

Western Reserve Academy  
**ECHO MODULE CATALOG 2019–20**



## ECHO PROGRAM at Western Reserve Academy

WRA's ECHO modules are designed to extend, enrich, and support student learning in a way that would not be possible in the Monday through Friday schedule. Modules will meet under a few different formats during one of the three trimesters (fall, winter, and spring). You will see the possible formats on the next page. Students will enroll in two modules per year.

ECHO modules are academic in nature: they present clear learning objectives that echo the spirit of our Monday through Friday program. The modules provide students with the opportunity to discover a new academic passion or to pursue an area of academic aptitude in depth.

The school will list students' ECHO modules on their official transcripts, with a grade of Honors Pass, Pass, Low Pass, or Fail. Modules will require approximately one hour of preparation before each class meeting. Moreover, teachers will expect conscientious attendance, earnest effort, and productive participation.

As you will see in reading through this catalog, the offerings are diverse, reflecting the broad interests and expertise of the WRA faculty and staff. We hope that the modules enable students to experience intensive, extended, innovative, and interdisciplinary opportunities for learning.

Students will rank their preference in trimesters and choose modules for each trimester from among the many offerings. (Students will be enrolled in their top available modules for two trimesters; moreover, we will take students' athletic commitments into account when determining which trimester to leave open.) Only a few offerings have prerequisites. All ECHO modules share the purpose of enhancing the transformational experience of a WRA education.

We hope you enjoy reading through this catalog and engaging in the eighth year of this exciting program.

## CLASS FORMATS

### **Format A:**

Designated Saturdays (9 - 11:30 a.m.)

### **Format B:**

Designated Friday Evenings (7 - 9:30 p.m.)

\*\*to take place the evening before ECHO Saturdays\*\*

### **Format C:**

Three Extended Saturday Meetings (9 a.m. - 2 p.m.)

\*\*Chosen Saturdays Listed in Catalog\*\*

### **Format D:**

One Extended ECHO Weekend

\*\*ECHO Weekend Listed in Catalog\*\*

### **Format E:**

Alternative Format

## FALL MODULES

### **A Study of Sherlock Holmes** | Amy Donnelly | Format: A

What makes a novel hard to put down? How can a short story written many years ago still keep the reader's attention? What qualities does a detective have that make him or her distinct, successful, and timeless? In this module, we will explore the qualities of the old fashioned gumshoe, specifically Sherlock Holmes, and the transformation of this iconic character throughout the years. This module will instill a love of the genre and particularly of the passionate following of this particular fictional detective.

### **Act Without Words** | Adam Yankay | Format: B

Composer Claude Debussy said that "music is the space between the notes." As an actor, Mr. Yankay says that acting is what happens when you're not saying lines. In this module students will read, observe, perform, direct, and write scenes and moments with no dialogue. Author Sam Beckett, actors Brad Pitt, Julia Ormond, and Denzel Washington among others will provide a platform from which students will explore the power and subtlety of communicating on stage or screen without words. A culminating performance should be expected.

### **An Introduction to Chinese Culture: When "Hello!" Meets "Ni hao!"** | Judy Chen | Format: E

Possible topics to be introduced in this module are Chinese cuisines, calligraphy, Chinese performance arts, Feng Shui, Tai Chi, Qi Gong, Meditation, festivals, and philosophy. This module will be taught in English. Learning materials will be provided with hands-on practice. We'll visit the Tibetan temple in Richfield and Chinatown in Cleveland on the extended meeting day.

Special Date(s): TBD

Note: This module will meet on three Friday evenings and one extended meeting on a Saturday or Sunday. The extended meeting date will be decided based on students' availability.

### **Canton to Cleveland: Pro Football and the Cleveland Browns** | Matthew Gerber | Format: B/E

The game of professional football originated in Canton, Ohio, a mere 30 miles from Hudson. The National Football League has evolved into the most attended and popular sport in the United States. This course will look at the history of the NFL and its evolution into the leading professional sports league by focusing on its business model, safety concerns and the Cleveland Browns. We will evaluate our local team, the Cleveland Browns, as to how operate a professional football team and how it impacts the community. We will talk with the media, former players, team officials and fans about the Cleveland Browns, its rich and storied history and the future of the NFL.

Note: This class will meet Friday evenings mostly, however, it is possible for a Saturday or Sunday meeting to accommodate the schedule(s) of the guest speaker(s).

### **Dance Composition and Choreography** | Katie Velbeck | Format: A

This course will explore basic dance compositional structures and movement development techniques. Students will be encouraged to explore different processes and approaches while crafting original choreography. Students will test their dance ideas in class through different improvisational and compositional techniques. They will also be participating in feedback

discussions, critical analysis, and journaling. This will play an important role in both the learning and the creative process as well as develop their observational and critiquing skills. Students can use this course to find their own personal voice and develop their unique style.

