Here They Are! Classes Offered at GHA 2017

July 2017 is an exciting time for students lucky enough to be attending the Governor’s Honors Academy at West Virginia University. There is a wide variety of titillating classes in both the Intensive and Broad-based categories, and you will enroll in one of each.

Intensive classes go more deeply into areas in which you already have a knowledge base. Broad-based courses are shorter in length and do not require previous experience with the subject matter. The broad-based courses should not be in the field of your major (intensive) class. For example, if you take an intensive math class, your broad-based course may not be in the math field. It is a good idea to take a course in the Arts and Humanities from the broad-based offerings if your intensive class falls into the Math/Science/Technology category.

Directions for choosing classes will accompany the electronic form that will be posted soon. Talk with your friends and decide among yourselves who’ll take which class. That way, your circle of friends can benefit from several classes. (This is a nice way of saying “Don’t enroll in the same classes that your friends from home are taking.”)

Titles of the Intensive classes are red; broad-based titles are blue.

INTENSIVE COURSES

Math/Science/Technology

Programming like a Pioneer

In this course, we will be discovering new territory, exploring a new foreign land, claiming as our own—programming. Programming is one of the most valuable skills an emerging adult can have in our society. Even more valuable than this skill are the thought processes and perspectives on life gained using programming. No matter what your interests are, being able to have a mindset of a programmer will allow you to approach all aspects of life more logically, allowing you to achieve whatever goals you may have. While learning how to use the programming language MatLab, we will be examining real life scenarios from perspectives that aren’t necessarily visible at first glance. By having the ability to see issues from multiple perspectives you will have gained an invaluable advantage over anyone or anything that comes to hold you back from achieving your dreams.

Cody Hood is currently a graduate student at West Virginia University. He is currently working to obtain his PhD. He received his Bachelors of Science in Math in 2013, also at WVU. This is Cody’s fourth year teaching at the Governor’s Honors Academy and wasn’t going to let anything come between him and being able to experience such an extraordinary adventure a fourth time. As a student, Cody worked in the math learning center, taught business calculus, calculus one and math workshop at WVU.

Information Security: Learning to Encrypt and Decrypt Messages

Starting from the time of Julius Caesar, the art of passing messages using secret codes has been applied and has only evolved since then. The invention of the computer has made this process of exchanging messages [safely] very different. Today we use computers to transfer money, shop, send emails, and exchange personal and important messages. It is pertinent to know how this transaction of information is being done safely. As it turns out, there are plenty of simple, yet elegant, mathematical concepts behind these processes. In this course, we will discuss those processes and the math behind them. We will also do some basic coding using Python, an open source programming language which has turned out to be a very useful tool
and has been recommended as one of the best programming tools by Google! We will learn how to encode and decode messages without an “evil attacker” being able to break the code easily.

Information security and privacy has always played an important role in our society. During the Civil War, both the Confederate and Union Armies used substitution ciphers to secretly exchange messages among themselves without letting the other side know. During the course, the class will practice using this and various other methods of encryption and decryption of messages.

Anup Poudel is currently working on his PhD in Mathematics at the University of Iowa. He has worked for the GHA in the past as an intern, and this is his second year as faculty. He truly enjoyed being part of Governors Honors Academy in the past and cannot wait to come back this year.

The Science of Fiction

Time travel. Flesh-eating zombies. Twenty-first century dinosaurs. Although these concepts seem to have been taking straight out of your favorite works of fiction, did you know each of them are based on actual scientific theories? In this course, we will explore the world of fiction through acritical, scientific lens, seeking to answers questions like: How probable is interstellar travel? What is “reality,” and do we actually live in it? Will nature ever fight back? Throughout the course, we will explore the ways science and fiction historically tend to rely on each other for growth, and study ways in which entertainment caters to the scientifically savvy consumer.

Maria Miller graduated with a BA in English and MA in secondary education from West Virginia University in May 2014. She is currently employed in Hancock County at Weir High School as an eleventh-grade English and Advanced Placement biology educator. She has previously worked as a resident assistant at GHA in the past, and she looks forward to working as a faculty member at GHA for the third time.

