

SCIENCE, TECHNOLOGY AND SOCIETY (STS)

STS 10052 Concepts of Energy and the Environment (3 Credit Hours)

A course developing the basic ideas of energy and power and their applications. The fossil fuels are considered together with their limitations, particularly as related to global warming, pollution, and their nonrenewable character. The advantages and disadvantages of nuclear power are studied and compared with alternative energy sources such as solar energy, wind, and geothermal and hydroelectric power. Various aspects of energy storage and energy conservation are also considered. This course is designed for the non-specialist. It is open to first-year students only.

Satisfies the following University Core Requirements: WKST-Core Science & Technology

STS 10115 Microbes and Man (3 Credit Hours)

The course will provide a survey of relationships between man and microorganisms. General information about microbial physiology, biochemistry, and ecology will support more detailed discussions of interesting topics in food, medical, and applied microbial biology. Included will be subjects of general and historical interest, as well as current newsworthy topics. The student should get a better understanding of the role of microorganisms in disease, the production of common foods, relevant environmental issues, and biotechnology. This course counts as general elective credit only for students in the College of Science.

Satisfies the following University Core Requirements: WKST-Core Science & Technology

STS 10119 Evolution and Society (3 Credit Hours)

Evolution is the cornerstone of modern biological sciences. This course will highlight evolution as well as ecology and biodiversity. Emphasis will be placed on the evolution of animal behavior, including human behavior. Sexual selection and its role in shaping many forms of life, including humans, will be extensively covered. Open classroom discussion is a central and required part of the course.

Satisfies the following University Core Requirements: WKST-Core Science & Technology

STS 10210 The Anthropology of Your Stuff (3 Credit Hours)

Have you ever pondered how people live(d) in a world without television, YouTube, smartphones, and automobiles? Why have bellbottoms come and gone twice in the last 50 years? Will we be forced to relive the fashion mistakes of the 1970s and 1980s? What new stuff will people invent and sell next? In asking and answering these questions, we must focus on one underlying query: What does our stuff really say about who we are and who we want to be? This course combines lectures, discussions, and interactive small group activities to explore the nature and breadth of peoples' relationships with their things. We will investigate why and how people make and use different types of objects, and how the use of these material goods resonates with peoples' identities in the deep past, recent history, and today. Since everyone in the class will already be an expert user and consumer of things, we will consider how people today use material objects to assert, remake, reclaim, and create identities, and compare today's practices to those of people who lived long ago. Class members will learn about how anthropologists, including ethnographers (studying people today) and archaeologists (studying past peoples) think about and approach the material nature of our social, economic, and political lives. We will discuss why styles and technologies change through time, and why, in the end, there is very little new under the sun in terms of human behaviors and the way people produce and consume goods. The topical breadth of this workshop encompasses most social science disciplines, including history, economics, psychology, and anthropology, and resonates with classics, art history, and gender studies.

STS 13181 Science, Technology & Society (3 Credit Hours)

Science and technology play a powerful role in structuring our world, making possible everything from our physical environment to our culture. It is thus imperative that we understand them not just as objects, but as practices and processes. What constitutes reliable knowledge? How do the technological systems in which we are embedded throughout our lives come to be, and how can they be changed? These questions are more urgent than ever. This course introduces students to the field of Science & Technology Studies in order to provide them with analytical and conceptual tools needed to confront the complex questions that arise where science and society intersect. Its objective is thus not so much to present a particular body of empirical information as it is to equip students with the analytical skills to understand complex multi-dimensional phenomena. The purpose is to give students both the opportunity and the tools to consider science and technology in a broader political, social, historical and economic context, and to reflect on how the practices of scientific and technological development shape their own individual and collective experience.

Satisfies the following University Core Requirements: USEM - University Seminar, WKSS - Core Social Science

STS 20063 Radioactivity and its Implications (3 Credit Hours)

This course will provide a broad overview about one of the most divisive scientific topics in our society. Both the scientific and societal aspects of radioactivity will be considered. This provides an understanding of the physical principles for cause and effects of radioactive decay and radiation. It will also provide a basis to evaluate the cost benefit in the growing use of radioactivity as a tool in industry and technology. To cover the broad range of material, the course will be offered in four topical sections that address the science and scientific effects of radioactivity, as well as the environmental consequences and the societal impact of its growing number of applications: 1. The phenomenon of radioactivity 2. The origin of radioactivity 3. The environmental impact of radioactivity 4. Societal impact of radioactivity.

Satisfies the following University Core Requirements: WKST-Core Science & Technology

STS 20202 Design Matters: Into to Design Thinking (3 Credit Hours)

Design thinking has emerged as a powerful methodology to catalyze breakthrough innovation for an array of complex business, social and humanitarian challenges. Business and industry have embraced design thinking as one of the most potent drivers of innovation, growth and prosperity for its' deeply human-centered approach to problem solving. During this fast paced, hybrid, hands-on journey through the design thinking process, students will immerse themselves in a series of overlapping modules that introduce the various phases in the design thinking process and familiarize students with the tools and techniques. This course will unleash your creativity and ingenuity in addressing problems through a human centered framework and mindset, applying this methodology to a vast array of human-centered problems, and complementing disciplines from science and engineering to business and the liberal arts. This course fulfills a Core Curriculum Liberal Arts 4 Way of Knowing (Arts) as well as the gateway to the Collaborative Innovation minor and cross-listed with other minors including: Sustainability, Computing & Digital Technologies, Education, Schooling & Society, Entrepreneurship and Anthropology. Satisfies the following University Core Requirements: WKAL - Core Art & Literature

STS 20204 Global Cultural Worlds: Fundamentals of Social and Cultural Anthropology (3 Credit Hours)

This course introduces students to the field of social-cultural anthropology. Cultural anthropologists are primarily interested in exploring issues of human cultural diversity across cultures and through time. This course will explore key theoretical, topical, and ethical issues of interest to cultural anthropologists. We will examine diverse ways in which people around the globe have constructed social organizations (such as kinship, and political and economic systems) and cultural identities (such as gender, ethnicity, nationality, race, and class) and we will consider the impact of increasing globalization on such processes. Throughout the course we will consider how different anthropologists go about their work as they engage in research and as they represent others through the writing of ethnographies.

Satisfies the following University Core Requirements: WKSS - Core Social Science

STS 20228 The Ethics of Emerging Weapons Technology (3 Credit Hours)

This course explores the ethical challenges posed by the ongoing revolution in the technology of war. After learning about some general, philosophical approaches to ethical decision making, we will examine a wide range of new weapons technologies, from "smart" bombs, drones, and robots to em (electromagnetic) weapons, cyberwar, and bio-enhancement, asking the question whether the existing framework of Just War Theory and the Law of Armed Conflict (LOAC) are adequate for war as it will be fought in the 21st century.

Satisfies the following University Core Requirements: WKSP - Core 2nd Philosophy

Enrollment is limited to students with a program in Science, Technology, & Society.

STS 20255 The Technoscientific Self (3 Credit Hours)

In an age where 'identity politics' figures as both an accusation and a creed in public and private spaces, a careful and critical examination of how we construct our individual and collective selves is more important than ever. Science and technology are crucial resources in these identity formation projects, serving as fundamental structuring elements of our world. They are crucial in shaping not only our physical environment but the very conditions of possibility within which we construct our collective and individual identities. This integration course is an exploration of the ways that the practice of science and the production and marketing of technology supply the material that gets taken up in the work of identity formation, focusing on two closely linked technoscientific domains: neuroscience and genetics.

Satisfies the following University Core Requirements: WKIN - Core Integration

STS 20257 Our Cosmic Stories (3 Credit Hours)

Since the dawn of history, human beings have been telling stories about their origin and destiny. From the Dreamtime of Aborigines to the gods of the Hellenes, Norse tales to Abrahamic revelations, our ability to weave imagination and reason, tradition and experience, has underpinned our collective identity and shaped our history. Today, we are increasingly turning to science to tell these stories of origin and destiny. Concepts like entropy and evolution are giving us cosmic and biological arrows of history, one inexorably tending to disorder, the other to ever-increasing complexity. Unfolding across a series of identifiable thresholds, the budding field of Big History combines our nature as storytellers with our skill as scientists to provide a coherent narrative of life and the universe from the big bang to the present, offering what has been called a new creation story for our time. What tale does Big History tell, what sources of knowledge does it draw on, in what ways does it challenge traditional beliefs, and what futures does it imagine? Bridging the chasm between C.P. Snow's Two Cultures of the sciences and humanities, this interdisciplinary course engages big questions about religion, nature, science, culture, and meaning through great books in popular science with the help of theoretical contributions from science and technology studies. The class welcomes non-scientists who are interested in acquiring scientific literacy as well as scientists seeking to acquire religious and social science literacy. We will look for the best descriptions of nature available to us today (the "is") to draw inspiration for unique insights on how to be (the "ought"). The readings and discussions of this class will provide global citizens in the twenty-first century of diverse religious, theological, or philosophical persuasions a common framework of the past, a sense of presence in the Anthropocene, and conceptual tools to imagine a shared future.

Satisfies the following University Core Requirements: WKIN - Core Integration

STS 20300 Global Change, Water & Energy (3 Credit Hours)

This course examines global environmental change within Earth systems and how these evolve under natural and human influence. Topics covered encompass atmosphere, oceans, water, land and ecosystems and how natural and human-induced processes are reshaping Earth's environments. Central to this discussion are water and air pollution, water management, freshwater availability and scarcity and impact of these issues on society. Sustainable energy is investigated and renewable energy sources that meet current needs and those of future generations are explored. This discussion includes energy production but also incorporates energy efficiency measures and responsible energy consumption. The course concludes with a discussion on the implications of climate change for Earth systems and human society.

STS 20306 Environmental Chemistry (3 Credit Hours)

Discussion of basic chemical processes occurring in the environment, particularly those relating to the impact of humanity's technological enterprise.

Satisfies the following University Core Requirements: WKST-Core Science & Technology

Enrollment is limited to students with a program in Science, Technology, & Society.

STS 20319 Technocultures: Anthropology of Science and Technology (3 Credit Hours)

What are the contributions of anthropology to the study of contemporary science and technology? In this course, we will respond to this question by examining the history of anthropological studies of the technosciences from the post-war period to the present. We will cover the history of ethnographic engagements with the biological and natural sciences, the debates about the nature of knowledge production, and the contemporary studies of computing and engineering with a focus on Artificial Intelligence. We will organize the class as a seminar, so be prepared to engage in close readings of the material and workshopping a research project of your own.

STS 20331 Introduction to Criminology (3 Credit Hours)

Introduction to Criminology provides students with an overview of the sociological study of law making, law breaking and the resulting social responses. In this class we not only look at a variety of crimes, but we also discuss the varying methods sociologists use to collect, interpret and evaluate data, as well as how we theorize about crime and punishment. We address questions such as "Why are some people or groups labeled as criminal, while others are not?" "Do laws in both their construction and enforcement serve everyone's interests equally?" "How can the communities in which people are embedded be considered as criminogenic?" "How are poverty, race, gender and other social factors related to crime?"