### **Digital Driver's License: Building a Technology Foundation with the IC3 Certification** | Brian Schwartz | Format: B

Work towards standing out in the future with a digital driver's license. The IC3 certification is based on three parts: Computing Fundamentals, Key Applications, and Living Online. Computing Fundamentals will explore the ins and outs of software, hardware, and operating systems. Key Applications prepares students to better use the tools built into Microsoft Office and build a basic understanding of databases. Living Online builds on top of student's knowledge of the internet by working on staying organized online, proper etiquette for electronic communication, and staying safe on the internet. At the end of the course, students will be prepared, and have the opportunity, to take the IC3 certification exam and receive a globally recognized certificate to add to their resume.

### **Exercise Physiology: An Investigation into Nutrition, Body Composition, Anatomy, and Training Practices for Athletes** | Michael Bonomo | Format: A

This module is designed to be an introduction to the physiology of exercise. Students will be exposed to the major concepts surrounding the anatomy and composition of the human body, nutrition and the processing of energy by various bodily systems, and the mechanics of the stresses of exercise on the body. The concepts of writing exercise prescriptions, evaluating cardiovascular health, and preventing and managing injuries will also be covered. The laboratory experience will be an essential component of this module. Hands-on activities will include techniques on assessing body composition, strength-testing, cardiovascular fitness, and maximal oxygen consumption.

Note: All students enrolling in this module will be expected to participate in labs involving exercise testing.

### **Forensic Science Technology** | Robert Aguilar | Format: A

This module deals with the application of basic biological, chemical and physical science principles in conjunction with technological practices used in real world criminal investigations. The major themes of study in this module include pathology, anthropology, odontology, ballistics, trace evidence, blood spatter, DNA, fingerprints, impression evidence, and questioned documents.

### **Going Global: Global Goals and Local Action** | Julianne López | Format: B

Is there a new global order? How do we currently engage with others? What will the future mean in terms of citizenship and culture? This module will examine citizenship and culture conceptually and reflect on their critical role in the global context. Together we will explore definitions, evolving considerations and opposing viewpoints on what it means to belong. Throughout our time together we will develop a shared vocabulary, and deeper understanding around the importance of citizenship and culture in our globalized world. As we continue to study citizenship and culture in our globalized world, we will move from theory to action. This module will be organized primarily around the 17 Global Sustainable Development Goals that were established by the UN to make a better world by 2030. Together we will explore different vehicles to engage on the global stage such as We, ONE, Global citizen, Change, Project Everyone, and take action.

**Horror!** | Jeff Namiotka | Format: B

"The oldest and strongest emotion of mankind is fear, and the oldest and strongest kind of fear is fear of the unknown." Thus begins H.P. Lovecraft's monumental essay, "Supernatural Horror in Literature." In this module, we'll explore the horror genre in its many manifestations, including short stories, radio drama, cinema, and haunted attractions. Lovecraft's essay will serve as our backdrop, so we'll begin by drawing out the more salient points he makes in it regarding the sources of human fear, and reading works by the authors - some familiar, others obscure - whom he regarded as exemplary. During the latter half of the course we'll consider the practitioners of the horror genre who followed him and whom, in most cases, he greatly influenced. N.B.: This module is not for the faint of heart. Over the course of our five weeks together, the aim will be to plumb the depths of horror, and it's more than likely that we'll scare ourselves silly in the process. If you are the person who says horror is stupid and claims not to understand its appeal for the rest of us, you would do well to avoid this module. After all, your dismissal of horror is probably just a defense mechanism. Otherwise, enter at your own risk.

**Ice Cream: History, Production and Marketing: The Ice Cream Industry** | Christine Borrmann | Format: A

In this module, students will be introduced to the history of this great American favorite. We will study from the cow to the cone and talk about the ingredients, the origins of certain favorites such as cones, sundaes and banana splits. Next we will go out in to the local community (Akron, Cleveland, Kent, Stow and Richfield) to see different processing and packing, and of course to taste various products. After several field trips students will be asked to make their own ice cream using two very different techniques. Then we will meet with a marketing specialist from the food industry to help advise students on different marketing strategies. Lastly students will make their own flavors and we will vote on the best flavor and perhaps share them with one of the local industries.

Note: This module will meet for five designated Saturdays.

**Introduction to Stage Combat** | Brandon Davies | Format: A

This class will focus on the art and skill of stage and stunt violence. Student actors will train in unarmed fake fighting in order to perform repeatable violence for the stage with safety and precision. From punches and slaps, blocks and kicks or just falling safely, the techniques learned in this course will help keep the actors safe long after the class is over.