Exploring Engineering Design: History and Approach to Innovation

Learn the history of engineering design and the role of innovation from the beginning of our country to today. Learn how everyday products are designed and manufactured. In this course, you will learn how to connect your analytical left-side brain with your creative right-side brain through the design process. In this course, you will experience a collection of interesting and fun exercises and projects to learn how today’s engineer solves design problems.

Dr. Hugh Costello currently serves as the Chair of the Department of Technology at Fairmont State University. He is an engineer by profession and has his own engineering firm. He has a M.S. Engineering Management from the University of Tennessee, a M.S. Mechanical Engineering, from Massachusetts Institute of Technology, and a B.S. Mechanical Engineering from West Virginia University.
GHA Class Choices 2017

**Competition Math and the Math of Casinos**

Is math easy for you? Do you enjoy difficult problems and math contests? If so, this class is for you. We will examine some advanced math ideas that are used frequently in brain teasers, math competitions, and in college level mathematics. We will focus on theoretical underpinnings of calculus, discrete mathematics and combinatorics—topics much more challenging than those in a standard high school math curriculum. We will also look closely at casino games and the math behind them. Good at math? This class is for you.

**Doug Squire,** a Charleston native and a Nitro High graduate, attended GHA in 1998 at WVU. He has taught GHA since 2011. Having earned both the B.A. and M.S. in mathematics from WVU, Doug has been on the mathematics faculty at WVU since 2006. In 2010, he won the Eberly College of Arts and Sciences Outstanding Teaching Award, and in 2011, he won the WVU Foundation Award for Outstanding Teaching. He was debate team captain at WVU and has coached debate both at WVU and Pace Academy in Atlanta, GA. He is coauthor of the textbook Applications of Calculus. He likes to play racquetball, ski and is a huge WVU fan.

**There’s an App for That! An App-driven Approach to Learning Computer Programming**

If you’re like most students, you use “apps” daily. New apps are popping up so rapidly that the Apple Company trademarked the tagline “There’s an app for that” to market its App Store. Have you ever thought about creating your own app? App is simply short for application, or software program application. In this class, you will be introduced to fundamental programming logic concepts using complete, real-world apps programmed in the Visual Basic (VB) language. By the end of the course, you will apply the programming concepts learned to ultimately create your own app.

**Dr. Rebecca Giorcelli,** Associate Professor of Information Systems Management, serves as the Assessment Director for the School of Business at Fairmont State University and teaches undergraduate and graduate classes. She earned her B.S., M.S. and Ph.D. in Industrial Engineering from West Virginia University. She received the 2010 Fairmont State University Outstanding Faculty Achievement Award, the 2011 Harold and Roselyn Straight Teaching Award, the 2012 Fairmont State Foundation Fellowship Award, and the 2013 Regional Service and Engagement/Economic Development Award. This is her fourth-year teaching with GHA.

**Nutritional Biochemistry**

What happens in your body when you are deprived of food for after 36 hours, 7 days, 30 days? What does the body do to save itself? Which areas of the body are the first to be depleted and why? These are questions as we explore the physiological aspects of hunger, a real problem in West Virginia and the world. Feeding America reported that 1 in 6 people suffer from hunger in West Virginia. We will use Hunger: An Unnatural History by Sharman Apt Russell as our guide into many unique scenarios of hunger. The book includes historical studies such as the Minnesota experiment on anorexia. As a class, we will further investigate the subject’s physiological symptoms related to hunger.

**Rebecca Uphold** is from Frederick, Maryland and attended the University of Maryland, College Park where she received a Bachelor of Science in Animal Science. While attending school in College Park she also worked as a research assistant in a plant science lab on campus. This opportunity allowed her to deepen her love for agriculture and botany. After graduation, she attended West Virginia University for a Master in Plant Science and a Master in Secondary Education. She currently teaches advanced academic science in Fairfax County Virginia. She has previously taught a course of ‘chemistry in art’ for the West Virginia Governors School for Math and Science in 2016 and is looking forward to another thoughtful and fun experience this summer.
Advances in Anatomy, Physiology and Medicine during the US Civil War

Advances in disinfection practices, regular use of antiseptics and anesthetics for treatment of wounded soldiers, development of medical specialties such as plastic surgery and cardiology, and even documentation of “traumatic neurosis,” which today we know as post-traumatic stress disorder (PTSD), are examples of medical advances made during the US Civil War. The diseases, illnesses and injuries common in Army hospitals, along with medical research advances will be used at the basis of anatomy and physiology lessons and activities conducted in this class.

