# **2018 Scarlet Honors Weekend Class Session Offerings**

# Can we detain a citizen suspected of terrorism indefinitely without charge or trial?

The military has captured an American citizen that it strongly suspects of terrorism. The President detained him without charge or trial so the government could gather vital evidence without having to disclose publicly the evidence or how it obtained the evidence. Now, nine months later, the citizen's family has sued the President claiming the detention is unconstitutional and demanding the citizen either be released or tried for treason. Who wins? Join the debate and see how we learn constitutional law by <u>doing</u> constitutional law at Wabash.

#### The Matrix: Neo as Savior Figure

In a world where everything is an illusion and human beings are imprisoned in a machinecreated software program, how do we learn the truth? Neo (Thomas Anderson) is the savior figure in search of an answer to the question, "What is the Matrix?" Like savior figures in many cultures and religious traditions, Neo pays dearly for that knowledge with his life. What choices does he make? Can he really free other human beings from deception? Can he free himself? *The Matrix* is a film that invites basic ethical questions about the enduring human questions: Who are we and how should we live? These are the liberal arts questions whose pursuit can change your life. But first, as Morpheus says, you must choose: Do I take the blue pill or the red pill? Which one are you prepared to take?

#### **Predicting the Future with Physics**

Using the laws of physics, you can predict the future! In this activity, you will be part of a team that will be presented with a problem for which you'll need to conduct experiments to formulate a model to predict what will happen when presented with a specific scenario. Then all the teams will put their predictions to the test—the winning team will be the one with the most accurate and most precise prediction.

#### **Protein Folding**

Proteins are important components of cells, and to do their jobs, they need to have the right shape. There are a number of diseases that are associated with incorrect folding, such as Alzheimer's disease, Parkinson's disease, and many others. But what forces affect protein folding? In this activity, we will use a model system to look at the intermolecular forces that stabilize protein folding and to learn about how biochemists study protein folding.

# Medicine, Life, Death, and Immortality - How a tobacco farmer in 1951 contributed to some of the world's most profound medical discoveries

Henrietta Lacks was a young mother of 5 who died of an extremely aggressive cancer. The cells harvested from her tumor are responsible for advances biomedical science, including the polio vaccine, in vitro fertilization, and chemotherapy. She was never aware of the role she played in medical research. In fact, she never even knew she donated cells. What have we learned from the ethical violations of the past, and what questions should we consider when thinking about research on human subjects? Students interested in a medical or healthcare career will be faced with these tensions of balancing biomedical advances with patient care.

# To Lead Effectively: The Making of Great Leaders in the 'Real World' and at Wabash College

What is leadership? Is it innate? Can it be learned? What separates "good" leadership from both "bad" and "exceptional" skills? And how and/or why is it that Wabash College produces alumni who are recognized leaders in all walks of life? We will both examine and further our individual approach, skills set, and mission for life-long learning and leadership.

#### Iron Man 3 behind the Curtain: Analyzing Genre Film

We will look at some of the basic skills in deconstructing film language in the hopes of revealing hidden subtext underneath the larger narrative. We will look into how Horror and Science Fiction films have historically been vessels for subversive speech. Students are encouraged to review 2013's *Iron Man 3* before attending the session but it is not mandatory.

#### **Democracy: from Athens to America**

Our country is a democracy—a term we've adopted from ancient Greece, where democratic government supposedly began. In this session, we'll travel back in time to explore what democracy looked like during the so-called Golden Age of Athens, ca. 450 BCE. We'll investigate key texts alongside the material remains of Athenian democratic government (from ballot boxes—some clearly rigged—to allotment machines and the scraps of pottery used to write down names of citizens to be ostracized) to answer questions like: "Who counted as a citizen?" "What were the rights and duties of a citizen?" and "How did democracy operate on a daily basis?" We'll also compare democratic government in Athens, which served as a model for the founding fathers of this country, to democracy as it operates today in the United States.

# Fashion, Innovation, and Entrepreneurship: How to Dress Like a Gentleman in the 21<sup>st</sup> Century)

How you dress is a reflection of who you are. Whether you wear a hoodie or a power suit, you're making a fashion statement. And unless you wear nothing at all (which is a fashion statement in its own right!), it's a statement you make every day. If you look around, fashion is everywhere in politics, sports, music, religion, and business. People use fashion to express creativity, pursue anonymity, or stick it to the Man. Fashion may be the ultimate embodiment of democracy since everyone can use it for free expression and creativity.

This course is about fashion in all its forms. From the cotton grown in fields half a world away to the t-shirts we buy at the local mall, fashion is a multi-billion dollar global industry with designers, entrepreneurs, counterfeiters, and ordinary consumers. We will see how the production, consumption, and ultimately the disposal of fashion items has made this industry one of the most important in the world. This course may appeal to anyone with an interest in economics, politics, music, science, or art.

#### Where am I in my Brain? Insights from Neuroscience

As our knowledge of the nervous system continues to grow, our theories of brain function are improving at a rapid pace, giving us new insights into how our experiences and actions depend on the activity of neurons. In this activity, we will complete a short cognitive psychology task, and discuss how this and similar tasks can be used to understand how decision-making is implemented by the brain, and to better understand why our decisions sometimes go wrong (such as when we claim to want one thing, but do another).

