

2017 Scarlet Honors Weekend Class Session Offerings

Prof. Bronwen Wickkiser (Title: **Democracy: from Athens to America**)

Category: Discussion

Description: 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.

Prof. Lon Porter (Title: **Nanotechnology and the Future of Materials Engineering**)

Category: Lab Activity.

Description: Nanotechnology remains popular in science fiction books and films! However, in real life, the manipulation of matter on the nanometer scale has become a huge area of modern research. Much of the driving force for building tiny devices and features on the nanoscale is their importance for existing and emerging technologies such as nanoelectronics, microscopic robots, sensors, molecular computing, medical implants that can communicate directly with cells, and a myriad of other applications. This interactive activity will allow you to synthesize gold nanoparticles in a Wabash laboratory and explore their behavior.

Prof. Michele Pittard (Title: **From Diapers to Driver’s Ed: Introduction to Development**)

Category: Discussion

Description: Wabash students in EDU 101 examine theories of child and adolescent development through a variety of course texts and field experiences. As well, they are introduced to the concept of diversity as it relates to development, and they consider the developmental implications for K-12 education. During the Scarlet Honors Weekend class session, prospective students will learn working definitions of the five elements of development: physical, cognitive, emotional, social, and moral by reflecting on their own development. This session will be an interactive discussion with students working in small and whole group activities.

Prof. Scott Himself (Title: **Can we detain a citizen suspected of terrorism indefinitely without charge or trial?**)

Category: Debate

Description: 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 doing constitutional law at Wabash.

Prof. Gary Phillips (Title: **The Matrix: Neo as Savior Figure**)

Category: Discussion

Description: In a world where everything is an illusion and human beings are imprisoned in a machine-created software program, how do they learn the truth? Neo (Thomas Anderson) is the savior figure in search of the truth 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?

Prof. Dennis Krause (Title: **Predicting the Future with Physics**)

Category: Lab Activity.

Description: 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.

Prof. Ann Taylor (Title: **Protein Folding**)

Category: Lab Activity

Description: 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.

Prof. Chad Westphal (Title: **Stochastic Simulation: Building Predictions from Randomness**)

Category: Computer Activity

Description: How can simple math and powerful computers come together to create an accurate model of a complicated process? From predicting the outcome of an election to understanding the spread of a disease, simulations are a powerful tool for understanding our complex world. In this collaborative group activity, we'll harness the power of randomness to develop simulations for a few simple games and discuss the role that simulations can play in science, economics, and public policy.

Prof. Colin McKinney (Title: **Kerbal Space Program and the Tyranny of the Rocket Equation**)

Category: Computer/Lab Activity

Description: The Tsiolkovsky rocket equation quantifies how much propellant it takes for a given rocket to change velocity. We will investigate what the equation tells us about the ease of some orbital maneuvers and the extreme difficulty of others, and then simulate trying to achieve orbit with the hit indie game *Kerbal Space Program*.

Prof. Matt Carlson (Title: **Did You Catch an Eevee?: The Philosophy of Virtual and Augmented Reality**)

Category: Discussion

Description: In *Pokémon Go*, you can use your phone to catch an Eevee in your neighborhood park (if you're lucky!). While there is a sense in which this is clearly true, it is also deeply puzzling. How, after all, can you catch an object that isn't real? In this session, we will investigate this and related puzzles to discover how video games and other implementations of virtual and augmented reality raise deep and venerable philosophical questions in new ways. By thinking carefully about our interactions with virtual objects, we will try to develop a deeper understanding of what reality is, and how we know about it.

Prof. Anne Bost (Title: **Viruses, Mosquitoes, You . . . and a Global Decision**)

Category: Discussion

Description: Recent newscasts have featured lots of stories about Zika virus infections, in other countries (and the Olympics!) and in the United States. What *is* Zika virus? If you could totally wipe out the mosquitoes that transmit this virus . . . would you do it? We will consider answers to these questions, weighing the relative merits of potential anti-viral strategies in light of public health, environmental, economic, and cultural constraints.

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

Category: Discussion

Description: 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.

Prof. Peter Hulen (Title: **Creating Computer-Based Electronic Music)**

Category: Workshop

Description: This class will take place in the Wabash College Electronic Music Studio. It will focus on the use of audio and MIDI inputs to a computer in a group project to create a piece of electronic music unique to the group. The final product will be mixed down and distributed as an mp3 to each member of the class.

Prof. Shamira Gelbman (Title: **The Politics of Immigration and Refugee Policy)**

Category: discussion

Description: Immigration is among the most hotly contested issues in U.S. politics. At its heart are several fundamental questions: Who should be allowed to move to a new country and how should they be treated once they arrive? What should newcomers have to go through to achieve full membership in a political community (a.k.a. citizenship)? Are there special circumstances that call for more restrictive or permissive immigration and citizenship policies? In this class, we'll delve into how political thinkers, politicians, and the public have grappled with these questions from the founding of the United States through the present. In addition to looking at what's changed and what hasn't in these debates generally, we'll explore the special case of refugee policy, or immigration provisions for people displaced from their home countries by natural disasters, persecution, or war.

Dean Michael Raters (Title: **To Lead Effectively: The Making of Great Leaders in the 'Real World' and at Wabash College)**

Category: Discussion/Group Work

Description: 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.

Prof. Matt Weedman (Title: ***Iron Man 3* behind the Curtain: Analyzing Genre Film**)

Category: Discussion

Description: 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.