Dr. Heather Billings is an associate professor in the department of neurobiology and anatomy at West Virginia University. She earned both the B.S. and Ph.D at Rutgers University, and she has done post-doctoral work at the University of Michigan in the field of reproductive sciences. Dr. Billings says, “I am currently fortunate to be able to pursue my long-time passion for teaching and am currently teaching in human gross anatomy courses for medical, dental, dental hygiene and nursing students. Further, I am developing a new research program focused on improving educational approaches in the teaching of human anatomy. My interest is in introducing innovative curricula for the teaching of undergraduate anatomy courses by integrating clinical concepts into these courses. This research program is still in its infancy, so I hope to have more updates in the future.


Embark on a scientific journey as we learn about the science of life. Starting at the most basic level of atoms and molecules we will travel through a variety of scientific fields as we work our way up to higher levels of organization and function within an organism. We will spend time learning about various aspects of chemistry, biochemistry, molecular biology, cellular biology, genetics, and neuroscience. To conclude our journey, we will learn about Alzheimer’s and Parkinson’s disease and what goes wrong scientifically on a bimolecular scale that leads to such devastating consequences.

Michael Vannatta was born and raised in Montana. He spent time in the US Navy, and is now retired, before beginning his formal education. He obtained bachelor degrees in Biology and Chemistry from Carroll College (MT). He went to the University of Washington to pursue graduate students where he earned his doctorate in chemistry. He completed post-doctoral studies in chemical education at West Virginia University and was a Visiting Assistant Professor from 2010-2014. He moved back to Montana in 2014 and is now a Director of STARBASE (STEM education for 5th graders) for the State of Montana.

The Arts and Humanities

Courts and Democracy

We all lead different “lives in common” as members of our towns, our schools, our families, and other groups. But the one that we all share together is our life in common as residents of the United States. And in that life, we believe in democracy—that everyone should have a voice in collective decisions. The Constitution sets up three branches of the federal government, the first two of which—Congress and the Presidency—are elected by citizens, ensuring that the people have a voice in those branches’ decisions. (continued next page)
The third branch, the federal court system, is not democratic at all. Federal judges are never elected, and once appointed they remain in office for life. But federal courts make important “political” decisions all the time, deciding which acts of the federal and state governments violate the Constitution and must be overturned. This class will examine the seemingly strange place that courts occupy in American democracy, and will ask whether and how the court system can be reconciled with our belief that everyone should have a voice in government decisions. We will examine several moments in American history in which the courts—particularly the United States Supreme Court—have become involved in contentious political debates ranging from slavery to abortion to the power of the federal government to regulate the economy. Students will finish the class with a better understanding of our how system of constitutional government works, and maybe how it could be made to work better.

James Dillon is an Associate in Law at Columbia University Law School and a Ph.D. candidate in Jurisprudence and Social Policy at the University of California, Berkeley. Originally from Madison, West Virginia, James obtained an undergraduate degree in English at West Virginia University in 1999, a law degree at New York University in 2003, and a Master of Arts in Philosophy at NYU in 2005. At GHA, he will be teaching “Courts and Democracy” and “How Do We Know What We Know,” both of which will introduce students to the operation of the legal system and contemporary issues in jurisprudence. James is an alumnus of the 1994 Governor’s Honors Academy, and is thrilled to be returning as a second-time faculty member.

Revolution: Everybody Wants to Rule the World!

#Revolution! Everybody Wants to Rule the World! This class is ALL about REVOLUTION! DEMOCRACY! Fighting for human rights! Artists making WAVES through revolutionary brushstrokes and... performance art via the Boston Tea Party? Join this course as we dive deep into minds of early protesters, challengers to the establishment, and see what artistic troublemakers are up to! We’ll compare them to what’s happening now with the Black Lives Matter Movement, controversies surrounding the Dakota Access Pipeline, and see how artists are taking initiatives to create real social action to support the needs of their communities. After some research, role-play, and debates, we’ll create our own visual and performative responses to issues we’re passionate about to share with GHA and the world!