Satisfies the following University Core Requirements: WKSS - Core Social Science

STS 20415 Meat, Markets, Medicine, and Other Moral Issues (3 Credit Hours)

This course introduces students to important concepts, issues, and debates in applied ethics. It begins with a brief overview of normative ethics, familiarizing students with two major approaches in this area: consequentialism and deontology. The remainder of the course tackles real-world issues, and proceeds in four parts. PART I: We engage with questions concerning our duties to non-human animals, as well as related questions concerning their moral status. Do non-human animals have moral rights? Do they matter less from the moral point of view than human beings? We'll also be engaging with some important questions about the ethics of eating meat. PART II: We consider the moral challenges raised by certain kinds of markets, including commercial surrogacy, sweatshops, and the black market in human organs. On the one hand, these practices seem objectionably exploitative. On the other hand, we might think that these individuals' choices—to sell their organs, rent out their wombs, or undertake risky labor—should be respected. PART III: We investigate ongoing controversies in the ethics of medicine. One such controversy concerns the shape that a state's organ donation system ought to take: should such systems be 'opt-in', or 'opt-out'? Another important issue is how we ought to conceive of disabilities: are disabilities neutral differences—as opposed to good or bad ones? We'll also look into related controversies surrounding human enhancement and genetic engineering. Finally, we'll explore the ethics of voluntary Euthanasia. PART IV: The course concludes by examining matters of justice. Among these are matters of global justice raised by widespread poverty; what duties do those of us living in affluent countries have to the global poor, and why? Another such issue is justice in the distribution of educational opportunities. Does justice require that all children receive the same quality education? Or does it simply require that all children receive a good enough education?

Satisfies the following University Core Requirements: WKSP - Core 2nd Philosophy

STS 20500 Principles of Science Communications (3 Credit Hours)

Communicating about science has always been a necessity in public discourse, but communicating complex or ongoing science, health, and technology issues can be a challenge. This one-semester core Writing Intensive course, taught in Spring and Fall semesters, immerses students in the art of communicating about science in many forms, from writing for magazines and newspapers, to institutional writing for universities or medical centers, to giving speeches to lay audiences and creating descriptive museum displays. The areas of focus will be on writing concisely without jargon, workshopping/re-writing/editing, communicating and writing with accuracy, and developing empathy for both the scientist and the science communicator. Each week will include short reading assignments, as reading about science is critical to writing about science. Communicating about science has always been a necessity in public discourse, but communicating complex or ongoing science, health, and technology issues can be a challenge. This one-semester core Writing Intensive course, taught in Spring and Fall semesters, immerses students in the art of communicating about science in many forms, from writing for magazines and newspapers, to institutional writing for universities or medical centers, to giving speeches to lay audiences and creating descriptive museum displays. The areas of focus will be on writing concisely without jargon, workshopping/re-writing/editing, communicating and writing with accuracy, and developing empathy for both the scientist and the science communicator. Each week will include short reading assignments, as reading about science is critical to writing about science.

Satisfies the following University Core Requirements: WRIT - Writing Intensive

STS 20555 American Healthcare in Perspective (3 Credit Hours)

We all recognize that the biomedical sciences change rapidly, but amid the seemingly intractable and interminable debate about healthcare reform in the US, it can be easy to lose sight of the fact that the same is true of the healthcare system. This interdisciplinary course will examine the American healthcare system in historical and comparative perspective. We look at its institutional structure, its professional composition, and its governance at various levels, with the end learning objective being to understand how these facets of the healthcare system shape not only national health outcomes, but also provider and patient experience. The course draws on the history, sociology and anthropology of medicine, and serves as one the core courses in the new Health, Humanities and Society Minor.

STS 20556 Science, Technology, and Society (3 Credit Hours)

Science and technology play a powerful role in structuring our world, in everything from our physical environment to our culture. It is thus imperative that we understand how these entities work. What constitutes reliable knowledge? How do the technological systems in which we are embedded throughout our lives come to be, and how can they be changed? In this historic moment of a global pandemic playing out against a backdrop of fake news, alternative facts and increasingly autonomous technologies, these questions are more critical than ever. This course introduces students to the interdisciplinary field of Science & Technology Studies in order to provide them with analytical and conceptual tools needed to confront the complex questions that arise where science and society intersect. Its objective is thus not so much to present a particular body of empirical information as it is to equip students with the analytical skills to understand complex multi-dimensional phenomena. The purpose is to give students both the opportunity and the tools to consider science and technology in a broader political, social, historical and economic context, and to reflect on how the practices of scientific and technological development shape their own individual and collective experience.

Satisfies the following University Core Requirements: WKSP - Core 2nd Philosophy, WRIT - Writing Intensive

Enrollment is limited to students with a program in Science, Technology, & Society.

STS 20600 Natural Science Drawing (3 Credit Hours)

This course will introduce students to scientific illustration and visual documentation through basic drawing skills and techniques utilizing traditional and contemporary art approaches, media and tools. Students will learn to create representational renderings through close and careful observation of natural subjects including botanical, animal, insect and/or aquatic life based on field observations, study at the Museum of Biodiversity and other sites as available. Emphasis will be on accuracy, form and structure as well as integrating personal vision through developmental, conceptual and compositional sketches and exercises leading to several completed drawings and include a field journal and sketchbook. Students do not need any prior drawing experience and can be pursuing any major!

Satisfies the following University Core Requirements: WKAL - Core Art & Literature

STS 20626 Theology and Ecology (3 Credit Hours)

We live and act in an ecological theater created by God that includes all other living organisms and their ecosystems within the biosphere. Urgent questions abound today about what our relationship is to the rest of the natural world. What is our place in the world? This course investigates the Christian understanding of God as Creator, creation, and our human relationship to God, one another, and the natural world. We will examine the theology of creation beginning with Scripture and the Creed and progressing through the Early Church, Medieval, and modern time periods. We will also discuss theological anthropology in terms of our identity and mission within our ecological home. To this end, we will apply Pope Francis' notion of integral ecology to the specific case of the Great Lakes watershed in which we live, examining topics such as biodiversity, water, agriculture, and energy. As ecological citizens and creatures of God, we will also address the connection between liturgy and ecology. This course will have a special appeal to students interested in the intersection of theology and science, especially ecology and environmental studies.

Satisfies the following University Core Requirements: WKDT-Core Development. Theology

STS 20627 Human and Machine: History and Philosophy of Artificial Intelligence (3 Credit Hours)

Today's artificial intelligence did not spring fully grown from any head in silicon valley but took slow and gradual shape under the influence of many historical forces. To think philosophically and productively about artificial intelligence, to understand the scope of its influence, the credibility of its claims, and ultimately to consider its present meaning for our lives, we must critically investigate the material, conceptual, and historical forces that have brought it into being. Therefore, as a kind of analysis of the concept of artificial intelligence, this class will proceed by examining some major elements that constitute the very phrase "artificial intelligence." We will examine the concept of artifice, or technology, then examine the concept of intelligence, before seeing how these two concepts have co-evolved and shaped one another. This is followed by two units on the architecture of AI, where we will develop a basic understanding of the structure of some contemporary AI models. The class will conclude by discussing a central function of AI processing: prediction. We will discuss how AI prediction relates to our concepts of freedom and creativity.

Satisfies the following University Core Requirements: WKSP - Core 2nd Philosophy

STS 20637 Biomedical Ethics (3 Credit Hours)

A discussion of ethical problems in the medical profession in light of natural law and Christian moral principles.

Satisfies the following University Core Requirements: WKDT-Core Development. Theology

Enrollment is limited to students with a program in Science, Technology, & Society.

STS 20684 Artificial Intelligence and Human Flourishing (3 Credit Hours)

Artificial intelligence is rapidly transforming society, impacting how we live as individuals and communities. This course will examine the issues raised by AI from the perspective of the Catholic understanding of the human person, Catholic theological anthropology. The course will particularly focus on how to ensure that AI promotes rather than prevents human flourishing. In the process of exploring those broad concerns, the course will address specific issues related to AI, such as whether AI could be a person, relationships with chatbots, surveillance capitalism, the implications of Catholic Social Teaching for AI, AI in warfare, bias, transhumanism, and the impacts of social media.

Satisfies the following University Core Requirements: WKDT-Core Development. Theology

STS 20710 Code in Context: Computing & the Liberal Arts (3 Credit Hours)

This course combines hands-on introduction to the basic concepts and technologies of computing with critical discussion of the historical, social, and cultural dimensions of computing, data, and digital technology. The work of the course includes content discussions that foreground the cultural, social, and historical dimensions of computing technologies, along with exploration and foundational skill building with various computing tools and methods. By studying how computing technologies have developed over time, as well as how they work, we'll consider what kind of technological future we want, and how to build it, via a critical examination of the technologies and platforms that shape our lives together. Along the way, we'll explore what computer science educators have identified as seven "big ideas" in computing: creativity, abstraction, data and information, algorithms, programming, the internet, and global impacts (AP Computer Science Principles).

Satisfies the following University Core Requirements: WKIN - Core Integration, WKST-Core Science & Technology

STS 20760 Witnessing Climate Change (3 Credit Hours)

The Earth's climate is changing faster than expected. Industrialization, fossil fuel use, consumption, and exploitation are radically transforming the planet we live on. In "Witnessing Climate Change," we work to make sense of the science behind this planetary crisis and practice writing about it for the public. This is a large, writing-intensive, public-facing course that engages key contemporary issues and core ways of knowing from a values-oriented perspective, through large lectures and small group workshops. Readings include Jeff VanderMeer, Nukariik, Barry Lopez, Aldo Leopold, Wanda Coleman, J.M. Coetzee, and St. Francis, among others.

Satisfies the following University Core Requirements: WKAL - Core Art & Literature, WKCD-Core Cathol & Disciplines, WKIN - Core Integration, WRIT - Writing Intensive

STS 20800 History of Medicine and Global Empires (3 Credit Hours)

This course will introduce students to the important roles that medicine played in shaping colonial contexts and the broader trajectory of global history. Since Christopher Columbus first landed on the shores of the West Indies in 1492, European imperialists have been acutely tuned in to matters of health and disease in the colonial enterprise. The health of colonists, the spread of diseases both new and old, the potential of novel medicines, and the control of native populations were all crucial matters in managing and expanding new empires. Our contemporary world is a byproduct of these colonial ambitions, a world in which medicine and science continue to play indispensable roles. Potential topics include: the early Americas; indigenous healers; colonial Africa, India, New Zealand, and Korea; medical missions; medical research in colonial contexts; race and gender; U.S. imperialism; modern global health. Some background knowledge of U.S. and World history useful but not required.

