

**Signature Series
Centre College
Fall 2020**

COVID-19

The courses in this Signature Series are designed to provide you with the creative and critical space to explore multiple themes and contexts surrounding COVID-19. The COVID-19 pandemic presents an exceptional opportunity to assess a global crisis through multiple disciplinary approaches. The liberal arts experience at Centre College provides you with an equally unprecedented moment to think in broad and crosscutting ways about the pandemic and the world that we wish to imagine after COVID. Each program has disciplinary insight into relevant areas such as epidemiology and public health, economic implications, ancient epidemics and the philosophers and artists who documented them, lessons learned from more recent history, and human responses to uncertainty and crisis throughout time. We welcome you to take full advantage of the following courses, while also keeping in mind opportunities for independent research courses related to COVID-19.

BIO 210 Introduction to Genetics in the Time of COVID-19

Block 1: Lecture, Professor Garcia; Lab, Professor O'Quin

Block 2: Lecture, Professor O'Quin; Lab, Professor Styga

In this course, the biology of SARS-CoV2 (the virus responsible for COVID-19), current research efforts, and related questions will frame students' introduction to the basic principles of genetics. Students will be introduced to the cellular mechanisms of inheritance, genetic information flow, and commonly-used experimental methods, then apply this knowledge to simulate the development of genetic tests and vaccines. Mendelian and non-Mendelian patterns of inheritance will also be discussed, and students will design experimental crosses in a model system in order to determine inheritance patterns. With this information, students will consider the heritability of disease resistance.

BNS/PSY 315 Health Psychology

Block 1: Professor Godlaski

An overview of the theory, research, and practice of Health Psychology from a biopsychosocial-cultural framework. While focusing on how the theory and practice of Psychology are brought to bear on issues of health and wellness, this course will also explore psychological perspectives on how motivation, health beliefs, individual and social behavior, social determinants of health, and healthcare structures play varying roles in the COVID-19 pandemic.

CHE 242 Organic Chemistry II

Block 1: Professor Muzyka

Block 2: Professor Workman

For the fall of 2020, the lab work in CHE 242 (organic chemistry 2) will be modified to include a significant number of computational chemistry activities to supplement/replace the traditional experimental work. The experience gained with these activities will prepare students to better understand drug development for COVID-19 and to potentially participate in drug discovery research carried out at Centre.

CHE 450 Physical Organic Chemistry

Block 2: Professor Muzyka

For the fall of 2020, there will be additional emphasis on computational chemistry in the CHE 450 (physical organic chemistry) course. Discussions of Hammett plots will be presented with particular attention to how similar tools are used by medicinal chemistry in the drug discovery/design process. The experience gained with these activities will prepare students to better understand drug development for COVID-19 and to potentially participate in drug discovery research carried out at Centre. (CHE 450 will be offered in the second six-week block in fall 2020)

DLM 1: Art as Activism

Block 2: Professor Amy Frederick

This course will examine the visual arts as a significant element in and impetus for social justice movements. Within historical and contemporary communities, individual artists and arts organizations have engaged in the work of social justice to affect change in their neighborhoods, cities, and countries. This fall, we will study how the visual arts specifically addresses injustice in times of global stress, such as our current COVID-19 crisis. While art does not literally save lives, we turn to art to communicate and/or combat political messages, express loss, and provide connection. We will focus on how art achieves these goals in diverse and distinctive ways from other disciplines, and has the capacity to strengthen our abilities to engage with our community about contemporary challenges.

ECO 385 Health Economics

Block 1: Professor Perry

Health Economics uses the theoretical and empirical tools of economics to understand the health sector. The COVID-19 pandemic has touched every aspect of the health sector (and the larger economy) and will be discussed in context throughout the course. In addition, course coverage on

the health sector's preparedness for large-scale shocks (like pandemics and "superbugs") and how decisions are made in an environment of uncertainty and scarce resources will be expanded.

ECO 476 Equity Research and Financial Modeling

Block 1: Professor Apostolova

In this applied course we will compile and analyze detailed financial and operating information about a company and a sector of the economy. We will use this information to develop valuation models to find the intrinsic value of a company's stock. This course will also explore the effect of various financial and macroeconomic shocks like the COVID-19 epidemic and the 2008 financial crisis on company valuation and the stock market.

EDU 228 Educational Psychology and the Reshaping of Learning in a Global Pandemic

Block 2: Professor Murray

This existing class in the EDU program has historically had both a research and field experience component that placed students in local classrooms. As local classrooms have shifted online, this class is uniquely positioned to explore questions about how educational psychology – including questions about motivation, student well-being, safe spaces, and measuring student learning – functions in a time of uncertainty. As part of a creative culminating class project, students will talk with local, state, national, and/or global leaders in education to ask critical questions about the current and long-term effects of COVID-19 on education.