Karen Gergely is a native West Virginian with a strong heart for Appalachia. She received a BFA from Shepherd University, and holds an MFA in Fine Arts from The University of Cincinnati, DAAP. Her research is rooted in community-based art and social practice, where she encourages communities to learn together, share experiences, skills, traditions, and stories in the name of art. Gergely is currently an Assistant Professor of Art at Graceland University in Lamoni, Iowa, where she teaches a myriad of studio classes, professional seminars, art history, and art ethics. Gergely is an avid adventurer, and loves long distance hiking and bike packing. She recently was inducted into the great Iowan tradition of bicycling across the state for RAGBRAI, and eating deep fried everything at the Iowa State Fair.
Fleshing Out Frankenstein

“It’s alive! It’s alive!” Dr. Frankenstein’s rapturous shouts endure in popular culture — and, why shouldn’t they? After all, his monster’s miraculous awakening came from jolting electricity through the patchworked flotsam and jetsam of cadavers. Pretty sweet, huh? Not so fast. The horror film adaptation is just one version of Mary Shelley’s classic Gothic novel. So what is the real story of Frankenstein — if there is just one? This class will explore the story in multiple iterations, focusing on Shelley’s 1818 novel and the most famous film adaptation. We will also explore two hundred years of Frankenstein’s narrative changes through woodcuts, silent film, a graphic novel, theater, dance, and popular culture, all to see what makes this story so scary, so enduring, and so plainly cool. We will also see if we can reinterpret the story ourselves, bringing our own Frankenstein creation to life. Get ready to shout, “It’s alive!”!

Adam Booth

Adam Booth’s storytelling blends traditional folklore, music, and an awareness of contemporary Appalachia. His original voice, both humorous and touching, is influenced by generations of diverse storytellers from West Virginia. His telling appearances have included Teller-In-Residence at the International Storytelling Center, New Voice at the National Storytelling Festival, resident at the Banff (Alberta) Spoken Word program, a collaboration with the West Virginia Dance Company, and multiple events in seventeen states. Equally at home as a teller and educator, his research and presentations have included the Berea Appalachian Sound Archives Fellowship, Ghost Ranch, the National Storytelling Conference, the Appalachian Studies Association Conference, and the National Endowment for the Humanities Voices from the Misty Mountains summer seminars. His stories and recordings have been honored with two Parents’ Choice Silver Honors, four Storytelling World Awards and Honors, the NSN’s J.J. Reneaux Mentorship Grant, and four West Virginia Liars’ Contest wins. He teaches Appalachian studies at Shepherd University and is the founder of the Speak Story Series. Adam is most at home sharing stories and music with the next generation of listeners and tellers throughout Appalachia.

A Minuet, LIBERTY & the Jig (Using your BEST to discover our Nation’s first steps)

This class will explore the science of the body with efficient and correct exercises that can be continued for a lifetime of healthy habits. Different art forms will be analyzed to create movement to express the information found. The different dance styles of the upper and lower classes of the period will be examined. Political statements and rebellion were communicated through the arts during this era. This research will lead to the history of how the American art forms of jazz music, Broadway theatre and modern dance eventually came into existence. Visual art will be explored through examples of the “luminists”, a defined American art form. Theatre and tyranny will be explored!

Bring some clothes that are comfortable for movement and together let’s discover the seeds of America through our BEST efforts. (Body, Energy, Space, Time) No prior dance or movement study is necessary. Movement is created directly from the physical and intellectual abilities of each individual student.

Toneta Akers-Toler

Beginning her fourth season with GHA, Toneta Akers-Toler is the Founder and Managing Artistic Director of West Virginia’s only professional touring dance company in the history of the state. Toneta’s recent awards include the 2005 WV Governor’s Arts Award for “Excellence in the Arts,” and 2010 WV Governor’s Award to the WV Dance Company for Excellence in “Arts and Education”. Toneta graduated from the Conservatory of Performing Arts at Point Park College and continued intensive study in New York City and at the American Dance Festival held at Duke University. On tour with the West Virginia Dance Company she has taught extensively throughout West Virginia, 14 other states and in Brazil at the Federal University at Espirito Santo.
Your Rights and Maybe a Few Wrongs

The first 10 amendments to the Constitution are collectively known as the Bill of Rights and together with the 14th Amendment they ensure the right of every American to a fair trial, free speech, religious choice, and due process among others, but it would be fair to say most Americans and certainly most high schoolers don’t fully understand and appreciate all of those rights, and even members of the Supreme Court disagree with each other about what they mean.

