in North America (3 credits)

Study of human health within and across a variety of geographic contexts in North America. Describe the health consequences of inequity and injustice within and across American contexts. Consider the roles of collectives, social movements, mutual aid, interdisciplinary thinking, power and social justice in addressing pathologies of power and working towards human well-being. Advocate a biosocial lens that considers the dynamic relationships between biology and environmental, social, geographic, and historical contexts.

Pathway Concept Area(s): 3 Reasoning in Social Sciences, 7 Identity & Equity in U.S., 11 Intercultural&Global Aware.

Instructional Contact Hours: (3 Lec, 3 Crd)

Course Crosslist: APS 3124

STS 3284 - Technology and Disability (3 credits)

Technologies and the experience of disability. The ways institutions, laws, and biases influence how disability is interpreted within engineering and design culture. How disability communities resist, negotiate, adopt, make, and change technologies. Development of work on this topic through making, doing, and writing. Conversations about ableism, media portrayals, historical narratives, ideology, and rhetoric surrounding technology and disability. Includes field trips to learn about the law and assistive technology.

Pathway Concept Area(s): 2 Critical Thinking Humanities, 6D Critique & Prac in Design, 10 Ethical Reasoning

Instructional Contact Hours: (3 Lec, 3 Crd)

STS 3314 - Medical Dilemmas and Human Experience (3 credits)

Provides a humanist perspective on dilemmas of medical ethics. Focus on the varieties of human experience of medical dilemmas. Topics include contemporary controversies, such as assisted reproduction, genetic testing and treatment, clinical trials, end-of-life interventions, and the allocation of health-care resources.

Pathway Concept Area(s): 2 Critical Thinking Humanities, 10 Ethical Reasoning

Instructional Contact Hours: (3 Lec, 3 Crd)

STS 3334 - Energy and Society (3 credits)

Examines the interconnections between energy use and social life. Considers the ways that modern social institutions, such as states, cities, and households are shaped by energy systems, particularly the pervasive use of fossil fuels. Explores the influence of energy extraction and commerce on economic development and global politics. Surveys major contemporary problems related to energy, including climate change and natural resource depletion. Develops an interdisciplinary framework, drawing insights from history, sociology, and economics, for evaluating policies to transition to a sustainable energy system.

Pathway Concept Area(s): 2 Critical Thinking Humanities, 3 Reasoning in Social Sciences, 11 Intercultural&Global Aware.

Instructional Contact Hours: (3 Lec, 3 Crd)

STS 3504 - The Practice of Collaborative Research in STS (3 credits)

Reinforces concepts and perspectives in Science, Technology, and Society through collaborative research projects. Provides experience with major research techniques used in STS, such as interviewing, ethnography, and documentary research. Covers a range of presentation formats for academic communication and public outreach. Research topics involving contemporary problems related to science and technology.

Prerequisite(s): STS 1504 and (STS 2154 or STS 2444 or STS 2454 or STS 2254)

Instructional Contact Hours: (3 Lec, 3 Crd)

STS 3705 - History of Science (3 credits)

Conceptual and institutional development of physical and biological sciences viewed within a cultural and societal context. 3705: Early Science; 3706: Modern Science

Instructional Contact Hours: (3 Lec, 3 Crd)

Course Crosslist: HIST 3705

STS 3706 - History of Science (3 credits)

Conceptual and institutional development of physical and biological sciences viewed within a cultural and societal context. 3705: Early Science; 3706: Modern Science

Instructional Contact Hours: (3 Lec, 3 Crd)

Course Crosslist: HIST 3706

STS 3734 - History of Modern Biology (3 credits)

Exploration of the history of biology during the nineteenth century and twentieth centuries, including developments in evolutionary biology, genetics and molecular biology, biology and race, and conservation biology. Emphasis on biology's reciprocal relationship with society, how it has helped shape ideas of race and ethnicity, and the ethical dilemmas it has generated.