Satisfies the following University Core Requirements: WKHI - Core History, WRIT - Writing Intensive

STS 20801 AI and the Good Life (1 Credit Hour)

Many students are working to equip themselves with the practical skills that they will need to use AI in their chosen fields after graduation, but it is equally important to think critically about the bigger challenges that AI presents: changes to how and why we learn; increases in academic and professional misconduct; and questions of justice, social and environmental responsibility, and spiritual well-being. This weekly course will present an overview of these issues and encourage students to think through their implications for the good life in the 21st century.

STS 20888 Science, Theology, and Creation (3 Credit Hours)

This course investigates the Christian understanding of creation and how this doctrine relates to contemporary scientific issues. We will examine the development of the doctrine beginning with Scripture and the Creed and progressing through the early Church period into the Medieval and Scholastic era, focusing on the concepts of creation ex nihilo, creation continua, divine Providence, and divine action in the world. With the rise of the modern era, we will analyze the origin of and principles involved with the purported conflict between science and theology. We will bring the doctrine of creation into dialogue with three contemporary issues in the sciences: cosmology, evolution, and ecology. Integral to this course will be the relationship and response of humankind to God and to creation. This course will have a special appeal to students interested in the intersection of science and theology.

Satisfies the following University Core Requirements: WKDT-Core Development. Theology

STS 20896 Faith & Science: Toward a Relational Unity (3 Credit Hours)

This course investigates the relationship between the Catholic Faith and modern science for the sake of an integrated worldview in which they are brought into a "relational unity," i.e. a dynamic interchange in which their distinct perspectives and methods are carefully respected. We will begin with historical, philosophical, biblical and theological resources for engaging science from the perspective of faith. These will be brought into dialogue with modern cosmology, evolutionary biology and the sciences of human origins in an attempt to forge a holistic perspective in which science, philosophy and theology are treated as distinct but mutually enriching paths to truth. Specific topics will include the conflict model of science and religion, the Galileo Affair, the biblical creation accounts, the doctrines of divine creation and divine providence, and the human person as the image of God.

Satisfies the following University Core Requirements: WKDT-Core Development. Theology

Enrollment limited to students in the Science, Technology and Values department.

STS 23202 Nasty, Brutish, and Short: The Archaeology of War (3 Credit Hours)

Organized violence between human communities is one of the unfortunate realities of human existence, and its causes and consequences have consequently been of great interest. Is war an inevitable outcome of human nature, or the result of specific social, historical, and environmental circumstances? Archaeology is uniquely positioned to provide concrete insights into the history of human violence through study of its direct material correlates, including traumatic injuries on skeletons, fortified settlements, weaponry, and iconography. However, the archaeological record also documents the impacts of violence (reduced nutritional status and health, evidence for enslavement, cannibalism, and population decline) and can provide insights into why war occurred through examination of environment, population, and social conditions. In this course, we will explore what the archaeological record tells us about violence, human nature, and the veracity of claims for either a more violent or more peaceful past. We will examine theoretical models of war, anthropological studies of conflict, and archaeological case studies of both violent and peaceful times to understand the role that organized violence has played in human history and evolution.

STS 23500 Writing in the Age of AI (3 Credit Hours)

What does writing look like in the age of generative AI? What does it mean to communicate with others, or to seek to persuade others, or to write for the sake of learning about a topic (or about oneself) at a time when generative AI has radically shifted the very sense of our educational, professional, and personal lives? These are the questions that will guide our work in this course, as we will experiment with generative AI to gain a deeper, clearer understanding of its impact on writing and our writerly identities. We will examine the role of AI during various parts of the writing process and in various genres and modes of writing in order to better assess, on the one hand, where generative AI can develop our thinking and writing in useful (and perhaps even astonishing) ways, and, on the other hand, where it requires us to think critically and ethically about its impacts on our own learning and ways of being.

Satisfies the following University Core Requirements: WRIT - Writing Intensive, WRRH-Univ Req Writing&Rhetoric

STS 24233 Philosophy & History of Medicine (3 Credit Hours)

This London Seminar focuses on The Nature of Man and the Order of the World throughout the history of philosophy and the history of medicine from Hippocrates to the discovery of DNA. It is a demanding course that is taught using primary texts and original manuscript sources available in the Museums, Libraries and Archives of London. Classes will include the analysis of texts and artifacts and site visits to The British Library, The British Museum, The Petrie Museum of Egyptian Archaeology, The National Gallery, The Wellcome Collection Library and Archives, The Royal Society of London, The Royal College of Physicians, The Science Museum London, The Old Operating Theatre Museum as well as The Gordon Museum at Guy's Hospital, London, which is one of the largest pathology museums in the world and the largest medical museum in the United Kingdom. The course will place an emphasis on the close reading of selected primary texts, supplemented by secondary specialist sources which will enable students to critically evaluate and interpret medical texts, terms, concepts, and theories in a philosophical context. It will also enable students to gain practical knowledge of how to use archival sources for philosophical research. It will give students a unique opportunity to study works of canonical philosophers such as Plato, Aristotle, the Stoics, Galen, Bacon, Boyle, Locke, and Descartes in a medical context in relation to the works of historically significant physicians, naturalists, and scientists, such as Hippocrates, Vesalius, Harvey, Burton, Willis, Newton, Darwin, Crick and Watson. This course will enable students to understand the close inter-relationship between the study of natural philosophy and the study of medicine from antiquity to the 21st century, since both are dedicated to gaining knowledge about the function of the human body and soul, the order of nature, the cosmos, and the natural world.

Satisfies the following University Core Requirements: WKSP - Core 2nd Philosophy

STS 25300 Knowledge and Power: An Introduction to Science Policy (3 Credit Hours)

In his famous farewell address, President Eisenhower warned that the partnership between science and the state that emerged after World War II had given rise to two "equal and opposite" dangers. First, with the creation of a "military-industrial complex," public policy risked becoming "captive of a scientific-technological elite." Second, given universities' growing dependence on federal funding, there was the potential "domination of the nation's scholars by Federal employment, project allocations, and the power of money." Both dangers—science's threat to democracy, and the government's threat to science—have reemerged as central points of conflict in our politics today. This course offers an introduction to science policy by exploring its historical, philosophical, and political dimensions. It will consider key historical episodes, from the invention of the atom bomb to Covid-19 pandemic, and the moral and political debates they engendered. We will take up questions of contemporary relevance, including: What is the relationship between scientific knowledge and technological and political power? What are scientists' obligations to society? Is science morally or politically neutral? What role should non-experts place in science policy? How can public policies preserve the freedom necessary for science to flourish while ensuring that scientific institutions remain democratically accountable? Satisfies the following University Core Requirements: WKIN - Core Integration, WRIT - Writing Intensive

STS 30014 Humans and Other Apes: a Modern Historical Survey from Scaliger to Peter Singer (3 Credit Hours)

One way to improve our understanding of ourselves is to compare ourselves with the animals who most resemble us, in informative, challenging and disturbing ways. In this course, we'll look at the relationship that has done most to change human self-perceptions. With a focus on Western texts and experiences, but with reference to many other cultures, we'll concentrate on the problems of how and why human attitudes to other apes have changed since the Middle Ages, and how they have influenced thinking in science, religion, politics, sociology, literature, and ethics.

Satisfies the following University Core Requirements: WKHI - Core History

STS 30021 History of Medical Sciences (3 Credit Hours)

This course is an intellectual history of western medicine. It is intended to familiarize students with the multiple explanatory problems that occur in medicine and the most important approaches to them. Its focus will be much more on medical theory and knowledge than on medical practice and institutions. The course will begin with a review the Hippocratic and Galenic heritages and early modern appeals to chemical and physical explanations of disease and of health. A middle section will explore the 17th-18th century syntheses of Sydenham, Boerhaave, and Cullen, consider the difficult problem of nosology, and examine the empiricist critique in the clinics of early nineteenth-century Paris, including the conflict between ontological and physiological concepts of disease.

The final section will examine several distinct trends in the nineteenth century: the impact of experimental physiology, the growth of clinical science, the emergence of epidemiology and tropical medicine, the rise of bacteriology, immunology, and virology; and the impact of new statistical methods. Reading assignments will be a mix of scholarly articles by medical historians and extracts from primary sources. Requirements include critical reviews of primary sources, journal, quizzes, and final exam. There are no prerequisites for the course. While some familiarity with the human body and its ailments and vulnerabilities, and some comfort with modes of biological explanation will be helpful, the course is intended for persons with general interests.

Satisfies the following University Core Requirements: WKHI - Core History

Enrollment is limited to students with a program in Science, Technology, & Society.

STS 30023 Media and Politics (3 Credit Hours)

Although the mass media is not formally part of the U.S. government, it is arguably the most powerful institution shaping public attitudes, creating and producing information, and communicating political information to individual citizens. Almost all exposure to politics comes not from direct experience but from mediated stories. And, with the rise of the Internet, the growth of 24-hour cable news, and the decline of the "Big Three" television networks has created, a more diffuse media environment has been created. The primary purpose of this course is to analyze the role of the media in American politics and its relationship with the public, government, and candidates for office in a democratic society.

STS 30111 Green Japan (3 Credit Hours)

Around 1600, Japan closed itself off for 250 years, neither importing food nor exporting people. It was, in short, an almost hermetic ecological system, and yet, instead of outstripping their natural resources, Japanese people managed to attain a level of well-being above that of most other people. Some scholars have acclaimed this era an "eco-utopia" while others point to problems with this view. This course explores the interplay between political, social, economic, and ecological forces asking whether Tokugawa Japan modeled resilience.

Satisfies the following University Core Requirements: WKHI - Core History

Enrollment is limited to students with a program in Science, Technology, & Society.

STS 30120 History of Modern Japan: From Samurai to Salarymen; From Feudalism to Fascism (3 Credit Hours)

This introduction to modern Japanese history focuses on political, social, economic, and military affairs in Japan from around 1600 to the early post-WWII period. It considers such paradoxes as samurai bureaucrats, entrepreneurial peasants, upper-class revolutionaries, and Asian fascists. The course has two purposes: (1) to provide a chronological and structural framework for understanding the debates over modern Japanese history; and (2) to develop the skill of reading texts analytically to discover the argument being made. The assumption operating both in the selection of readings and in the lectures is that Japanese history, as with all histories, is the site of controversy. Our efforts at this introductory level will be dedicated to understanding the contours of some of the most important of these controversies and judging, as far as possible, the evidence brought to bear in them.

Satisfies the following University Core Requirements: WKHI - Core History

STS 30131 Societal and Medical Issues in Human Genetics (3 Credit Hours)

It has been 20+ years since the first draft sequence of the entire human genome was published, spurring development of genetic technologies that were previously impossible, such as CRISPR genome editing. These technologies carry potential to identify, treat, or even prevent genetic conditions; at the same time, they often rely on assumptions that genes determine one's fate and are shaping contemporary ideals of health, wellness, and disability. This course will examine how genetics and genetic technologies raise a host of complicated ethical questions, such as concerns about "new" forms of eugenics and genetic determinism, the ownership and commodification of genetic material, the ethics of genetics research in marginalized communities, legislative efforts to prevent genetic discrimination, and more. We will use a case study approach, pairing examinations of the biological and technical bases of specific genetic technologies with bioethical analysis to consider costs and benefits from a variety of stakeholder perspectives. This will entail engagement with perspectives from the history of science, genetics, bioethics, genetic counseling, etc. to explore complicated questions about the relationships between genetics, research, medicine, and society.

