CORE CURRICULUM SCIENTIFIC WORLD (CCS)

CCS 153 | SCIENCE FOR CITIZENS | 2 quarter hours (Undergraduate)
Students will learn basic knowledge of science as they engage in activities that are connected to their everyday life. They will explore their natural ecosystem and be able to describe various functions. They will engage in the scientific method through observations, hypotheses, data collection and basic data analysis. Students will apply their critical thinking based on the scientific method to local environmental or science related issues/events. (2 quarter hours)

CCS 208 | ISSUES IN SCIENCE AND RELIGION | 4 quarter hours (Undergraduate)
This course develops students' understandings of the scientific and religious constructions of self in the modern world (natural and social). The institutions and bodies of knowledge comprising science, religion, and their overlap are critically analyzed. Key historic debates are examined, for example: the Vatican's trial of Galileo for his teachings of a heliocentric universe; the controversial reception of Darwin's theory of evolution; and the 2001 U.S. policy on embryonic stem cell research. Through such analyses, the course develops students' skills in making ethically-informed decisions and thus recognizing their roles in the public debates involving the intersection of science and religion.

CCS 217 | UNDERSTANDING AND MEASURING INTELLIGENCE | 4 quarter hours
(Undergraduate)
In this course, students examine intelligence testing and its uses in employee selection and placement. Students learn the principles of assessing human traits (reliability, validity, bias and other systematic errors), and apply them to intelligence testing. We will work to define "intelligence" and consider various approaches to intelligence, contrasting the theories of unitary vs. multiple intelligences. Students will examine the implications of the definitions and measurement approaches on different groups of people, both historically and currently, with attention to the unintended effects of the biases of test developers and the ethical implications of different approaches and uses of intelligence testing.

CCS 219 | NEUROPLASTICITY AND THE AGING BRAIN | 4 quarter hours (Undergraduate)
In this course, we will examine the latest research on the aging process and, specifically, its relationship to the brain. We will cover a mix of material from psychological and, especially, neuroscientific fields. Students will also be introduced to the field of neuroplasticity, which is revolutionizing the way we understand the functioning power of the brain. Neuroplasticity, in simple terms, is the brain's ability to rearrange its connections and, therefore, its functions based on experiences. In other words, the brain has the capacity to literally change itself, based on experiences, to achieve positive results. The goals of this course are to understand how the brain works, examine its impact on our daily actions, study how aging impacts brain functioning, discover the learning and adjustment potential of the brain, and apply the principles of the 3 P's. We will use numerous examples to understand the brain, including health, work, relational, and personal settings. Students will ultimately answer the question of whether they will have an aging or reengaging brain.

CCS 220 | FASHION AND THE ENVIRONMENT | 2 quarter hours (Undergraduate)
This 5-week course introduces students to the concept and science of sustainability, its relationship with the business of fashion, and strategies and work practices to shift the business to a sustainable operating mode. Coursework topics focus on defining sustainability, understanding human-induced climate change, and local and global effects that fashion has had on the Earth and its peoples. Learners will examine the impact of supply chains and apply sustainability practices to create an action plan for a fashion company. The course is self-paced and includes a pre-assessment test and modules of interactive instruction based on asynchronous lectures, videos, interactive exercises, case studies and knowledge assessments.

CCS 225 | CLIMATE CHANGE: TRANSFORMING ORGANIZATIONS FOR SUSTAINABILITY | 4 quarter hours
(Undergraduate)
Climate change is the biggest challenge faced by society and organizations of all kinds can play a significant role in the transition to a sustainable society. In this course, students will gain knowledge concerning the latest scientific facts on climate change and the ecological crisis we face as well as how to make positive changes in their organizations. Students will learn about a range of tools to reframe cultural norms, both personally and professionally, and explore different perspectives concerning climate change. They will reflect on their personal leadership style, and gain a 'big picture' view inspired by case studies featuring pioneering people and organizations who are collaborating to take radical action. The course is designed as a fully online interactive course based on asynchronous lectures, videos, podcasts, interactive exercises, quizzes, case studies, an individual project, discussion boards and knowledge assessments.

CCS 250 | SOCIAL MEDIA MARKETING FUNDAMENTALS | 2 quarter hours (Undergraduate)
This course will provide students with an overview of the history of the Internet and basic marketing strategies as they relate to the Internet and Web 2.0 technologies. Students will learn about how to keep abreast of new technology, how these technologies can be used to market services and products as well as how they can be used to create and maintain social networks for professional use.