ENS 320 Global Environmental Health and Development

Block 1: Professor Faye

The course introduces students to global health issues, exploring various microbes that cause infectious diseases. Students learn definitions pertinent to epidemiology and host-parasite relationships, as well as vectors/hosts, pathogenic agents and routes of transmissions. Humanity is experiencing with many emerging and re-emerging diseases long thought gone, controlled, or eradicated such as Tuberculosis, Zika, Dengue Fever, Coronavirus, Ebola, and Malaria to name a few. The course also addresses the relationships between environment, disease, and development in sub-Saharan Africa by exploring the intertwined histories of human-environment relations and diseases including—but not limited to—Sleeping sickness, West Nile virus, and Rinderpest.

ENS 430 Human Dimensions of Climate Change

Block 1: Professor Werner

Many connections between climate change and the Covid pandemic can be drawn, including how policymakers and the public respond to crises and the role of authority and expertise (along with

misinformation, uncertainty, and incomplete information) in an emerging scientific and social topic. In this course, we will draw explicit comparisons between climate change and pandemics, but we will also examine how environmental issues beyond climate change—air pollution, food systems, and land use change—can both increase the background co-morbidities of a pandemic, and create the impetus for additional pandemic outbreaks.

FRE 271 Group Conversation: Global French Perspectives

Block 2: Professor Wood

Course conducted in French. Prerequisite FRE 220 or higher

The *world's* perspective on 2020, COVID-19, and life beyond? Even the best-intentioned discussions of contemporary issues often remain grounded within a single national perspective or “normal” framework: for instance “American academic” or “French Liberal” or “U.S. Conservative”, and so forth. Instead, this course seeks out many perspectives of the startling events of 2020 from a wide range of different sources and regions, united by a common, but fluid, historical theme: *global Francophones*. We consider: Quebec, Maghreb regions (North Africa), France and Tahiti, Sub-Saharan African regions (Senegal for instance), and Francophone India (Pondicherry), to name some prominent places. Drawing upon general themes such as friendship, technology, equality, the “greater good,” globalization, and the importance of multiple languages, our course patiently assembles a puzzle, appreciating opinions and practices from several places and types of response. Through these themes, we will conduct informal interviews with many global Francophones, and draw upon fresh world news sources and reports. Without pretending to know “the world’s perspective,” we nonetheless focus on this type of diversity of opinion and perspective in order to better appreciate the significance of 2020 and beyond.

GLC 210 Introduction to Global Commerce

Block 2: Professor Hartmann; Professor Pektus

This course introduces students to the many aspects that influence global commerce. By analyzing the global exchange of specific goods and services, students identify common political and cultural, as well as economic, themes that influence trade. Students also examine concepts such as sustainability and ethics and their role in shaping future developments and patterns of global commerce.

The course is organized around 4 specific modules, each of which focuses on a particular good or service and the issues that matter for the multiple stakeholders involved in these businesses. In the fall of 2020, one of the modules will examine the pharmaceutical industry’s response to COVID-19.

HIS 120 Invention of the Modern World–II

Block 2: Professor Earle

This fall's iteration of HIS 120 explores the history of the Influenza Pandemic of 1918—or the Spanish flu—and its place in the making of the modern world. The pandemic has attracted considerable attention surrounding COVID-19. It occurred at the height of the First World War and remains one of the deadliest public health crises in human history. By 1920, approximately one-third of the world's population had been infected by the H1N1 virus. It claimed 50 million lives, including 675,000 Americans. The legacies of the pandemic raise numerous questions about historical memory, the development of public health, and the international contexts out of which anticolonial nationalisms, women's suffrage, civil rights, and the Second World War emerged. By returning to the pandemic, we begin to imagine social and cultural possibilities following COVID-19.

HUM 234 Facts Matter: Solving the problem of Fake News during COVID-19

Block 1: Dr. Manny

Fake news has captured the attention of politicians, the media, and the general public since 2016. In the era of COVID-19, fake news can literally kill. In this course, students will develop personal strategies for being responsible creators/disseminators of information and explore potential solutions to the problem of fake news in multidisciplinary environments.

IST 110 Introduction to International Studies

Block 1: Professor Bosco

This course introduces students to some of the most pressing global challenges of the modern era. It utilizes interdisciplinary inquiry as a means of addressing the complexities of conflict, migration, climate change, and health in the context of the COVID-19 pandemic. Students will be challenged to draw on multiple perspectives – including politics, history, economics, religion, and culture – to understand how various disciplines compete, interact, and intersect in their definitions of the problems, obstacles, and solutions to complex global challenges.

IST 360 Global Health: COVID-19 in Context

Block 1: Professor Faulkner

Through an interdisciplinary lens, drawing from the fields of political science, economics, epidemiology, history, sociology, and others, this course engages students with the challenges and responses to the COVID-19 global pandemic. Course themes include comparative assessments of the intervention and function of government in responding to epidemics/pandemics (e.g. autocracies vs. democracies), challenges and successes in domestic and international coordination

efforts in addressing COVID-19 and other infectious diseases, the role and impacts of non-state actors during outbreaks, economic and traditional security implications of epidemics/pandemics, and future health challenges facing states and the broader international community.