Satisfies the following University Core Requirements: WKSS - Core Social Science

STS 30132 U.S Environmental History (3 Credit Hours)

This course is an introduction to the new field of environmental history. While many people think "The Environment" suddenly became important with the first "Earth Day" in 1970 (or a few years earlier), environmental issues have in fact long been of central importance. In recent decades historians have begun actively to explore the past sensibilities of various groups toward their surroundings and fellow creatures. They have also increasingly paid attention to the ways environmental factors have affected history. This course will range widely, from world history to the story of a single river, from arguments about climate change to the significance of pink flamingos, and will survey a number of types of history including cultural, demographic, religious, and animal. Satisfies the following University Core Requirements: WKHI - Core History

STS 30150 Decolonizing Gaming: Critical Engagement Through Design and Play (3 Credit Hours)

This course aims to change the way you think not only about the way that we play games, but also about the way that video games teach their players to behave within their digital worlds. This course will encourage students to reflect on and utilize their lived experiences as players, and utilize these experiences to locate themselves within their analysis and writing as well as their design practices. This course will undertake an intensive, interdisciplinary focus on the history of video game development, representation in video games, and the languages that digital games work in as well as decolonial theory and diverse theories of design. This class will engage with a variety of scholarly texts, video games, media posts, videos, and design exercises, in order to illustrate the ways in which video games have shaped the ways we play, think, and behave within their spaces. Students will be required to write and design around these lessons and address and push back against the problematic behaviors and colonial narratives around violence, race, gender, sexuality, and relationship to the land that these gamic languages and lessons have created.

Satisfies the following University Core Requirements: WKAL - Core Art & Literature

STS 30160 Analyzing Policy and Development in Context (3 Credit Hours)

Many approaches to policy, development, and governance emphasize universal goals and patterns. In practice, however, all policies and processes of social development unfold in specific places, at specific historical moments. In this course, we will explore a vibrant body of scholarship from multiple disciplines, called "critical policy studies," that combines social and cultural analysis with policy studies. Students will learn how to analyze global policy interventions and outcomes as the products of specific communities, cultural contexts, and historical settings. We will examine the history of core categories in policy, like "poverty," "growth," "progress," and even "development" itself. We will then use case studies to explore specific examples of how cultural and historical context shape policy interventions and outcomes. In so doing, students will learn the core methods of critical and interpretive policy studies, in order to develop valuable skills for analyzing how policies are shaped by, and act on, social life in unexpected ways.

STS 30163 Epidemics in America (3 Credit Hours)

Where were you in March 2020? When did you first learn about the COVID-19 pandemic? How has the pandemic affected your life, your community, and your world? Although many of us think of the pandemic as a singular and unprecedented event, pandemics actually have a long history in America (and around the world) and have profoundly shaped the American experience. In this course, we will study epidemics in America from the precolonial period to the present, paying particular attention to their cultural as well as biological dimensions. As we will see, disease outbreaks have influenced government policy, economic and market relations, media, popular culture, religious beliefs, and ideas about race, ethnicity, class, gender, sexuality, disability, and citizenship. Throughout the course, we will place these histories in conversation with the present, reflecting on how the COVID-19 pandemic has reshaped our nation and our world. Assignments include analytical papers, personal reflections, class presentations, and collaborative projects.

STS 30173 Video Games and the American West (3 Credit Hours)

Video Games of the American West will utilize digital games as the primary case studies to examine the modern cultural image, understanding of, and interaction with the "space" of the American West. This class will provide historical understandings of the vast, varied, and often mythologized history of the American West, as well as its place as a site of continued colonial narratives and hegemonic imagery in contemporary popular media such as film, television, and video games. Through the close-playing of a variety of Western games including installations from the Call of Juarez series, Red Dead Redemption, series, Horizon, series, and many others, students will be asked to apply their knowledge of the historical and contemporary understandings and employments of the West as a physical space and a cultural space to the visual and mechanical recreations of it within the digital realm of video games.

STS 30192 Sports and American Culture (3 Credit Hours)

Sports play a big role in American culture. From pick up soccer and the Baraka Bouts to fantasy football and the Olympics, sports articulate American identities, priorities, aspirations, and concerns. They reflect our dominant values but also highlight our divisions and serve as a means to question those values. Athletes, organizers, spectators, fans, and the media all have a stake. This course will examine sport's role in American society and culture thematically, covering the late 19th century to present and paying special attention to sport as a physical performance (including issues of danger, drugs, disability, spectatorship, and fandom), sport as an expression of identity (the construction of race, gender, class, community, and nation), sport as a form of labor (with issues of power and control, safety, and amateurism), and sport as a cultural narrative (how do writers, historians, and the media attach meaning to it?). We will examine history, journalism, documentary film, and television coverage; topics will range from Victorian bicyclists and early college football to Muhammad Ali. Requirements include reading and regular discussion, a variety of short analytical papers, and a culminating project in which students will choose one course theme to analyze through a topic of their own choice.

Satisfies the following University Core Requirements: WKHI - Core History

STS 30193 Malls of America (3 Credit Hours)

In the 20th century, the "Mall" was an indelible component of the American Dream. It was a social, economic, and cultural space that signified American prosperity alongside automobile and home ownership. However, in the 21st century, the mall is no longer the center of conspicuous consumption in the US. Instead, it has become a site of fiscal crisis, it has been dislodged from the cultural imagination, and it has firmly been replaced by Amazon and Instacart as the premier intermediaries of consumption. While its physical "ruins" have become a dystopic reminder of decline, stagnation, and obsolescence illustrating what happens when capital is injected and then forcibly extracted from the landscape. This course will examine the complex relationship between the "Mall" and American culture through popular culture, print media, digital media, planning and zoning ordinances, retail practices, and technological innovation. From the Mall of America in Minneapolis to The Grove in Los Angeles to The Galleria in Houston, the "Mall" will serve as an entry point to think about America at its current moment. Central to this course will be understanding the roles that technology, consumer culture, and capital accumulation and dispossession play in contemporary US culture.

STS 30210 US National Security Policy Making (3 Credit Hours)

This course serves as a gateway for subsequent coursework in international security. It is a required course in the Notre Dame International Security Center's undergraduate certificate program requirements, but it is also appropriate for, and open to, any Notre Dame students interested in U.S. national security policymaking. It will begin with an account of the history and development of U.S. national security policy from the Founding through the present. Next, it examines the current state of the primary institutions involved in U.S. national security policymaking. Finally, it explores the tools and instruments of military statecraft as applied by the United States. The course culminates with a simulation exercise in which students will role-play key participants in the U.S. national security policymaking process. At a minimum, that students will gain from it the analytical tools, historical knowledge, and current-events background to become more informed citizens, particularly with respect to important national debates about when and how our country should use military force. At a maximum, the course may lead some students to become interested enough in the topic to pursue a career in either the practice or the study of U.S. national security policy. The current draft version of the syllabus is posted at https://www3.nd.edu/~dlindley/handouts/ND_NDISC_cert_gateway_syl.pdf.

STS 30300 Intro. to Clinical Ethics (3 Credit Hours)

The focus of the course will be an examination of the advances in medicine over the last 30 years that have challenged traditional values and ethical norms, and the institutional processes and procedures in place that facilitate decision-making in the health care setting. It will include a sketch of the most recent advances in the various fields of medicine, followed by an examination of the clinical and ethical questions they raise and how they have affected the physician-patient relationship.

STS 30313 Indigenous Environments (3 Credit Hours)

The ancestors interrelated with the environments we live in today and will interact with in the future. This course explores indigenous cultures and perspectives on the importance of traditional knowledge and the environment. In this seminar-style course, we will learn about how indigenous groups in the Americas, both past and present, think about the world around us and how their cultural livelihoods are threatened by climate change and ongoing development. The goal is to provide students with a strong foundation in indigenous environmental issues. We will cover a range of topics that intersect with traditional ecological knowledge, land use and perceptions, reciprocity, sense of place, memory-making, and environmental justice.

Satisfies the following University Core Requirements: WKHI - Core History

STS 30320 Film and the Physician (3 Credit Hours)

This course will examine the representation of medicine in film, still art and texts. The point of view will be to examine the interdisciplinary arts, primarily film plus secondary readings of literary texts, with the goal of broadening the understanding of the lives of patients, families and providers for future health care professionals, particularly physicians. The goal is to heighten the awareness of the world surrounding medical encounters and encourage an open minded approach to people in medical need. Based on Cinemeducation training in medical schools and residency programs, topics examined include delivering bad news, end of life issues, medical malpractice, family dynamics, professionalism, cultural diversity, gender issues, grief, balance of professional and personal life and medical errors. Film clips will be introduced and reviewed with specific discussion points. Strong emphasis will be placed on group discussion, with four short papers, one discussion lead and a final paper.

Enrollment limited to students in the Science, Technology, & Society department.

STS 30330 Religion, Myth and Magic (3 Credit Hours)

Spirit possession in Africa, Catholic piety in Mexico, and mortuary rituals in Borneo could all be described as manifestations of religion. But what do we mean by the term "religion," and how might we compare different religions (and their corollaries, myth and magic) across the globe? By building upon these examples and many others, this course will help you think about religion from a comparative perspective, both across various cultures and between your own beliefs and those of others. Along the way, you will encounter and evaluate core concepts in the anthropology of religion such as purity and pollution, the sacred and the profane, ritual, sacrifice, and witchcraft. You will learn to articulate prominent theories of religion, and, by pairing foundational texts in anthropology with select case studies, you will grow in your ability to think and see as a budding ethnographer of religion.

Satisfies the following University Core Requirements: WKSS - Core Social Science

STS 30403 Talk to the Animals... and Plants, Ghosts, & AI: Linguistic Anthropology Beyond the Human (3 Credit Hours)

Models of human communication developed in linguistic anthropology have long relied on empirical analysis and cross-cultural comparison of how people talk to other people, and to a variety of non-human "persons" as well. This course examines how anthropologists study communication between humans and non-humans, and how communication helps make persons out of non-humans. The class concerns research on seances and related scenes of spirit possession where the dead speak, talking with animals whether pets or prey, learning spiritual lessons from teacher plants, and contemporary conversations people have with artificial intelligence language models. We compare how anthropologists have asked questions about personhood when considering speech across species boundaries or across divides such as life and death. We ask how communication constructs interlocutors and makes relationships possible, and we consider the commonality and variety among communicative approaches and tactics. We ask if communication with non-humans connects people to other worlds of experience, or if it is more instructive as a projection of our own social life onto others.