Pathway Concept Area(s): 2 Critical Thinking Humanities, 7 Identity & Equity in U.S., 10 Ethical Reasoning

Instructional Contact Hours: (3 Lec, 3 Crd)

Course Crosslist: HIST 3734

STS 3984 - Special Study (1-19 credits)

Instructional Contact Hours: Variable credit course

STS 4304 - Topics: Contemporary Issues in Science, Technology, and Society (3 credits)

Advanced introduction to social scientific concepts and methods in the study of contemporary science and technology. Examines the political, social, and cultural dimensions of a contemporary development or controversy in science and technology. Studies the relationship of science and technology to social structure, power relations, and inequality. Focuses on the institutions and organizations in which emergent science and technology are produced. Discusses policy options informed by social scientific analysis. May be repeated once with different content for a maximum of 6 credits. Pre: Junior standing.

Pathway Concept Area(s): 3 Reasoning in Social Sciences, 11 Intercultural&Global Aware.

Instructional Contact Hours: (3 Lec, 3 Crd)

Repeatability: up to 6 credit hours

STS 4314 - Narrative Medicine (3 credits)

Introduction to the field of narrative medicine, with attention to narrative competencies, the use of narrative medical education, and the function of narratives in the experience of healing. Includes narrative approaches to biomedical ethics.

Prerequisite(s): ENGL 1106 or ENGL 1204H or COMM 1016

Instructional Contact Hours: (3 Lec, 3 Crd)

Course Crosslist: ENGL 4314

STS 4314H - Narrative Medicine (3 credits)

Introduction to the field of narrative medicine, with attention to narrative competence, the use of narrative in medical education, and the function of narratives in the experience of healing. Includes narrative approaches to biomedical ethics.

Prerequisite(s): ENGL 3154 or ENGL 3324

Instructional Contact Hours: (3 Lec, 3 Crd)

Course Crosslist: ENGL 4314H

STS 4324 - Medical Experiences and Biomedical Theories (3 credits)

Builds the analytical tools of STS and humanistic deconstruction. Challenges students to read, write, and interrogate academic literatures and real-life, immediate problems and artifacts in ethical, sociocultural, historical, and context informed ways. Builds this competence while examining materials related to current topics in health, such as but not limited to: population, development, reproductive technologies, pollution, climate change, environmental health beyond humans, and, colonialism. Employs multiple humanistic lenses including: biopolitics & biopower, intersectionality, structural and institutional analysis, syndemics, anticolonialism, violence, and disability to examine these materials.

Prerequisite(s): STS 2154 or STS 3314 or SOC 3104

Pathway Concept Area(s): 2 Critical Thinking Humanities, 3 Reasoning in Social Sciences, 11 Intercultural&Global Aware.

Instructional Contact Hours: (3 Lec, 3 Crd)

Course Crosslist: SOC 4324

STS 4334 - Sexual Medicine (3 credits)

Discusses sex and medicine in contemporary U.S. society. Explores how notions of sexual behavior and normality are defined and structured by medical discourse. Examines cultural institutions that play significant roles in formulating ideas about and definitions of deviance, perversity, and tolerated marginality. Critiques medical responses to sexual variations. Examines experiences of people who have sought out, or been the unwilling victims of, sexual medicine. Junior standing required.

Prerequisite(s): WGS 1824

Instructional Contact Hours: (3 Lec, 3 Crd)

Course Crosslist: WGS 4334

STS 4704 - Gender and Science (3 credits)

Investigates the gender dimensions of science in both historical and contemporary perspectives. Discusses feminist studies of science, exploring strengths and limitations. Assess implications of cultural assumptions about gender for practicing scientists. A 3000 level course in science or engineering may satisfy the prerequisite.

Prerequisite(s): STS 1504 or WGS 2244

Instructional Contact Hours: (3 Lec, 3 Crd)

Course Crosslist: WGS 4704

STS 4754 - Internship (1-19 credits)

Instructional Contact Hours: Variable credit course

STS 4964 - Field Study (1-19 credits)

Instructional Contact Hours: Variable credit course

STS 4974 - Independent Study (1-19 credits)

Instructional Contact Hours: Variable credit course

STS 4974H - Independent Study (1-19 credits)

Instructional Contact Hours: Variable credit course

STS 4984 - Special Study (1-19 credits)

Instructional Contact Hours: Variable credit course

STS 4994 - Undergraduate Research (1-19 credits)

Instructional Contact Hours: Variable credit course

STS 4994H - Undergraduate Research (1-19 credits)

Instructional Contact Hours: Variable credit course