**Loving Landscape Painting with Bob Ross: Experiencing the Nature Genre** | Lisabeth Robinson | Format: B

This course offers students the opportunity to enjoy the creative process of painting in a pressure-free environment. With Bob Ross's soothing voice, and the beauty of being able to stop and start the videos, students can paint and learn at a comfortable pace. Each week we will tackle a "type" of landscape (ex: Seascape, Forest-Scapes, Fieldscares, Desert-scapes, etc.) studying famous artists' work in the genre, and then attempting a similarly-themed Bob Ross painting. It's all about the journey, not the product, as we celebrate our "happy little accidents"--as Bob would say.

Note: This module has a \$30 materials fee for which students get a personal brush set, an easel and a palette knife.

**Neuroscience and the Adolescent Brain: Why Do You Sometimes Feel Like Your Brain Is A Mess? Your Neurons Are Being Destroyed!** | Tiffany Ott | Format: A

A funny thing happens when you hit puberty -- your brain begins a process of destroying millions of neurons! Explore how the brain changes from birth to adulthood and answer the age-old question: Why is being a teenager so hard?

**News and Social Media** | Sarah Forrer | Format: B

Where do you get your news? This module explores news and how we process it. From traditional media to social -- what sources do you rely on, trust the most and why? From editorial to advertorial, we'll explore traditional print media and television. We'll draft press releases and discuss distribution. We'll take a deep dive into social media and how it's used for marketing and sharing news. During one of our sessions, students will visit a local news station in downtown Cleveland. (This class will meet for four Fridays and one extended weekend day to visit a news station.)

**"Our School": WRA's Version of Thornton Wilder's "Our Town"** | Rich Hoffman | Format: B

Students will re-write Thornton Wilder's classic play, inserting elements of our campus and its denizens in the appropriate places. The plot will vary slightly, when appropriate; but we will follow Wilder's text as the template of our own story.

**Racism in Sports** | Jon Butensky-Bartlett | Format: B

This course will introduce and investigate past and current issues with racism and sports. An emphasis will be placed on the current issues and will culminate in a final presentation about a significant event involving racism in sports.

Note: This class will meet 4 Friday evenings with one Field Trip to the Football Hall of Fame (TBD).

**The Appalachian Trail Experience** | Laurie Allen | Format: E

This module provides an introduction to long-distance hiking. Students will learn how to outfit themselves for an extended stay in the wilderness. We'll pack a thru-hiking backpack with all of the essentials. How much weight can you comfortably carry? How do we ensure safe drinking water in the backcountry? We will prepare and dehydrate trail snacks, watch a documentary about Karl Melzer's recording-setting thru-hike, and learn about the history, topography, and ecosystems of the Appalachian Trail. The module will culminate with a mock Appalachian Trail day hike along a section of Ohio's 1,444-mile Buckeye Trail. We'll plan our route, organize our food, practice leave-no-trace hiking, and investigate potential water sources and camping sites along the way.

Note: This module will meet on three Friday evenings and will culminate with one extended meeting on a Saturday or Sunday.

**The Birds and the Bees: Building Support for Pollinators and Native Species of Northeast Ohio** | Beth Pethel | Format: C

Students will learn the importance of pollinators to the Northeast Ohio ecosystems and scout, design, organize, and install a pollinator garden on campus. Students will also refurbish and install nesting boxes for native birds throughout the campus. Students will explore ecology, botany, ornithology and invertebrate biology in the context of pollinators and native species and their contributions to our ecosystem. Students will plant a garden on campus which they will be able to observe and enjoy well after the end of the ECHO. This ECHO would occur over the first three Saturdays of the fall season.

**This Old Pond: A Deeper Look into Life of the Hockey Pond** | Jill Spano | Format: C  
This ECHO begins with a field trip to the West Creek Reservation where students will work through a variety of activities to learn more about assessing the water quality in a natural body of water. Upon returning to campus, students will apply their understanding of water quality to do an in depth study of the hockey pond on WRA's campus. A naturalist from the Watershed Stewardship Center will visit campus to help students come up with an action plan to restore the hockey pond to a healthier status. Students will submit a final action plan to the school with ideas to move forward with hockey pond restoration.

**Women In Business** | Emily Thews-Baldrige | Format: B  
The course will delve into the history of women in business, do case studies on current and past female leaders (Sheryl Sandberg, Marissa Mayer, Martha Stewart, etc.), and examine questions like "Does the glass ceiling still exist?" and "Are women expected to behave differently in the workplace, and if so, why?"

## WINTER MODULES

**Ballroom Dancing** | Jennifer Nagano | Format: B  
This module provides an introduction to ballroom dancing. Students will learn how to dance several popular ballroom dances including waltz, foxtrot, tango, rumba, cha-cha, and swing. We will explore the fundamentals of partner dancing such as the lead-follow relationship and appropriate etiquette. Students will develop their understanding of rhythm, balance, movement, and style in the context of these dances. We will conclude the module by attending a social dance at a local ballroom dance studio.