STS 30405 Compassionate Care in Medicine (3 Credit Hours)

This course is designed to provide the theoretical and practical foundation to providing compassionate care in the medical professions. It will provide an introduction to the field of Caring Science and provide the behavioral and attitudinal components to providing effective patient care as well as teaching how practitioners can be balanced in providing patient care. Topics include Caring Science theory, clinician burnout, compassion fatigue, maintaining caring in the encounter with suffering, and physician self-care. While designed specifically for the future medical professional, the course is open as enrollment allows to students in allied helping professions. Class material will include research from medical, psychological, caring science, business, and spiritual sources. Enrollment limited to students in the Science, Technology, & Society department.

STS 30408 Global Environmental Issues & Policy (3 Credit Hours)

Fracking, Water Wars, Deforestation of the Amazon, Droughts, Global Warming, Climate Change, Unsustainable Agriculture, Hurricanes, Pollution, Species Extinction, Invasive Species, Poaching, Overfishing, Depletion of Fossil Fuels, Overpopulation, Wastes, Ocean Acidification, Wildfires, Oil Spills, Overconsumption, Land degradation - the list goes on! These complex environmental problems are occurring constantly and rapidly; their consequences are global in scope and transcend national boundaries; and they embody the complex relationship between humans and the natural environment. This course is about developing an interdisciplinary understanding of the relationship between humans (society) and the environment. We will examine the historical and contemporary environmental challenges of global concern, the underlying role of humans, and attempts by society to address, mitigate, and adapt to such complex problems through policies, institutions, and governance. We will pay attention to the roles of different state and non-state actors in environmental policy making. Overall, students will draw from both the social and natural sciences to develop a deeper understanding of how society - through consumption, culture, politics, power, ethics, values, economic growth, location, etc... contribute to, or solve, environmental problems.

STS 30456 From Humors to Hysteria: Human Political Bodies in European History, 1517-1918 (3 Credit Hours)

Between the early rumblings of the Reformations and the last cannon shot of World War I, Europeans profoundly changed how they conceptualized bodies as experience and metaphors. During these four centuries, Europeans grounded the ways in which they interacted with each other and the world in bodily imaginings. On an individual level, the living, human body provided a means of accessing and understanding the material or spiritual world. On a collective scale, the physical body, its adornments, and its gestures provided markers that Europeans used to fracture society along axes of gender, sexuality, class, race, mental aptitude, and even sacralty. Drawing in part from their myriad imaginings of the human body, Europeans constructed metaphorical political bodies. The body politic assumed diverse forms spanning from divine right monarchs to revolutionary republics to modern nation states. Our course will lay bare the human body as culturally constructed, while fleshing out how Europeans' evolving visions affected political imaginings. Satisfies the following University Core Requirements: WKHI - Core History

STS 30461 History of Television (3 Credit Hours)

Television has been widely available in the United States for only half a century, yet already it has become a key means through which we understand our culture. Our course examines this vital medium from three perspectives. First, we will look at the industrial, economic and technological forces that have shaped U.S. television since its inception. These factors help explain how U.S. television adopted the format of advertiser-supported broadcast networks and why this format is changing today. Second, we will explore television's role in American social and political life: how TV has represented cultural changes in the areas of gender, class, race and ethnicity. Third, we will discuss specific narrative and visual strategies that characterize program formats. Throughout the semester we will demonstrate how television and U.S. culture mutually influence one another, as television both constructs our view of the world and is affected by social and cultural forces within the U.S.

Satisfies the following University Core Requirements: WKAL - Core Art & Literature

STS 30482 Earth, Water, Air, Fire: Art, Ecology, and the Environment (3 Credit Hours)

Building on recent ecocritical approaches to the discipline of art history, this course will explore human-environmental relations and changing ideas about the natural world from the industrial revolution to the present. Structured around four elemental modules and drawing on a diverse range of visual media including scientific 'specimen' prints, Romantic landscape paintings, contemporary photography, and installation art (with works by J.M.W. Turner, Thomas Cole, and Edward Burtynsky), we will discuss natural history, landscape gardening, and land art (earth), global maritime trade, colonial expansion, and its visual culture (water), climate and disease (air), and the impacts of industrialisation and the burning of fossil fuels (fire). Major themes will include interactions between science and art, the global movement of people, ideas, flora, and fauna through colonial networks, developments in environmental theory, indigenous perspectives, materiality (especially as it relates to natural resources), and art as a form of critical intervention. This course will include visits to the Raclin Murphy Museum of Art, the Museum of Biodiversity, and Rare Books and Special Collections. Finally, the course will introduce students to the discipline of art history and its knowledge-making techniques.

Satisfies the following University Core Requirements: WKAL - Core Art & Literature

STS 30493 Policy Lab: National Security (1 Credit Hour)

This course explores the myriad of national security policy challenges facing the United States and the policy options to address these challenges. The course will explore security issues with Russia, China, Iran and North Korea as well as climate change, global health/pandemics, cyber threats/security and terrorism/extremism. The course will include lectures by policy experts and student engagement with these experts to explore policy options and their potential for success. Students will conduct research of primary source policy documents to develop a policy memorandum for the US National Security Council that will outline a policy challenge for the United States and recommend policy options for consideration.

STS 30550 Foundations of Global Health (3 Credit Hours)

Over the last two decades, there has been a groundswell of interest in global health across multiple disciplines and professional fields. The field of global health recognizes the multidimensionality of health as well as the interconnectedness of everyone living in the world today; its primary goal is to eliminate health disparities to achieve health equity for all. This course will provide foundational knowledge necessary to understand what global health is today; its history and evolution; how social theory contributes to understanding specific global health problems; the importance of understanding health and designing interventions by using a biosocial model that includes a myriad of cultural, social, political, economic factors; and an understanding of the role of various actors on the global health stage including international, bilateral, and civil society organizations.

STS 30553 Social Entrepreneurship and Innovation (3 Credit Hours)

Social Entrepreneurship has sparked dialogue and debate for two decades. Its very definition is much debated, as well as its capacity to create sustainable, scalable, systems-changing impact. This course explores the theoretical concepts, practices and strategies associated with the dynamic discipline of social enterprise and innovation. For our purposes, social entrepreneurship is the landscape, of which paradigm-shifting solutions like microfinance, MSME (Micro-Small-Medium Enterprise) development, bottom of the pyramid, fair trade, impact investing, and the like, are components. This course will study many of these concepts, focusing on their opportunity for social impact, and as a vehicle for wealth creation in vulnerable and disenfranchised communities across the globe. Further, the course covers examples of various social enterprise models (for-profit, non-profit, hybrid), requiring students to analyze and devise strategies to improve the efficacy of these ventures. Finally, the course engages students in research seeking to advance the field of social entrepreneurship at the Keough School of Global Affairs and Notre Dame.

Enrollment is limited to students with a program in Strategic Management.

STS 30555 Human-Centered Design for Social Innovation into AI (3 Credit Hours)

This course introduces the foundational theories of human-centered design (HCD), its critiques, and the subsequent development of design principles, followed by a practical, hands-on exploration of HCD methods. It approaches design as a broadly applicable practice across multiple domains, including – but not limited to – social innovation and computing for social good. The course is organized into four modules. The first module examines the foundations of HCD, its critiques, and its evolution toward community-driven, value-aligned, and justice-oriented approaches. The next two modules provide hands-on experience in design research, prototyping, and reflection, where students learn to integrate technical, ethical, and social insights into actionable design strategies. In the final module, students will address real-world design challenges drawn from domains such as global development, sustainability, and public policy. The course welcomes students from the social entrepreneurship and innovation minor, global affairs, computer science and engineering, poverty studies, business, public policy, science-technology-values, and peace studies who are interested in designing for social impact.

STS 30558 Women and Health in Global Context (3 Credit Hours)

This course is designed to introduce students to a wide range of health issues affecting women globally, with particular emphasis on Africa, Asia, and the United States. The topics will focus on a woman's life, from infancy and childhood, through adolescence and reproductive years, to old age. We will examine the physiological, social, psychological, economic, cultural, political, behavioral, and environmental factors that influence women's health, and the role of poverty, discrimination, and unequal health access. Topics such as determinants of women's health, reproductive health, sexual health, cardiovascular health, maternal health, cancers of the reproductive tract, mental and emotional health, substance use and abuse, and various forms of violence against women will be discussed. At the end of the course, students should have a solid grasp of key issues affecting the health of women in different cultural contexts globally, and how women can be empowered to take actions that positively influence their health.

STS 30565 Health Economics (3 Credit Hours)

This course examines how economic analysis can be applied to various components of the health care system. Microeconomic theory is used to understand the operation of health care markets and the behavior of participants (consumers, insurers, physicians, and hospitals) in the health care industry. International comparisons and the role of the public sector are discussed.

STS 30570 Technology and Justice (3 Credit Hours)

Explore the responsibility inherent in using, creating, and developing new technology. Students will begin with the following questions: What is justice? How does Technology promote or reduce justice? Does it do both? We will engage these questions through ancient frameworks such as the thinking of Plato and through modern frameworks outlined in Catholic Social Teaching. We then turn to the question of what scientists and engineers owe their creations, which we address through engaging with the classic literary work, *Frankenstein*. Finally we will look into the relationship between technology and economy through the lens of community. We will ask how we actually create meaningful change and what systems are at play. We will read the work of technology ethicists and economists as well as moral theologians. Technologies and economies work together and against each other to create community; we will explore how to create and promote a just future.

Satisfies the following University Core Requirements: WKCD-Core Cathol & Disciplines

STS 30605 Education Law and Policy (3 Credit Hours)

This course focuses on selected legal and policy issues related to K-12 education in the United States. A central theme is the intersection of K-12 schooling and the state, with a particular focus on Constitutional issues of religious freedom and establishment, student speech and privacy, parental choice, educational opportunity, and education reform trends such as charter schools and accountability measures. Questions examined over the course of the semester include: What are the most basic obligations of the state with regard to its regulation of K-12 education? What are the most basic rights of parents in this regard? In what ways does the 1st Amendment protect - and limit - the speech and privacy rights of K-12 schoolchildren? In what ways may the state accommodate K-12 schools with an explicitly religious character? What are the Constitutional requirements with regard to religious speech or expression within K-12 public schools? To what degree is the principle of equality manifest in the form of educational opportunity? How has this changed over time? In what ways have education reform trends such as charter schooling and increased accountability changed the policy landscape of K-12 education?