One could also add that at this point in our history, the knowledge of, and appreciation for, our Constitutional rights might be more important than ever. Religious liberty for all, personal privacy, gun rights, citizenship rights and equal protection of the law have all been major points of discussion, debate and controversy in our national politics.

The class will be heavily discussion based. Actions/decisions/reasoning of the Court in interpreting the amendments will be part of the discussion, but far more of the class will be spent debating for ourselves what the rights should and shouldn’t mean in the future. Many scenarios will be introduced and students will be encouraged to bring the full force of their convictions to class in a respectful manner.

Dan Hollis

This will be Dan Hollis’ 16th year with GHA. He is a professor in the W. Page Pitt School of Journalism and Mass Communications at Marshall University. Hollis is the 2012 Carnegie Foundation for the Advancement of Teaching and Council for Advancement and Support of Education West Virginia Professor of the Year and the 2011 recipient of Marshall University’s Marshall and Shirley Reynolds Outstanding Teacher Award.

He has been with the School of Journalism and Mass Communications since 1999 and primarily teaches JMC 101: Media Literacy and JMC 402: Mass Communications Law. Professor Dan also regularly produces award-winning video projects on a full range of topics including the roller derby, road bowling and glass making. His videos can be found on www.youtube.com/danhollisvideo. He recently brought home two first-place awards for his creative work from the National Broadcasting Society's national convention in New York City, according to a news release from the university.

There’s No Such Thing as Beethoven: Nationalism and Why It Matters

We tend to imagine Beethoven’s music as both moral and universal—as music that is not just “good,” but also “good for you.” But more than the sounds themselves, our beliefs about Beethoven’s music originated from a series of immensely successful propaganda campaigns organized by German nationalists during the nineteenth century. Period authors transformed Beethoven—a guy that wrote some music and happened to be at the right place at the right time—into “Beethoven”—the masterful genius who overcame even his own “deafness”—as part of their formulations of a newly-emerging German nation.

This course examines The Beethoven Myth with four aims: 1) To examine the ways nationalist thought shaped twentieth-century history (Beethoven’s music became an especially dark propagandist tool during WWII, the height of German nationalism); 2) Learn to recognize opinions-expressed-as-facts (that “Beethoven is great,” for example); 3) To explore the ways nationalist beliefs still shape the way we hear music today (why is Beethoven’s music so much “better” than Kanye West’s?); and perhaps most importantly: 4) To practice thinking carefully and with complexity about the ways nationalism continues to frame even modern political conversations—a skill that will aid us in developing our own advocacy campaigns to address the needs of our communities. What issues are important to you? How could you use sound to cultivate your own nation? And what should that nation look like? Come prepared to work as a team to promote a cause of your choice.

Kelly St. Pierre

Kelly St. Pierre is thrilled to join GHA for her fourth summer with the program. She holds a Ph.D. in Musicology from Case Western Reserve University has been working as an Assistant Professor of Musicology at Wichita State University since 2015. In addition to other recent publications, she released her first book, Bedřich Smetana: Myth, Music, and Propaganda, with the University of Rochester Press in March, 2017. She is also currently working on her second book, Measuring Czechness: Musicology, Ethnicity and the State, which is an invited submission to the University of California Press.
“Young America” and “Shakespeare, Young America, and the New Millennium”

Are you Shakespeareanced? In this course, we will explore several of William Shakespeare’s major plays (such as Macbeth, Julius Caesar, and The Merchant of Venice) through close reading, focused viewing, and high-level discussion, with particular emphasis on the analysis of Shakespearean text as a performance document; the discussion of early modern staging and performance practices, as well as the adaptation of those practices on and for the twenty-first-century stage and audience; the exploration of the contemporary political and social contexts in which the plays were written and first performed; the examination of the thematic connections between the plays and the social and political contexts and contemporary issues of Young America; and the examination of the thematic connections between the plays and the social and political contexts and contemporary issues facing our country in the new millennium.