MAT 165 Modern Calculus

Block 1: Professor Lamar

Block 2: Professor Hoots; Professor Swanson

The decisions made regarding social distancing and COVID-19 are primarily based on mathematical models. In this course, we will develop tools of mathematical modeling and differential and integral calculus and use these to understand how mathematics can help inform such decisions.

POL 220 Law and Society

Block 1: Professor Ebin

Law and Society introduces students to a range of topics concerning the interaction of the US legal system and politics. While the course regularly addresses questions of religious freedom, privacy, and equal protection rights, the Coronavirus pandemic brings a new urgency to our discussion of these issues. Students will have an opportunity to think critically about how COVID-19 may impact American public law through the inclusion of special case studies related to public health, surveillance, and religious free exercise.

POL 500 Senior Seminar (focus: Politics of Pandemics)

Block 1: Professor Knoll

Prerequisite: senior standing POL major or permission of the instructor

This course is the Senior Seminar for Politics majors and will take a deep dive into the political aspects of responses to the COVID-19 pandemic of 2020. Topics may include government policy responses, public opinion toward policy options, modeling the pandemic's effects, policy-making tradeoffs between public health and economic growth.

REL 130 Introduction to Asian Religions

Block 1: Professor Sippy

The religions of Asia are often described as ancient, profound, and mystical, but they have also played a practical part in the daily lives of billions of people for thousands of years, shaping culture, and politics in myriad ways. In this course, we will try to appreciate both aspects of eight of Asia's major traditions, and their historical interactions. We will explore: Hinduism, Buddhism, Islam, Sikhism, Jainism, Confucianism, Daoism, and Shinto. Through a survey of the literature of

these traditions, as well as an examination of their practices and rituals, we seek to understand how and why Asia's religions have provided direction and inspiration to so many people across the world for centuries.

This fall, the course will have a special unit devoted to exploring the relationship between Asian Religious Traditions and suffering. We will consider how Asian traditions have provided comfort, healing, and explanation for practitioners in times of trouble, illness (including COVID-19), and natural disasters (tsunamis, earthquakes). We will also explore how crises transform traditions, inspiring new theologies, cosmologies, rituals, forms of practice and participation (i.e. digital religion), and communal relationships.

REL 317, Illness, Healing and Miracles in the Age of Pandemics,

Block 2: Professor Jefferson

In antiquity, the mark of a miracle worker's effectiveness was the ability to heal. Health and healing were as important in earlier eras as it is today. Religion was an inextricable element in healing, as citizens sought treatment for their bodily ills by walking through the doorway of religion. This course will examine the large role healing and miracles played in the lives of people living during plagues and pandemics in the first millennium of the common era up to the contemporary era. Primary and secondary texts will be examined in this course as well as art and iconography, incorporating several different genres to illuminate the subject of illness and healing and its continuing relevance in contemporary life. Also, the class will engage in interviews with first responders, hospital chaplains, and physicians to explore the particular issue of illness, healing, miracles, and religion in our new normal of COVID-19. By looking to the past and considering questions of how religion and healing were entwined, we can begin to interrogate our current situation with COVID-19, and see how religion and the search for the miraculous appear today.

SLJ 210 Introducing Social Justice through a COVID Lens

Block 1: Professor Jamie E. Shenton

At its most basic, social justice means recognizing the uneven distribution of resources and opportunities across members of society by virtue of their social identities (sex, gender, race, class, sexuality, disability, religion, citizenship status, and so forth). In a number of ways, COVID-19 has laid bare social inequalities that have existed for a long time; these inequalities are systemic and pervasive. This course will use social justice theories, concepts, and frameworks from a variety of disciplinary perspectives in order to understand how COVID-19 has exposed and exacerbated social inequalities. Who is most vulnerable to contracting COVID-19, and why? Once sick, who is least likely to get adequate treatment or to recover? What do the answers to these questions tell us about privilege, oppression, and our responsibilities to one another?

SPA 240 Advanced Conversation

Block 2: Professor Flaherty-Echeverría

Course conducted in Spanish. Prerequisite SPA 220 or equivalent

This course provides students with situational practice of spoken Spanish, emphasizing vocabulary building and increasing proficiency, and a review of basic grammar structures.

Students will focus on current subjects such as social dynamics, social justice, access, immigration, with a unit on how COVID-19 is affecting Spanish Speaking countries and how the Spanish speaking world is dealing with it at different levels of society.

THR 335 Theatre and Crisis

Block 2: Professor Goff

Throughout history, theatre has been quick to respond to the extraordinary circumstances of its time. Through war, disease, and even acts of terror, theatre artists have risen to the challenge of engaging audiences in dialogue around even the most traumatic shared experiences of humanity. This class will explore dramatic literature from various periods in history, investigating how it has taken on the Atomic Bomb, 9/11, AIDS, and more – and inquiring as to how, with COVID currently shuttering theatres around the world – the art form might still continue to provoke, elevate, and unite.