STS 30627 History of the American West (3 Credit Hours)

Few American regions have generated as many cultural narratives, myths, and icons as the American West. Exploring conflicts and conquests alongside Western culture and the creation of the mythic West, we will examine the West through the multiple perspectives of the many peoples who have lived there. Using novels, histories, first-hand accounts, art, and film, we will trace the history and culture of the West. While discussing the evolution of the West's regional identity, we'll explore topics like episodes of violence and conquest, the creation of the US-Mexico border, the rise of national parks and tourism, and the West Coast's counterculture. In this course, we will investigate how violent frontier battles and brutal discrimination became tamed and commodified to sell the West to Americans through fashion, film, and tourism. This course is open to all students; no previous knowledge of the topic is required. Satisfies the following University Core Requirements: WKHI - Core History

STS 30634 Crime, Heredity and Insanity in America (3 Credit Hours)

This course gives students the opportunity to learn more about how Americans have thought about criminal responsibility and how their ideas have changed over time. Historians contend that the 19th century witnessed a transformation in the understanding of the origins of criminal behavior in the United States. The earlier religious emphasis on the sinfulness of all mankind, which made the murderer into merely another sinner, gave way to a belief in the inherent goodness of humankind. But if humans were naturally good, how are we to explain their evil actions? And crime rates varied widely by sex and race; European women were said to have been domesticated out of crime doing. What do those variations tell us about a common human nature? The criminal might be a flawed specimen of humankind born lacking a healthy and sane mind. Relying in part upon studies done in Europe, American doctors, preachers, and lawyers debated whether insanity explained criminality over the century and how it expressed itself in different races and sexes. Alternative theories were offered. Environment, heredity, and free will were all said to have determined the actions of the criminal. By the early 20th century, lawyers and doctors had largely succeeded in medicalizing criminality. Psychiatrists now treated criminals as patients; judges invoked hereditary eugenics in sentencing criminals. Science, not sin, had apparently become the preferred mode of explanation for the origins of crime. But was this a better explanation than what had come before? Can it explain the turbulent debates in the late 20th and early 21st Centuries over variations in crime rates by race? Can it explain why men, not women, are still more likely to commit murder?

Satisfies the following University Core Requirements: WKHI - Core History

STS 30635 Drunk on Film: The Psychology of Storytelling with Alcohol and its Effects on Alcohol Consumption (3 Credit Hours)

Alcohol Use Disorder is a chronic relapsing brain disease. But when presented on screen, it's entertainment. Why do we laugh, why do we cry, why do we emulate fictional characters whose drinking habits result in a life of debilitating addiction? From James Bond to Jonah Hill, the psychology and seduction of alcohol on film, television, and online will be analyzed. Furthermore, what is the relationship between the manner in which alcohol use/abuse is presented on screen and the manner in which alcohol is used and abused on, for example, college campuses? Surveying recent film history, we will examine how alcohol is used in story structure, as a character flaw or strength, and as a narrative device in the story arc of films across multiple film genres, (teen rom-coms, sports films, etc). Why do characters drink, where do they drink, and how does the result of their "getting drunk" advance the narrative? We'll also look at non-fiction media that tackle issues of addiction, as a way of comparing character development in fictional films to the results of this same behavior in everyday life. Film materials will include weekly screenings outside of class, and academic articles relating to the portrayal and analysis of alcohol use in film and television, including the business of marketing alcohol from social media to televised sports. From the psychological perspective we will discuss the topic and process of social influence and how the presence of others influences our behavior. Questions of interest will include the following: what are the mechanisms by which group influence unfolds? How and why might we be persuaded? Does the manner, and if so how, in which alcohol use is portrayed in movies and the media reflect the processes and principles of social influence? Readings will include chapters on social influence, persuasion and academic articles evaluating the manner in which alcohol is portrayed and advertised and the effect this has on alcohol consumption. In addition, issues of addiction will be discussed - from understanding the basis of addiction to examining the efficacy of addiction treatment.

Satisfies the following University Core Requirements: WKIN - Core Integration

STS 30659 Space Ethics: Creation, Commerce, Colonization (3 Credit Hours)

The journeys of human beings into space have captivated the imagination but have also raised significant ethical issues. As the human presence in space for research, recreation, commerce, and possible future habitation becomes more frequent and the goals of space exploration more clear, the urgency of addressing the ethical issues surrounding the human presence in space has also increased. This course begins with an examination of theological understandings of the origin and meaning of the cosmos across a number of different religious traditions, with a particular focus on Christian theological account of creation. The second part of the course reviews the various ways that human beings have approached and are considering the human presence in space, including lunar exploration, commercial exploitation, and possible habitation. The third part of the course considers the ethical issues associated with space commerce, and the course concludes with a comparison between past sublunary colonizations and as-yet-unrealized space colonizations. Satisfies the following University Core Requirements: WKCD-Core Cathol & Disciplines

STS 30668 The History of Energy in Modern American Life (3 Credit Hours)

This course will offer students a rigorous and lively encounter with multiple energy sources and their manifold effects on American society, from the mid-nineteenth century to the present. Recent political developments in the US offer plenty of reasons for a course of this sort, one that can contextualize contemporary debates over energy-related matters such as global warming, national security, federal regulation, and sustainability in broad sweeps of change over time. Yet the primary goal of this course will be to provide a history of energy on its own terms. One Cannot grasp the complexities and entanglements of modern life in its entirety without first coming to terms with the ways humans demand, consume, and interact with energy - and in turn, the ways it shapes and reshapes our social structures, realigns our lived and material infrastructures, and even dictates cultural values and trends. We will interrogate these values and structural outcomes with the help of path-breaking scholarship - books and articles about coal, petroleum, electricity, and nuclear energy that not only chart their development over time, but also reveal the ways in which, at key junctures in the nation's past, they forged new patterns of labor and race relations, corporate and community growth, state governance and land-use policy, gender and religion, regional growth and America's global reach. Moving from the Civil War to the present, from the oil patches of western Pennsylvania and West Texas to American petroleum sites in the Middle East - from the electrification of east-coast cities in the late nineteenth century to the damming of western rivers for hydropower in the early-twentieth, this course will give students the opportunity to ponder past and present energy systems within prisms of vast societal impact.

Satisfies the following University Core Requirements: WKHI - Core History

STS 30672 Social History of American Medicine (3 Credit Hours)

This seminar explores the dynamic and complex history of medicine in the United States, from colonial times to the present, with a focus on how race, gender, class, and geography have shaped medical practices, healthcare institutions, and public health policies. Medicine in America has never operated in a vacuum? It has both shaped and been shaped by broader social structures. The course critically examines how medical authority was established and legitimized, often at the expense of marginalized communities, and how those communities have responded and resisted.

Satisfies the following University Core Requirements: WKHI - Core History

STS 30703 Digital Abstinence (3 Credit Hours)

Digital technologies present many opportunities for people to work, play, and find community online, but there is a persistent desire to unplug and avoid the ire of social media, information overload, and mass surveillance. Abstaining from technology involves actively assessing how a given tool may enhance, detract from, or reconfigure one's values, whether that be for reasons of privacy, health and wellbeing, leisure, community, or others. This will look different depending on the context: the traditional lifestyle of Amish communities, the neo-luddism movement, Catholic contemplative practices, and "digital detox" trends each have something unique to say about the potential to abstain from technology (even if only temporarily or unsuccessfully in some cases). How do we identify when a tool is working for or against our needs? What are some strategies to reclaim mindfulness and agency over the barrage of social media and generative AI? What are the potential affordances of making more attention in non-digital spaces? At the same time, is it possible to develop an ethical stance on refusal when we are living in a digital society that appears nearly impossible to disconnect from? This course will explore perspectives from human-computer interaction, media studies, philosophy, theology, and psychology on what it could mean to rethink digital engagement not as a default but a deliberate choice. Students will be asked to complete oral and written communication assignments and engage in debates and discussions about the topics at hand.

STS 30750 Generative AI in the Wild (3 Credit Hours)

Generative AI is a form of computing in which computer systems generate media such as text, images, sound, video, or combinations based on prompts or other information provided to the computer. These systems, including, but are not limited to, ChatGPT, Midjourney & DALL-E, have been evolving rapidly and have led to extreme excitement, confusion, and fear. This course provides a survey of how to understand and use a number of these tools including explorations in prompt engineering as well as addressing issues from across the liberal arts including artistic, economic, social/psychological, educational and legal concerns and opportunities.

Satisfies the following University Core Requirements: WKIN - Core Integration

STS 30802 AI Ethics and Society (3 Credit Hours)

In the last decade, the field of artificial intelligence (AI) ethics has been receiving significant attention in academic, professional, and public discourses. AI ethics research not only faces and attempts to counter a variety of sociotechnical issues relating to algorithmic decision making, mis/disinformation, and fairness, accountability and transparency, but also must reckon with broader social, political, and economic forces. To engage with these conversations, this course will introduce modern AI and technical aspects of predictive systems, discuss the underlying social and political assumptions of AI development, analyze current and future impacts of AI on humanity and the environment, and consider the significance of these conversations in everyday terms. Through the lens of AI ethics discourse, students will learn to analyze persuasive arguments, describe genres, norms, and values of communication, and understand concepts including perception, expertise, meaning making, and responsibility. Students are asked to complete oral and written communication assignments, engage in debates and discussions, and participate in experimental research-creation workshops to think critically about the AI ethics issues at hand.

STS 30835 Poverty, Business & Development (3 Credit Hours)

The course adopts an entrepreneurial perspective in exploring the role of business in helping to address the poverty challenge in developing and developed economies. The multi-faceted nature of poverty and its implications when it comes to business and entrepreneurship are explored. Attention is devoted to venture creation as a pathway out of poverty, and to how the larger business community can be leveraged in poverty alleviation efforts. Students will examine case studies and meet low income entrepreneurs.

STS 30857 Fiction Writing: For Our Times (3 Credit Hours)

In her book, *The Art of Death: Writing the Final Story*, Edwidge Danticat states that "we are all living dyingly." The concept of death and/or dying is part of our collective and shared experience. It presents us with the larger possibilities on how to live, how to experience, how to persevere, and how to change. In this course we will examine the politics of trauma, disaster, and memory. We will read across genres in fiction, essays, and poetry in order to write work that contemplates memory as a locus for resilience. We will look at how writers are grappling with some of the more pressing issues of our time i.e., climate change, natural disaster, femicide, colonialism, war, among others. Students will write prose that looks to redress what it means to "live dyingly."

Satisfies the following University Core Requirements: WKAL - Core Art & Literature

STS 30900 Foundations of Sociological Theory (3 Credit Hours)

Sociological theory is the foundation of sociology. Students in this course will learn two things: first, what theorists do and why and, second, how to use fundamental theoretic concepts - such as exploitation and alienation, social structure and solidarity, bureaucracy and charisma - to analyze and explain contemporary society.

Satisfies the following University Core Requirements: WRIT - Writing Intensive

Enrollment is limited to students with a program in Science, Technology, & Society.

STS 30902 Methods Sociological Research (3 Credit Hours)

Sociology 30902 is designed to provide an overview of research methods in the social sciences. Topics covered include (1) hypothesis formulation and theory construction; (2) the measurement of sociological variables; and (3) data collection techniques - experimental, survey, and observational. At the end of the course, students should appreciate both the strengths and the limitations of sociological research methods.

