

# Science, Technology and Society (STS)

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## **STS 210/WGS 210 Women and Gender in Science and Technology** (3 credit hours)

Interdisciplinary introduction to the reciprocal relationships between scientific/technological research and contemporary understanding of gender. Special emphasis on social factors influencing scientists and engineers in their professions.

*GEP Interdisciplinary Perspectives, GEP U.S. Diversity, Equity, and Inclusion, GEP U.S. Diversity*

*Typically offered in Fall, Spring, and Summer*

## **STS 214 Introduction to Science, Technology, and Society** (3 credit hours)

Introduction to the field of Science, Technology, and Society (STS), including most important STS scholars, major schools of thought, and important theoretical and empirical issues in STS.

*GEP Interdisciplinary Perspectives*

*Typically offered in Fall, Spring, and Summer*

## **STS 257/ARS 257 Technology in the Arts** (3 credit hours)

The interaction between technology and the arts with an emphasis on developments in Western art of the twentieth century. Historical and emerging issues include: sound and film recordings, the addition of sound to films, the impact of films and television on theater, the impact of radio, computer applications to music, the visual arts, and literature.

*GEP Interdisciplinary Perspectives*

*Typically offered in Fall and Spring*

## **STS 301 Science and Civilization** (3 credit hours)

An inquiry into the scientific achievement and cultural impact of three different, but interrelated, models (or paradigms) of understanding the world and man's place in it; the Ancient-Medieval model of Aristotle, Ptolemy and Aquinas; the 17th century model of Newtonian physics; and the emerging, but fragmentary, 20th century model based upon the new physics of Einstein, Planck and Heisenberg.

Requisite: Sophomore Standing or Above

*GEP Interdisciplinary Perspectives*

*Typically offered in Fall and Spring*

## **STS 302 Contemporary Science, Technology and Human Values** (3 credit hours)

Interdisciplinary evaluation of recent and potential influences of current scientific and technological developments on US and non-US societies. Emerging social, ethical, and intellectual issues include: The adequacy of contemporary scientific frameworks; the relations among science, technology, and society; the social consequences of scientific and technological applications, and human prospects and possibilities.

Prerequisite: Sophomore standing

*GEP Global Knowledge, GEP Interdisciplinary Perspectives*

*Typically offered in Fall, Spring, and Summer*

## **STS 304 Ethical Dimensions of Progress** (3 credit hours)

Multidisciplinary examination of traditional western notion of progress, focusing on ethical issues raised by concept of progress, and connections between science, technology and society. Places relationships such as engineering and social responsibility within the context of present day redefinitions of the notion of progress.

*GEP Interdisciplinary Perspectives*

*Typically offered in Fall and Spring*

## **STS 310 Science, Psi, Sasquatch, & Spirits** (3 credit hours)

This course examines cultural perspectives on science and cultural practices within scientific communities as illuminated through examination of fields of inquiry generally considered outside of mainstream science. We will ask questions that include: How does and should science draw and enforce its boundaries? How is evidence considered within and across diverse scientific disciplines and in social spheres, and how do these realms influence one another? Students will engage with scientifically-framed arguments from so-called "skeptics," "believers," and others, as well as consider issues in and aspects of science including reproducibility, experimental design, statistical analysis, media representations, instrumentation, measurement, citizen science, and history and philosophy of science. By "thinking and doing" within these fields, students will develop an embodied sense of how to conduct scientific inquiry and situate scientific thinking within society and life.

*GEP Interdisciplinary Perspectives*

*Typically offered in Fall and Spring*

## **STS 315/WGS 315 Feminist Futures** (3 credit hours)

This course seeks to both analyze and disrupt dominant narratives of science, technology, and science fiction by exploring the possibilities of alternative futures as imagined by and with feminist communities and feminist thinkers. By examining critical technology studies, theories of feminist technoscience, and speculative and science fiction across media, we will work to interrogate how technologies have been used to create, sustain, or challenge systems of power and oppression and to imagine new possibilities.

P: WGS 200 or WGS/STS 210 or STS 214

*GEP Interdisciplinary Perspectives*

*Typically offered in Spring only*

## **STS 320 Cycling Cities: STS, the Bicycle and Urban Transportation** (3 credit hours)

Comparison of historical and current practices with respect to bicycling in various cities, with special emphasis on comparisons between practices in the United States and Europe. Use of the bicycle to introduce STS concepts of technological systems, the language of technology, and risk. Examination of bicycle policies and practices in Raleigh and North Carolina State University.

*GEP Global Knowledge, GEP Interdisciplinary Perspectives*

*Typically offered in Spring only*

**STS 322 Technological Catastrophes** (3 credit hours)

Interdisciplinary examination of the human, organizational and technical factors contributing to the causes and impacts of recent technological accidents such as the Bhopal chemical leak, the space shuttle Challenger explosion, the Chernobyl nuclear accident, and the Exxon Valdez oil spill. Evaluation of risk assessment, risk perception and risk communication strategies. Consideration of options for living with complex technological systems.