CCS 256 | EVERYDAY ECOLOGY | 4 quarter hours (Undergraduate)
Every week, we learn of typhoons and landslides, floods and hurricanes, droughts and other natural catastrophes. Scientists now agree that the major cause of climate shift is man-made, specifically our use and abuse of global energy resources. In Everyday Ecology we will analyze our energy use patterns and explore practical alternatives. The word "ecology" originates from the meshing of two Greek words meaning the "study of homes." Although the main focus of this course is the individual household, another "household" we must take into account is the economy. Ecological economics examines how both disciplines need to look toward the other to be viable long term. We will examine options to bring the earth household (ecology) and the human household (economy) together for the benefit of both. This course observes how 'man' is connected to the world around him. It allows us to see our options in response to growing concern over global climate change. Through readings, field trips, activities, discussions and an analysis of our personal use of energy, this course enables us to become increasingly aware of ecological issues. You will learn to evaluate the effect of personal choices on the earth and be introduced to alternative, 'greener' options.

CCS 259 | PREHISTORIC LIFE | 4 quarter hours
(Undergraduate)
This course promotes students' investigation of fossils to interpret the character of 3.5 billion years of biological evolution and ecological change on earth. By way of scientific reasoning, mathematical inference, and applicable technologies, emphasis is on the exploration of earliest evidence of life, development of multi-celled plants and animals, dinosaur evolution, mass extinction events, mammal diversification, human origins as well as appraisal of the societal reliance on fossil resources and the persistent debate over evolution versus creation. Learning is assessed through labs, a fieldtrip, an exam, video summaries, contributions to online discussions, and a research paper in a scientific format.

CCS 267 | NUTRITION FOR A LIFETIME | 4 quarter hours
(Undergraduate)
Today's consumers want and need to be educated about taking charge of their own health. With the current fast-paced world that has spilled over into our eating habits, food choices have become unlimited. Choosing a healthful approach to diet requires basic information about our bodies' nutritional needs. The greater our understanding of our basic bodily needs, the better we are able to make choices concerning our health. This course will offer an overview of the basic science of nutrition, with an emphasis on the relationship between disease and nutrition, and current research findings.

CCS 269 | ENERGY AND HEALTH | 4 quarter hours
(Undergraduate)
This course will provide a framework for understanding human energy systems, such as digestion and respiration, in relation to current healthcare practices to enhance their effectiveness (dietary approach, manipulation therapies, acupuncture, exercise, and meditation). We will consider connections between social and environmental variables such as constitution, stress, lifestyle, and vital physiological functions. Each class will build on the basic understanding of biological systems in relation to energy through lecture and discussion. We will review literature on various healthcare practices to discern sound approaches and practical applications. Students will cultivate an appreciation for daily health choices that cumulatively affect their health.

CCS 275 | BODY, MIND, SPIRIT: YOGA AND MEDITATION | 4 quarter hours
(Undergraduate)
Why are 20 million Americans practicing yoga? This course answers that question with an introduction to yoga and meditation techniques and the underlying scientific and philosophical principles of the system of yoga. The first half of each class will be experiential, conducted as a yoga and meditation class for beginners, providing tools to reduce stress, focus the mind, and cultivate inner peace. This first hour and a half will use yoga postures, breathing exercises, and meditation techniques. The second half of each class will use readings, reflection, and discussion to examine the scientific and philosophical knowledge of yoga as a way to ease stress, strengthen the bone and muscle structures, lower blood pressure, increase flexibility and strength, improve mind functioning, and provide spiritual sustenance. We will read Yoga Mind Body and Spirit: A Return to Wholeness by Donna Farhi, and The Yoga Sutras of Patanjali, research articles on the scientific studies of yoga's benefits from journals and websites, etc. Students will keep weekly reflection journal observations on the changes(s) they notice in themselves. This course will refresh, relax, rejuvenate. Yoga mats and other props will be provided. Bring/wear comfortable clothes (no jeans, belts, dresses). This is a Gentle Yoga class for beginners. Yoga means to unite or yoke so course will explore the ways to unite body, mind, spirit. This course is designed to 1) help establish good health and well-being; 2) gain scientific knowledge and understanding of the various systems of the human body; and 3) explore the spiritual benefits of meditation.