STS 30905 Financing Social Impact (3 Credit Hours)

This course examines the financial and economic tools that support sustainable solutions to social challenges, with a focus beyond traditional government aid and philanthropy. Students will explore the rapidly expanding fields of impact investing and microfinance, evaluating their roles in advancing social entrepreneurship, broad-based wealth creation, and equality of opportunity. Topics include emerging approaches to microcredit, the benefits and limitations of financial innovations, and the role of public policy in fostering effective initiatives. Through a combination of case studies, critical analyses, and applied projects, students will engage directly with real-world challenges such as poverty alleviation and inclusive economic development. No prior background in business or finance is required; the course is designed for students from all disciplines who bring curiosity, creativity, and a commitment to social problem-solving.

STS 30910 Experience of Conquest: Native Perceptions of Relations with Spaniards (3 Credit Hours)

The aim of this class is to try to understand what conquest, as we have traditionally called it, meant to the people who experienced it in some parts of the Americas that joined the Spanish monarchy in the sixteenth century. We'll concentrate on indigenous sources - documentary, pictorial, and material - and try to adopt the indigenous point of view, without neglecting sources mediated by Europeans. Although the class will concentrate on selected cases from Mesoamerica, the lecturer will try to set the materials in the context of other encounters, both within the Americas and further afield; and students will be free, if they wish, to explore case-studies from anywhere they choose in the Americas (in consultation with the lecturer and subject to his approval) in their individual projects.

Satisfies the following University Core Requirements: WKHI - Core History

STS 30950 World Economic History Since 1600 (3 Credit Hours)

The difference between rich and poor nations is not, as Ernest Hemingway once said, that the rich have more money than the poor, but is in part because the rich produce more goods and services. Industrialization, in other words, has often brought wealth (as well as social dislocation and protest) to those who have succeeded. This course examines the process of industrialization from a comparative perspective and integrates the history of industrialization and its social consequences for Western Europe (Britain and Germany), the United States, Latin America (Mexico), and East Asia (Japan and South Korea). We will concentrate on these countries' transition from agriculture-based societies to industrial societies. We will analyze the process of industrialization on two levels from above the role of political authority and from below a view of factory life, industrial relations, and protest from the perspective of workers and the working classes. No specific prerequisites in history or economics are necessary.

Satisfies the following University Core Requirements: WKHI - Core History

STS 30986 Technology and the World We Inherit: A Global History (3 Credit Hours)

This class examines the history of engineering in the late 19th and early 20th centuries and its relationship with capitalism and development on a global scale, with the use of digital tools. Engineers came to design, implement, and manage nearly all elements of the modern world from their positions within corporations and state bureaucracies; they quickly became the primary agents in development in the 20th century. We will examine the history of engineering, introduce students to basic tools in data science, digital humanities, and data visualization, and students will develop data-intensive research projects using the skills they have learned. The class is designed for students from both Arts & Letters and STEM disciplines as a window onto historical methods and an introduction to using qualitative data for analysis and data visualization. There are no prerequisites. This course emerges from a three-year NSF-funded research grant to the instructors, which includes a commitment to develop new undergraduate courses on the subject and the development of open access course materials. Student projects from this course are eligible for inclusion in our global dataset and for hosting on the project website.

Satisfies the following University Core Requirements: WKHI - Core History

STS 33333 Design Anthropology (3 Credit Hours)

As an emergent field of ethnographic theory and methods, design anthropology involves talking to people, figuring out what they want, and creating ways to improve our shared lives. These practices are focused on developing ideas and forms based on people's needs while anticipating conscious practice and considerate use. Design anthropologists create potentials for future selves, anticipating projected needs and transcending potential limitations. This seminar introduces the emerging phenomenon and ongoing merger of the anthropology of design. It integrates sources in design anthropology, ethnographic design, cultural marketing, and other applied methodologies. We will engage with theoretical discussions, analytical approaches, practicing exercises, and portfolio development to explore the holistic depths of this nascent field.

STS 33634 Data Visualization, Society, and Student Learning (3 Credit Hours)

Students in today's information age are consuming greater amounts of quantitative information on a daily basis than ever before. This information comes in many forms and typically involves large data sets that tell "number stories" such as social media activity, politics, global health concerns, and educational achievement. How those number stories are displayed, numerically, text narrative, or graphically holds both power and peril. In this course, we will consider the evolution of visual displays of quantitative information, analyze the characteristics of visualizations, and explore the ways in which the interaction between data and design influence the communication of a number story. These ideas will be investigated through the lens of societal issues and student learning.

STS 33950 Appalachia (1 Credit Hour)

This course is designed to introduce students to the cultural and social issues of the Appalachian region - its history, people, culture, challenges, and strengths - through study and experiential learning. The course also provides engagement with the people of Appalachia through a required immersion over Break. The Appalachia Seminar utilizes a Catholic Social Tradition (CST) framework to build skills around social analysis, critical thinking, and theological reflection. Students examine the relationship between solidarity and service and consider how the Common Good is expressed in local communities across the region. This course has a fee.

STS 35636 Wild Kingdom; Animals in North American History (3 Credit Hours)

Animals are everywhere in North American history. From the living room to the back alley, animals created history on their own and with humans help. Steeds bore generals into battle while rats bore fleas with diseases that flattened armies. This course will introduce students to animal studies and offer them a sampling of the manifold ways non-human creatures drove economies, shouldered burdens, entered families, and entertained audiences. The topics covered in the class will include co-evolution, the fur trade, people eating animals and animals eating people, pet keeping, animal symbolism, and endangered species. The course invites students to see North American history anew through the eyes of a race horse, a sled dog, a passenger pigeon, a grizzly bear, or a field mouse.

Satisfies the following University Core Requirements: WKHI - Core History

STS 35850 History of the Space Race (3 Credit Hours)

This course is an upper-level history seminar aimed at exploring the history of space flight from political, military, diplomatic, technological, and cultural perspectives. It begins with works of imagination - like Jules Verne's 'From the Earth to the Moon' - that inspired the early generation of rocket scientists, like Konstantin Tsiolkovsky and Robert Goddard. It then traces how the military utility of modern rockets, first mass produced for use as a weapons system in the First World War, turned the new science into a key strategic competition between Germany, the Soviet Union and the United States in the 1930s. From Germany's V-2 rocket program to the missile race of the 1950s, the course then explores the strategic impetus behind the highly militarized space competition of the early Cold War. Following the success of Apollo, the strategic aims and goals shifted, and resources drained away from the American and Soviet space programs; readings will then explore the role of spaceflight in intelligence gathering and science diplomacy. Following the Cold War, competition in space seemed to be at an end, but the privatization revolution and growing strategic competition with China and Russia have given birth to a new space race, with targets including the Moon and Mars. In sum, students will address the key question: why space? How has the human imagination, technological change, and strategic necessity driven humanity into orbit, to the moon, and beyond? Satisfies the following University Core Requirements: WKHI - Core History

STS 40105 Future of Labor (3 Credit Hours)

The new wave of technologies, such as robotics and AI, will have long-lasting impacts on the labor market. Jobs will be displaced, new tasks created, different skills demanded, teams reshaped, and new management practices will emerge. Organizations and the broader economy will also change. These technologies may benefit and disadvantage workers unevenly, potentially increasing inequality. Education and training systems, along with the institutions that support them, must adapt. At the same time, demographic challenges driven by aging populations and declining fertility will significantly affect labor. How will these forces shape the future of work, and how should we prepare for them? How might the meaning of work evolve, and what policies will be needed to ensure the dignity of workers? We are entering a new era of increasing uncertainty regarding labor and work. Addressing these challenges requires a holistic understanding. This course will be interdisciplinary—grounded in economics but also drawing on insights from history, philosophy, public policy, computer science, and related disciplines. The goal of this course is to provide students with a framework for understanding and analyzing how new technologies like robotics and AI are affecting and will affect the labor market. Students will (1) read and discuss both economics and less quantitative materials, (2) conduct original research by collecting and analyzing data on the labor market, and (3) experiment with AI agents to gain firsthand experience of the future of work. Ultimately, students will develop perspectives on how cognitive and physical AI may impact jobs, occupations, income distribution, and social institutions. They will also consider how education, training, and redistribution policies can help mitigate the disruptions created by technological change.

STS 40113 Climate and Environmental Justice (3 Credit Hours)

"Climate and Environmental Justice" is a lecture- and discussion-based class primarily targeted at undergraduates. It is designed to introduce you to the core and crucial concepts of climate justice and environmental justice, with a particular emphasis on existing legacy injustices and the injustices we are currently creating as environmental pollution, climate change, and human systems interact. We will discuss existing patterns of burden, inequality, poverty, and threats to human dignity, and discuss opportunities and mechanisms to repair and avoid injustice. In particular we will discuss environmental injustice as a widely experienced but largely localized experience of disproportionate burden (e.g., on the basis of race and class) associated with extraction, industrialization, and non-greenhouse gas environmental pollution, alongside climate injustice as a global and emergent phenomenon of severe and disproportionate impacts from climate change. We will address concepts of reparations and remediation, as well as governance and other strategies for enacting justice. We will also address links between climate and environmental justice with related movements focused on adaptation, energy, housing, transportation, health, and land. Our focus will be both domestic and international, with attention directed to power dynamics, vulnerabilities, and opportunities for corrective action. Climate change and the energy transition will be major themes given their deep relationship with both climate and environmental justice, particularly as processes of industrialization and deindustrialization associated with decarbonization proceed. Overall, the course will focus on patterns, drivers, and opportunities for corrective action associated with severe injustices associated with climate change and environmental burden.

Satisfies the following University Core Requirements: WKIN - Core Integration

STS 40221 Cybercrime and the Law (3 Credit Hours)

Almost all crimes, or even human interactions, contain a digital component. The fact that "old" laws don't always fit "new" problems is no more apparent than in the area of cybercrimes. This course will include discussion of topics including: the methodology of typical cyber investigations, the application of the Fourth Amendment to digital evidence, and different types of cyber-specific laws enforced today. The course will also focus on the responses of both courts and legislators to the ever-evolving issues presented by computer crimes.

STS 40222 Measuring Sustainability: Life Cycle Assessment for Policy and Practice (3 Credit Hours)

"Life Cycle Assessment" is a lecture- and practicum-based class primarily targeted at graduate students. The class is designed as a once-per-week session where we will spend about half the time on lectures and the other half on hands-on activities to practice LCA. The class is designed to introduce you to Life Cycle Assessment as a method for evaluating environmental, and social impacts of products, policies, systems, and services, with a focus on International Standards Organization (ISO)-compliant LCA. We will primarily be using OpenLCA, with some exposure to alternative tools. This course will particularly focus on LCA practice in the context of policy development, with emphasis on LCA's role as a decision support tool. We will address the implications of LCA and related methods being increasingly required in policy contexts (e.g., for prioritizing grant recipients and allocating tax subsidies). We will also address the challenges associated with disparities in the maturity of various life cycle methods, most notably social LCA in comparison to environmental LCA and life cycle costing. We will evaluate published LCAs in forms like Environmental Assessments and Environmental Impact Statements, and also investigate the use of life cycle thinking and LCA for Environmental Product Declarations. The course will also emphasize the role of LCA in the energy transition, particularly given LCA's strong role in greenhouse gas accounting, and explore how both technological and climate dynamics pose challenges for LCA practice. This course is primarily a methods course, and we will work through case studies and examples together both in and out of class, with a topical emphasis on energy, buildings, and climate due to LCA's particular relevance in those areas.