John Shirley. John Shirley taught in public and private high school and college classrooms for the past fifteen years. After attending GHA as a student in 1995, he earned a B.A. in English from Bridgewater College and both an M.Litt. (with a concentration in teaching) and an M.F.A. (with a concentration in directing) in Shakespeare and Renaissance Literature in Performance from Mary Baldwin College. John has an interest in looking at themes of damnation and redemption in literature and drama and has developed something of an obsession with Macbeth. He is also a published poet and produced playwright, an occasional photographer, and a paranormal junkie. In addition to more than ten years inside the classroom, he has been an RA, intern, and program assistant and has served multiple terms as GHA’s faculty representative on the WV Governor’s Schools Advisory Council.

**BROAD-BASED COURSES**

The History of Mathematics

Starting from the Greeks and their contributions to mathematics, we will make our way toward the study of the development of mathematics in the modern age. Our focus will concern the era of the most rapid growth in mathematics, the 17th and 18th centuries.

During the course, we will spend a clear majority of time discussing the period around the scientific revolution; a time when mathematicians, such as Sir Isaac Newton and Leibniz invented Calculus, and Leonhard Euler and Carl Friedrich Gauss who, arguably, are the most influential mathematicians of this time due to their diverse contributions to mathematics. We will analyze how discoveries made by these mathematicians has helped advance our understanding of mathematics and how much we have progressed in proving some of the problems raised by these mathematicians.

Anup Poudel

How Do We Know What We Know?

Who was the first president of the United States? What is the speed of light in a vacuum? What time will the sun rise tomorrow? You probably know the answers to these questions, but how do you know that you know? And what does it mean to know, anyway? This class will try to figure that out. Starting from the fundamentals of logic and reasoning and working our way through high-profile controversies about specific knowledge claims, we’ll try to decipher what we really mean when we say that we “know” something, or that something is a “fact.” We’ll think about how our brains and senses work to form beliefs, and some of the ways that they can trick us. We’ll also take a close look at the methods of modern science, thinking about whether and how science can deliver on its claims to produce reliable, objective knowledge of the natural world. Finally, we’ll look at the way claims of knowledge are used (and misused!) in the real world to make social and political decisions that affect all of us. Come join us! You know you want to.

James Dillon
Mathematical Logic and Casino Games

Did you know there is more to math than addition, multiplication, polynomials, and graphs? A large part of mathematics is logic and arguments. In this class, we will examine the fundamentals of symbolic logic. We will take arguments, analyze them, and decide whether they are valid or not. We will look further at how to improve our own arguments made in speeches, papers, and casual conversation. We will also learn some mathematics related to probability and expected value. We will learn how to play some popular casino games and the math behind them. Finally, we will make logical arguments both for and against legalization of casinos in the United States. Doug Squire

Smart Homes, Smart Cars, and Computer Interfaces for Reading Minds: A Look at Emerging Technologies That Are Changing the World

Do you ever wonder what the future holds? IBM provides predictions for you with 5 in 5 – five technology innovations that will change the way we learn, work, live and play within the next five years. Recent predictions explore the idea that everything will “learn”. Imagine if your house could learn to maintain itself, or your car could learn to drive itself, or your classroom could get to know you to determine the best way to teach you. This course explores the evolution of technology and the pathway to this new era where machines learn, reason, and engage with us in a more natural and personalized way. The effects of technologies on society will also be examined. Rebecca Giorcelli

An Introduction to Technology and Mathematical Preparedness for College

Today's student has been born into a world of technological advances and devices. Many are unprepared to perform at a college level and have no idea of the many programs and career opportunities available to them. Do better on your ACT! Reduce the difficulty of transitioning to the expectations and demands of College programs. This class will make you aware of the many opportunities in Technology, help you overcome mathematical and algebra stumbling blocks, and give you helpful tips on how to succeed in college. Hugh Costello

Preparing for Our Future

Death and taxes, the only two things guaranteed in life. Most believe that for one of these things, we are never truly prepared. However, there is actually rhyme and reason to how taxes work, and we will discover how manageable a process can be. School is filled with algorithms and arithmetic that seem to have minimal use outside of the classroom. This course is designed to introduce us to numerous ways math will be encountered in our lives and others. From investing in the stock market, to getting a job, to buying a house, we will explore and understand how these processes work, from a logistical perspective as well as a financial one. Knowledge and preparedness are so important to living a fulfilling life. By educating ourselves on some of the aspects of life our forefathers have created, we can better predict and shape our future for the better. Cody Hood