Prerequisite: Sophomore standing

*GEP Interdisciplinary Perspectives*

*Typically offered in Fall, Spring, and Summer*

**STS 323 World Population and Food Prospects** (3 credit hours)

Examination of the dynamics of population size and food needs, production, distribution and utilization. Consequences of inadequate nutrition and food choices, efforts to increase the compatibility of effective food production systems and alternate crops and cropping systems examined.

*GEP Interdisciplinary Perspectives, GEP Global Knowledge*

*Typically offered in Fall and Spring*

**STS 325/PHI 325 Bio-Medical Ethics** (3 credit hours)

Interdisciplinary examination and appraisal of emerging ethical and social issues resulting from recent advances in the biological and medical sciences. Abortion, euthanasia, physician-assisted suicide, compromised infants, aids, reproductive technologies, and health care. Focus on factual details and value questions, fact-value questions, fact-value interplay, and questions of impact assessment and policy formulation.

*GEP Humanities, GEP Interdisciplinary Perspectives*

*Typically offered in Fall, Spring, and Summer*

**STS 402 Peace and War in the Nuclear Age** (3 credit hours)

An interdisciplinary examination of contemporary wars and international conflict, arms, races, nuclear strategy and defense policy, arms control, theories and strategies of peace.

*GEP Interdisciplinary Perspectives*

*Typically offered in Fall, Spring, and Summer*

**STS 403 Seminar in Science, Technology, and Society** (3 credit hours)

Capstone course for the Science, Technology, and Society (STS) major. Review of the principal theoretical and empirical issues of the field. Research project focused on each student's STS specialty.

Prerequisite: STS 214, STS or STB Majors

*Typically offered in Fall and Spring*

**STS 405 Technology and American Culture** (3 credit hours)

Interdisciplinary study of the role of technology in American culture that examines the social, ideological, economic, and institutional contexts of technological change in nineteenth and/or twentieth-century America. Explores cultural impacts of transformative technological innovations, such as electricity, trains, telephones, radios, cars, airplanes, and computers, as reflected in popular cultural products like magazine/newspaper articles, advertising, literature, music, museum exhibits, and/or film.

*GEP Interdisciplinary Perspectives*

*Typically offered in Spring only*

**STS 438/ENG 438 Responsible Artificial Intelligence and Society** (3 credit hours)

With artificial intelligence systems becoming more integrated into today's society, it is important for citizens to develop the ability to critically engage with the fundamental challenges and concerns introduced by such AI tools. In this course, you will learn how to identify biases and discrimination embedded in AI systems and how to use interdisciplinary research to encourage public engagement, inform public discourses about the social impacts of AI, and help create more responsible AI. Topics can include rhetorical theories, data ethics, AI ethics, algorithm systems and risks, AI Model Lifecycle Management, AI in job searches, medicine/healthcare, and finance; and biases and discrimination in automated decision-making systems.

Prerequisite: ENG 101

*Typically offered in Fall only*

**STS 471/REL 471 Darwinism and Christianity** (3 credit hours)

Evolutionary biology and Christianity. Darwin's evolutionary theory; neo-Darwinism; conflicts between evolutionary theory and Christian thought; methodological parallels and differences between science and religion; proposals for divine action in an evolutionary world.

Prerequisite: One course in religious studies, biological sciences, philosophy of science, or history of science. Credit is not allowed for both REL 471 and REL 571.

*GEP Interdisciplinary Perspectives, GEP Humanities*

*Typically offered in Fall only*

**STS 490 Issues in Science, Technology, and Society** (3 credit hours)

Examination of a significant issue, method, or historical episode in the area of science, technology, and society.

Prerequisite: Junior standing.

*Typically offered in Fall and Spring*

**STS 491 Independent Study in Science, Technology, and Society** (3 credit hours)

Independent investigation and discussion of a selected topic in science, technology, and society. Individualized/Independent Study and Research courses require a "Course Agreement for Students Enrolled in Non-Standard Courses" be completed by the student and faculty member prior to registration by the department.

*Typically offered in Fall, Spring, and Summer*

**STS 571/REL 571 Darwinism and Christianity** (3 credit hours)

Evolutionary biology and Christianity. Darwin's evolutionary theory; neo-Darwinism; conflicts between evolutionary theory and Christian thought; methodological parallels and differences between science and religion; proposals for divine action in an evolutionary world. Credit is not allowed for both REL 571 and REL 471.

Prerequisite: Graduate standing. Credit is not allowed for both REL 571 and REL 471.

*Typically offered in Fall only*