CCS 281 | LIBERAL ARTS IN ACTION: RATS IN THE CITY | 2-6 quarter hours
(Undergraduate)
This course directs students to analyze an engaging topic (here, urban rats) from multiple perspectives in the liberal arts. Students strengthen their problem-solving skills by drawing upon the ideas and methods of three different liberal arts disciplines. The learning activities clarify how the liberal arts can be put into action to solve problems. The course strengthens students' development of critical thinking and academic writing across the curriculum. Students also will learn about resources that will be useful for their academic success at DePaul. (2-6 credit hours)

CCS 285 | ENVIRONMENTAL ETHICS | 4 quarter hours
(Undergraduate)
This course contains two distinct strands of learning: (1) the current condition of the natural world and the ways it is approached scientifically; and (2) the major premises of the most significant ethical frameworks in use today. Using this knowledge, students investigate several contemporary environmental problems, identifying their underlying causes, and analyzing various proposed solutions. This is complemented by the intensive study of major ethical perspectives, particularly those which have developed alongside, and as a consequence of, grave environmental concerns. The course project is a collaborative endeavor to integrate the knowledge and skills acquired through mastery of both learning strands.

CCS 292 | EXPLORING EARTH'S PHYSICAL FEATURES | 4 quarter hours (Undergraduate)
This course advances student exploration of earth's 4.5 billion year geologic record in order to evaluate the planet's evolution and the interrelationships between humans and landforms. Through the application of scientific reasoning, mathematical inference, and prevailing technologies used by geologists, emphasis is on plate tectonics, geologic time, the rock cycle, weathering, earthquakes, fluvial features, rock structures, volcanoes, mountains, plateaus, plains, glacial features, deserts, caves, and coasts. Students also assess human reliance on landforms, the economics of landforms, and cases of earth pseudoscience. Learning is assessed through labs, fieldtrips, a scientifically-formatted research paper, an exam, and contributions to online discussions.

CCS 300 | PROJECT MANAGEMENT | 4 quarter hours (Undergraduate)
Project Management is a business concept which has received a great deal of attention over the last few years. Business managers are discovering that the complexity of human and technological systems forces workers to organize, prepare, and monitor project development in a way which was not necessary in simpler times. In this course, students will discuss and discover methods of project organization and execution which will help them achieve efficacy and success in the workplace. This course will cover concepts in describing project goals, setting priorities, identifying needs, and designing realistic time lines. Students will learn how to execute successful projects from start to finish. (4 quarter hours)

CCS 320 | MAMMALOGY | 2-4 quarter hours (Undergraduate)
This course will introduce you to the origins, evolution, ecology, and biodiversity of the class Mammalia. Key topics will include mammalian anatomy, classification, genetics, reproduction, thermoregulation, locomotion, behavior, ecology, and conservation. Special emphasis will be on investigating the connections of mammalian evolutionary biology to human health issues including disease, nutrition, physical activity, injury, and overpopulation. Online learning will incorporate readings, discussions, a science 'kit' for hands-on labs, virtual labs using 3D mammals, and computer simulations. Student will also undertake collaborative experimentation and onsite inquiry of mammals at a zoological park, museum, and/or nature reserve. Prerequisite: None.

CCS 328 | GLOBAL INFECTIOUS DISEASES AND HEALTH | 4 quarter hours (Undergraduate)
In this course we will learn about the global burden of disease with an emphasis on understanding the critical intersection of policy, social expectations in determining how health systems function and adapt to address new challenges; and examine why some health systems are so fragile in the face of new disease challenges such as the Covid-19 pandemic. We will look at the role of globalization in introducing "western world" diseases to low and middle income countries, and we will learn about the science-based methods and tools we have to track the emergence of new disease threats, assess global disease burden, understand disease mitigation strategies, and compare our ability to measure improvements in health outcomes in well-resourced and resource-poor countries. Online learning will include readings, slide presentations, discussions, and open-source epidemiological tools to examine disease burden and trends.

CCS 329 | DATABASE DEVELOPMENT FOR MANAGING INFORMATION | 4 quarter hours (Undergraduate)
Using MS Office tools suite (in particular Access), this course takes students through the entire process for building a database system that will be used to capture, store and present information. In addition to database concepts like designs, reports and SQL queries, the students will discuss and analyze relationships between technology and society.

CCS 332 | BIODIVERSITY | 4 quarter hours (Undergraduate)
The science of Biodiversity is the study of life on earth, both past and present. It involves the exploration and measurement of the amount of genetic, species, and ecological variation on earth and is emerging as one humanity's most important and urgent endeavors. Scientific efforts to study earth's biodiversity have intensified because of our growing appreciation of the role human population growth and urbanization play in accelerating the extinction of plant and animal species. This course introduces students to the nature of science and the central issues concerning life on earth including: the current state of biodiversity, valuing life's variations, human dependence on biological diversity, the origin and extinction of species, mass extinction, critical habitats at risk, and policies and approaches to conserve biodiversity (4 hours)