Sensationalism and Science in the News

Today’s headline, “Two cups of coffee a day good for heart health.” Tomorrow’s headline, “Increased cancer risk for coffee drinkers.” Did you ever read headlines like that and wonder how true they are? Are you confused about what to believe? Do you want to know more about the science behind them? Did you know sensationalized news stories about science topics have been documented since at least 1835? In this course, students will choose science and health stories from the news, and with instructor guidance, learn about the science behind them, and the history of sensationalism in journalism. Then, try your hand at writing your own news story about a scientific breakthrough. This is a science course for students who have a primary interest in future non-scientific careers. Heather Billings
Arts/Humanities—Broad Based

EXCUSE FOR A PARTY!!!, The role of dance in Society from 1776 through 1864 (Using your BEST to understand class divisions and politics as America was formed)

This class will work on understanding the most incredible machine, the human body. A body science regiment will be learned and movement will be explored through improvisations. The concepts that will be used for creating movement communications will be from the exploration of the cultural and political scene of this period. Together we will find our way through understanding that class divisions have been apparent but denied from the beginning of our nation to this current time. We will discover with our BEST efforts (Body, Energy, Space, Time) that all the different societal classes looked for an excuse for a party! What is a party without dance and music?

Bring some comfortable and moveable clothes so we can discover what the parties of a past age were all about! No prior dance or movement study is necessary. Movement is created directly from the physical and intellectual abilities of each individual student. Toneta Akers-Toler

Literature’s “Single Story” Syndrome

Chimamanda Ngozi Adichie said, “The problem with stereotypes is not that they are untrue, but that they are incomplete. They make one story become the only story.” In this course, we will study how literature has not only influenced, but also been influenced by, the concept of groups of individuals being categorized by a “single story.”

From American Romanticism and Transcendentalism constructing contemporary caricatures like Cloyd Rivers, to hip-hop music arguably both shattering and reinforcing African American stereotypes, the impact of “single stories” hard to miss. In this class, we will not only analyze these ideas in the context of literature, but we will also reflect on our personal, culture-prescribed “single story,” and how it has influenced the development of our own identities. Maria Miller

What Haunts Us

The nineteenth century saw the emergence of medically-diagnosable, often opium-induced “obsessions” (or “idées fixes”) that blurred boundaries between waking and sleeping hours, especially among Artists; the building of automated dolls (or “automata”) so lifelike that some worried they might fall in love with a machine; and ghost stories concerned not just with the dead, but with how sweetly and alluringly the dead might entice us to our own ends. Today, a host of popular music similarly explores blurred boundaries between drug-induced dream worlds and reality (The Weekend’s “Can’t Feel My Face” (2015), among others); popular movies like Her (2013) hinge on the possibility of a man (Joaquin Phoenix) falling in love with a machine (the voice of Siri on his cell phone); and still other films like Black Swan (2010) feature Natalie Portman being slowly drawn into the dark side and (spoiler alert:) eventual suicide of her character in Tchaikovsky’s Swan Lake.

This course examines the mode of nineteenth-century writing in music and literature that yielded works and attitudes like those listed above, called the fantastic, and asks us to consider how and why its same anxieties continue to haunt our popular imagination today. What do fantastic works help us understand about the needs and concerns of listeners? What do the sounds in popular music and film reveal about the expectations—sonically and socially—of contemporary audiences? In the end, students will work together produce a podcast that examines fantastic works in their own time and place to learn about even contemporary listeners’ anxieties and political fears. Kelly St. Pierre
You’ve got to Know When To Hold ‘em - Know When To Fold ‘em

Love DRAMA? Dig ROLE-PLAYING? Heart HISTORY? GAMER? Can’t get enough of HUMAN RIGHTS or SOCIAL JUSTICE? This is the course for you! We’ll travel back in time to role-play through some highly controversial scenarios dealing with race, segregation, land ownership, native rights, and the industrial revolution. See firsthand how the world changed during the 18th and 19th centuries! Wear costumes! Create sets! Use accents! We’ll connect everything to contemporary times, and even author a game together! Take a gamble -This is your Bill and Ted’s Excellent Adventure!