#### Science Fiction on Page and on Screen

We will analyze a scene from the movie District 9 and an excerpt from Octavia Butler's short story "Bloodchild," focusing on bodily autonomy, genetic engineering, alien invasion, and biological interdependence.

#### Parasites, Poverty, and the Social Side of Global Health

Neglected Tropical Diseases (NTDs) -- including some that are now in the United States -- are mainly parasitic diseases of poverty. Given that these infections represent encounters between parasitic organisms and hosts, it would seem like understanding them would be a straight-forward consideration of biology and species interactions. However, global health problems like these are, in fact, multi-disciplinary problems -- indeed, liberal arts problems -- that require careful consideration of risk factors from a variety of perspectives including the life sciences, social sciences, humanities, and the arts. What are these factors and what role(s) do they play? Together we'll consider some NTDs and the social, economic, and political factors that contribute to our study of, and fight against, these infections.

## Climate Change: Are Plants Part of the Problem or Part of the Solution?

We have strong evidence that human activities have caused a dramatic increase in the amount of carbon dioxide, a heat-trapping gas, in our atmosphere. But how will plants respond to this carbon dioxide surplus? After all, almost all plants "eat" carbon dioxide when they photosynthesize; will they simply eat more in the future? Or will some of the indirect effects of rising greenhouse gases diminish plant appetites? We will discuss the current evidence and how plant responses to rising carbon dioxide might affect our planet's future.

## Plato's Cave: The Pain and Promise of Seeking Knowledge

Perhaps the most famous image in ancient Greek philosophy is that of Plato's cave analogy. In his *Republic*, Plato has Socrates, a character in the dialogue who was Plato's teacher, stage a scene that Socrates says describes the process of education. In the cave, prisoners sit held in place by chain, seeing only shadows on the wall. Thinking these shadows are true, they make of their whole lives the effort to distinguish between shadows. One prisoner is freed of his chains and dragged out of the cave, resisting as he goes because adjusting to new light at each stage on the way up is painful. In this class, we will read the short passage of the cave analogy and think about how this image explains why the process of letting go of what is familiar and seeking new knowledge is painful, but still worth doing.

## Comparing the Infinite

How do we know if two sets have the same size? This may seem like an easy question for finite sets, but how do we compare infinite sets? We will discuss the sizes of the sets of natural numbers {1, 2, 3, 4, ...}, the integers, and the rational numbers. Are there more rational numbers than natural numbers? The answer may surprise you!

## Pompeii: A Roman City Frozen in Time

The eruption of Mt. Vesuvius famously dumped a mountain of volcanic material on the city of Pompeii, encapsulating its residents, houses, temples, baths, bars, and brothels in meters of ash. This situation has led historians and Discovery Channel-style experts to hold up Pompeii as a perfect archaeological circumstance, a city supposedly "frozen in time." But is such an assessment really true? To what degree? In this session, we will interrogate that notion by engaging volcanology, archaeology, and the ways that the past can be shaped to serve the present. Along the way, we'll learn more about this city, its inhabitants, and their final hours.

#### Naval Battles in the Age of Sail

Naval warfare developed slowly because creating ships capable of acting as weapons or even weapons platforms required even more specialized technology (and, usually, more manpower) than did merchant marine activity. Further, naval warfare required not just concentrations of people and eco-nomic activity near shores, concentrations that gener-ated the sailing traditions and infrastructures of maritime activity on which navies had to be built; it also required states capable of organizing military forces, states for which sea-lanes linked (but not too distantly) strategically important and contested locations.

We will examine and discuss the men, ships, and tactics of naval combat in the age of sail (1650-1815). After a brief discussion, you will join the professors in an exciting, tactical ship-to-ship miniatures game.

#### **Yellowstone Wolves**

The U.S. Fish and Wildlife Service's proposal in the mid-1990s to reintroduce the gray wolf into Yellowstone National Park sparked political controversy by raising the concern that the economic interests of ranchers and other landowners would be compromised for the sake of protecting an endangered species. In this class, the reintroduction of wolves into Yellowstone will serve as a case study to help us explore issues in environmental philosophy. Examining the ethical commitment to preserving an endangered species like the gray wolf will give us a chance to think about the extent of human responsibility to nonhuman animals and the earth. This discussion will introduce you to a basic understanding of philosophical ethics. It will also offer the opportunity to think about how good policies can emerge out of a process that seriously considers economic, political, and ethical approaches to the problem.

## Thinking about the Nature and Purpose of Public Schools

Historically, the purpose of public education in the U.S. has been described in terms of preparation for democratic citizenship. But what does that mean--and what should it look like? We will explore the ways in which learning, knowledge, and schooling are understood and discussed in the U.S., including the move toward standardization of schools and content, questions about vocational education versus college prep, and the problem of how to foster creativity and problem-solving in a standard classroom setting.

#### Writing for Video Games

Video games have come a long way from the days of Space Invaders and Donkey Kong. Complex in structure, rich in design, today's narrative video games are a viable art form that can promote empathy and reach a broad audience. This session will look at writing from several contemporary games and give students a chance to explore ideas for their own branching narratives.