STS 40300 Digital Commons (3 Credit Hours)

From the late 1960s debates on environmental degradation and overpopulation to the present concerns with sociotechnical and climate change, the "commons" has returned as a key symbol for social analysis, political organizing, and collective resource management. Since then, various currents have claimed and reclaimed the concept under the guide of "communality," "conviviality," and "common-pool resources" as concrete alternatives to public and private modes of governance of tangible and intangible goods. In the past two decades, the concept has been central for the discussion of the "digital commons" with decentralized, community-based governance of information production and sharing. In this seminar, we will map out the key definitions of the "commons" with a focus on the introduction of algorithmic forms of governance. This course will be organized as a seminar for the study of concepts, case studies, and methodological approaches for the study of the digital commons. We welcome students working on Internet-based research and Free and Open Source technologies as well as climate change, conservation, and sustainability to join the seminar.

STS 40470 Zoom Talk Chat Insta Sing Read Write Chat: Modalities and Media of Interaction (3 Credit Hours)

In this class we analyze the many modes of human interaction, from our original invention/discovery of spoken language, to the invention of writing, to telegraphy, telephony, radio, movies, television, and the Internet, smart phones, and social media. We examine the affordances of each medium and modality, and develop tools to understand the ones that aren't even here yet. We draw on linguistic anthropology, biological anthropology, linguistics, cognitive science, psychology, sociology, conversation analysis, media studies, and communications.

STS 40511 Ethics of Data Analytics (1.5 Credit Hours)

Data-informed decision making has created new opportunities, but also expands the set of possible risks to organizations. One of these risks comes from grappling with the "should we?" question with regard to data and analytics, and associated concerns with identity, privacy, ownership, and reputation. In this course, we will explore several frameworks to address the issues related to the proper roles of public law, government regulation, professional codes, organizational approaches, and individual ethics in performing and managing analytics activities. The course will cover applicable theory and guidelines, and also make use of case studies. Upon completion, the student should be comfortable adapting one of these ethical frameworks for use in alignment with their organizational mission.

STS 40628 God, Science and Morality (3 Credit Hours)

The study of morality has been judged "one of the hottest topics in the life sciences." Scholars working in fields like evolutionary biology, paleoanthropology, primatology, evolutionary psychology, child psychology, social psychology, social neuroscience, and biomathematical modeling now routinely release accounts of the biological "origin" or "basis" of morality. Many authors of such studies claim that their findings either invalidate or make obsolete religious views of morality. This course will provide you an occasion to investigate the work of several scientists who advocate "biologizing" the study of morality as a way of de-theologizing the subject. I will equip you to place this endeavor in historical context, to evaluate its empirical and philosophical warrants, and to incorporate its valid aspects in moral theology. This course therefore promotes Notre Dame's mission of exploring how Christian thought "may intersect with all the forms of knowledge," including the sciences.

STS 40698 Contemporary Concerns in Medicine (3 Credit Hours)

This seminar examines a number of important topics in medicine and society today, including shared health responsibility, race and class-based inequities, vaccinations, opioid crisis, beginning and end-of-life care, organ donation and body modification, health of imprisoned populations, mental health of healthcare providers, and health in the age of social media. Students in this class will gain an understanding of the ethical, social, and practical dimensions of a variety of healthcare and health policy issues and how providers navigate these dimensions in their care. A key part of the class is the opportunity for students to engage directly with healthcare workers who will serve as guest speakers. The seminar will emphasize writing and journaling, and will directly integrate matters of health care with broader humanistic and social science approaches to health, wellbeing, the body, etc. to deepen students' understandings of what medicine is. This is a core course in the Health, Humanities, and Society minor.

Satisfies the following University Core Requirements: WRIT - Writing Intensive

STS 40707 Lies, Damn Lies, & Statistics: Quantitative Methods for Anthropology (3 Credit Hours)

This course provides an intensive introduction to statistical methods of use for anthropological research. It will examine why and when to use quantitative methods, and how such methods can be incorporated into a holistic anthropological research design. Topics covered include probability theory, and parametric, non-parametric, and Bayesian principles of hypothesis testing, data ordination, and methods of analyzing non-independent data, including network analysis. All course work will be undertaken using free statistical packages available through the R programming language. No prior mathematical or programming experience is needed.

Satisfies the following University Core Requirements: WKQR- Core Quantitat Reasoning

STS 40712 The Antichrist and the Algorithm: Religion, Technology and Power in the Digital Age (3 Credit Hours)

Behind the rhetoric of disruption and progress lies a deeper spiritual story. This course examines the religious and apocalyptic dimensions of technology through thinkers ancient and modern—from Augustine and Dostoevsky to McLuhan, René Girard, and Peter Thiel. We will explore how digital technology functions as both idol and oracle, promising salvation through data and control. Students will analyze the cultural myths of transhumanism, the occult fascination of tech elites, and the challenge of recovering a theology of creation, incarnation, and human freedom in a technocratic age.

STS 40851 Visualizing Politics (3 Credit Hours)

This course is an introduction to political, economic, and social issues through the medium of visual displays. This kind of course has become feasible because data are now abundant and easy to access and software for displaying and analyzing data are available and easy to use. The ability to examine and display data is an increasingly valuable skill in many fields. However, this skill must be complemented by the ability to interpret visual displays orally, and by a commitment to use data responsibly: to reveal, rather than slant or distort, the truth. We will discuss examples concerning drugs, marriage, climate change, development, economic performance, social policy, democracy, voting, public opinion, and conflict, but the main emphasis is on helping you explore many facets of an issue of particular interest to you. You will learn to manage data and produce your own graphics to describe and explain political, social, economic (or other!) relationships. The graphics will include line and bar graphs, 2D and 3D scatterplots, motion charts, maps, and others.

STS 40999 Consulting and Development (3 Credit Hours)

Students, in a structured format, are involved in assessing, prioritizing and creatively solving problems encountered by low-income and other disadvantaged South Bend entrepreneurs. A process consulting approach is employed and a number of useful tools and frameworks are introduced. Students work with both for-profit and non-profit enterprises, producing tangible deliverables that help clients launch, grow and sustain their ventures. In addition to class time, students will meet with clients on a weekly basis at a Notre Dame facility located downtown. Assistance with transportation will be available for students needing it. Class will meet on Tuesdays. On Thursdays, students will consult with local entrepreneurs in one hour blocks during the hours of 5p to 9p at the Center for Civic Innovation. This consulting time is flexible with students' schedules and based on appointments made by local entrepreneurs.

STS 43260 Political Economy of Development (3 Credit Hours)

The course will focus on why and how political institutions affect economic development. The goal is to understand core theoretical concepts in political economy, discuss the political determinants of economic policy choices and learn how to understand and evaluate empirical evidence. The course will use evidence and examples from both developed and developing countries. Topics will include the role of historical circumstances and political leaders in fostering economic development, the incentives and constraints of political leaders, and the economic determinants of corruption and conflict. Readings for the class will comprise academic journal papers, case studies and book chapters. Satisfies the following University Core Requirements: WRIT - Writing Intensive

STS 43334 New Readings in Transgender Studies (3 Credit Hours)

In this seminar, students will engage with texts published within the last five years in the field of transgender studies. Along with academic writing, we will work with literature, memoir, film, and popular culture. Together, these texts expand our shared understanding of what trans* means; pose challenging questions about Western transgender studies and its canon; and link the field of transgender studies with global movements for justice. Students will have opportunities for collaboration and community engagement, and to create their own theory and creative work.

STS 43611 Carbon Neutral Development through Net Impact Design (3 Credit Hours)

Knowledge about the relationship between built environment development and global and local challenges, such as climate change, resource depletion, environmental impact, justice and health, is of key importance to move towards a sustainable and resilient future. This course takes a trans-disciplinary approach to understanding how to decarbonize the built environment. Linkages between and perspectives from engineering, architectural design, and social sciences are emphasized throughout the course. This course provides students with real-world problems to work with such as urbanization-related pollution in China and urban revitalization needs for the aging building stock in Germany. This course is composed of two modules: (1) Carbon neutral development at the urban scale is examined through three real case studies to explore the different development principles, design strategies and patterns. (2) Net zero building design and related environmental impact are examined through research literature and real case projects.

STS 43717 Forbidden Knowledge: The Social Construction and Management of Ignorance (3 Credit Hours)

Science has traditionally been billed as our foremost producer of knowledge. For more than a decade, however, science has also been billed as an important source of ignorance, and this aspect of science is now being studied in a new interdisciplinary area of enquiry sometimes called agnotology. In this course we shall explore this new area of ignorance studies and its relation to the knowledge studies of philosophy—epistemology and philosophy of science. Accordingly, readings will be drawn from the work of a broad array of scholars—scientists, historians, journalists, and social critics as well as philosophers.

STS 43903 Philosophy of A.I. (3 Credit Hours)

This course examines a range of metaphysical, ethical, and social questions about artificial intelligence. Questions to be addressed include: Could a computer be conscious? Is there anything the human mind can do that a machine couldn't be programmed to do? What are the similarities and differences between human and artificial intelligence? What are the likely cultural and economic effects of AI? What moral principles should guide our use of AI? Is it likely that we'll create AGI (artificial general intelligence), and would this pose an existential threat to humanity?

STS 44404 Neuropharmacology of Great Britain (3 Credit Hours)

In "Neuropharmacology in Great Britain," you will learn about the basic tenants of pharmacology and classes of drugs that affect the brain, with particular emphasis on drugs that have been important in Great Britain's culture and history.

STS 46497 Directed Readings/Research (1-3 Credit Hours)

Independent research or readings taken under the supervision of an STV faculty member. An approved proposal for the research/readings will be filed with the STV office. (In order to receive STV credit, the student's proposal will need to be approved by the faculty member supervising the student's research/readings and by the director of the STV program.) Course may be repeated.

STS 48497 Undergraduate Research (1-3 Credit Hours)

Undergraduates will conduct research or elaborated readings on a topic of interest.
Course may be repeated.

STS 60000 GLOBES Forum (0 Credit Hours)

GLOBES registration course

STS 61000 GLOBES Forum (0 Credit Hours)

This zero credit course is required of all GLOBES students in order to be eligible for the GLOBES mini grants.