#ZiggyPiggy!!! #ZiggyPiggy!!! Karen Gergely

From the Birth of Quantum Mechanics to the Development of Quantum Dots: A Science Story

Nearly 100 years in the Making

Most people think of “Quantum Mechanics” as being extremely complicated. The mathematic equations behind the theory are quite intense, however, the behaviors for which the equations represent are everywhere in our daily lives. We will learn the basics of quantum mechanics and will focus on the structures and behaviors of atoms and their associated sub-atomic particles. The second half of the course will delve into the relatively new field of Nanotechnology. We will learn about the unique properties that matter exhibits at the nano-scale and will learn about amazing materials called quantum dots and their application to modern biotechnology. Michael Vannatta

The Old One-Two Punch

The class is based on the First and Second Amendments to the U.S. Constitution. Although they weren’t planned to be, the first and second amendments have come to be seen as perhaps the most important of the freedoms because they are, by some degree of chance, the first and second that end up enumerated as such. The First protects what are commonly known as the five freedoms: religion, speech, press, assembly and petition and the Second has been seen by the courts to protect an individual’s right to own a firearm for protection. Obviously, both are very important and ripe for discussion in West Virginia. But the work that James Madison, the Father of the Constitution and author of the first and second amendments, and others accomplished in 1791 is far from finished or settled. For example, a report released in October 2016 from PEN America suggested “a rising generation may be turning against free speech.”

Dan Hollis

“Young America” and “Speaking the Speech”

If you’ve ever wanted to explore the process of taking Shakespeare off the page and onto the stage (but weren’t sure where to start), this class is for you. During our time, together, we’ll combine academics and the arts as we explore foundational textual analysis, character development, and text based acting techniques to give voice – and life – to the poetry and drama of William Shakespeare. Our creative process will include, but not be limited to, the analysis of Shakespearean text as an outline for performance; the discussion of Elizabethan staging and performance practices and the adaptation of those practices on the modern stage; and the discussion, exploration, and application of a variety of textual and practical acting techniques as we interpret and perform a variety of sonnets and soliloquies. John Shirley

#BlackMusicMatters

#BlackMusic forms the backbone and soul of our #AmericanMusicalLandscape ! Long before the strong voices of @KanyeWest @Beyonce & @NICKIMINAJ filled your ears, themes of #struggle and #PersonalExpression were foundational to #popsongs 🎶 This class begins with #Black #19thC #rootsmusic and looks at analyzing #socialjustice #poetry + #lyrics in 200 years of
GHA Class Choices 2017

#AmericanPopSongs to find out how #BlackMusic shaped and responded to culture 🎵 🎵

Join up to explore A-A sociopolitical musical history before #BlackLivesMatter, listen to #amazingsongs, speak your mind, and #FightThePower $ #thestruggleisreal #funk @JamesBrown @BillieHoliday #minstrelsy #banjo #warwhatitisgoodfor #rockandroll #LGBTQ @StevieWonder @NinaSimone #kingofpop #AChangeIsGonnaCome. Adam Booth

Why Are There So Many Hungry People? How Do We Feed Them?
The United Nations Food and Agriculture Organization estimates that about 795 million people of the 7.3 billion people in the world, or one in nine, were suffering from chronic undernourishment in 2014-2016. The estimate of 276 million chronically undernourished people in 2014–16 is only marginally lower than the number in 1990–92. Almost all the hungry people, 780 million, live in developing countries, representing 12.9 percent, or one in eight, of the population of developing counties (FAO 2015).

The world produces enough food to feed everyone. This growth in food availability in conjunction with improved access to food helped reduce the percentage of chronically undernourished people in developing countries from 34 percent in the mid-1970s to just 15 percent three decades later. (FAO 2012, p. 4) Feeding America reports that 1 in 6 people in West Virginia suffer from hunger. So why are there so many hungry people, and how do we feed them? We will use Hunger: An Unnatural History by Sharman Apt Russell as our guide into many unique scenarios of hunger. As a class, we will investigate and debate how poverty and hunger have shaped life and culture for many people and the global causes. Rebecca Uphold