**Boys in the Boat** | Jeff Warner | Format: A  
Boys in the Boat is the exploration of the 1936 Olympic gold medal-winning 8-man crew team from the USA/University of Washington. The story is another Depression-era sports story, like *Seabiscuit* and *Unbroken*, though by a different author. What makes this piece different than the other two novels is that this story emphasizes the importance of committing oneself to something greater than yourself.

**Exploring the Harlem Renaissance** | Brandi Wheeler | Format: B  
In this module, students will be introduced to the Harlem Renaissance, a literary, artistic, and intellectual movement that helped to foster a new black cultural identity in the 1920s. Each week, students will be introduced to new voices and important works of the Harlem Renaissance. Students will have opportunities to explore different aspects of Harlem Renaissance art, music, and literature through hands-on, creative projects.

**Formal Feelings: Prosody and the Machinery of Poems** | Conor O'Sullivan | Format: B  
Do you ever wish you could scribble a sestina? Trill a triolet? Vanquish a villanelle? Labor over a luc bat? Do you think of verse when you hear that freedom isn't free? If you like to write poems-- or would like to start-- and wonder how poets can make a sonnet sing, this module is for you. You

will read a wide variety of poems, from a broad range of places and times, and you will emulate great writers as you learn to control language, both its sense and its sound. You will work with your fellow students to shape your poems and come to understand how formal constraint can in fact free the poetic spirit within you. Your writing will be more precise, more efficient, and more elegant at the end of this module--and those are skills that you can bring to bear in any subject, in any style.

**History of World War II : How and Why the World Changed as a Result of World War II** | Brand Clozen | Format: A

Students will study the causes, early US response and involvement, major theater campaigns, political and social impacts of the war, and how war affects individuals (both combatants and civilians) on a personal level. This will be accomplished through reading selected works, viewing film, lecture and discussion, and will include a student project involving contact with a veteran.

**Hollywood Comes to Hudson** | Caitlin Fritz | Format: B  
The class is a look at Hollywood, film, media from the writers view. The course will look at production design, writing TV comedy, producing and directing, writing a TV drama, producing on a low budget, talent agencies, film finance and post production and movies. It will feature a behind the scenes look at current tv shows and future movies and shows. The main focus of the course is writing for television, commercials and movies with instruction from WRA graduates employed in the industry.

**Introductory Robotics** | Joel Preston | Format: A  
We will construct robots in teams of two students using the Lego Mindstorm set. No experience necessary. The students will build mechanisms to perform specific tasks which will be increasingly challenging. The plastic parts make construction, literally, a snap. Motors and sensors will be combined with the mechanisms and controlled using a programmable microprocessor. Object-oriented programming will be introduced and used.

**Intuitive Calculus** | Gerard Manoli | Format: B  
Intuitive calculus is a non algebraic approach to the study and understanding of the concepts of calculus including limits, continuity, derivatives and the definite integral. Students will learn how to use simple geometric and numerical approximation methods and techniques to demonstrate and understand the fundamental concepts of calculus. Since the approach is not algebraic, as in the formal study of calculus, any student who can calculate the slope of a line, calculate the area of a rectangle and use a graphing calculator can study calculus through this approach. (Note: this offering is for students who have completed Math 21 or its equivalent, but who have NOT yet had calculus and are not currently enrolled in a calculus module.)

Note: Students may NOT be enrolled or have taken calculus.

**Musical Theater: Exploring Broadway and Beyond** | Midge Karam | Format: E  
You know 'Wicked' and 'Phantom' and 'Le Mis' but do you know 'Passion' or 'Godspell' or 'The Fantasticks' or 'Parade'? Why not? Using live performances as our vehicle for further study, we will celebrate and learn about the huge body of work that makes up American Musical Theater.

Note: Students should expect some flexible scheduling to attend local performances (Friday evenings, Saturday matinees, or Sunday matinees).

**Philosopher and Madman: The Life and Thought of Friedrich Nietzsche** | Jeff Namiotka |

Format: A

The nineteenth-century German philosopher Friedrich Nietzsche was wont to proclaim during his own lifetime that his "true readers" had not yet been born and that his greatness would not be recognized until "the day after tomorrow." The prescience of this remark is simply astonishing. We now inhabit his "day after tomorrow," and not only has his work achieved world-wide recognition and even adulation, the urgency of his message has never been more compelling than it is today. In our six weeks together, we shall consider each of Nietzsche's major doctrines, from eternal return and will to power to resentment and the death of God. Perhaps more importantly, however, we shall endeavor to determine how these doctrines, both individually and collectively, can serve to inform our postmodern world.

**Planing and Staining: An Introduction to Woodworking** | Michael Bonomo | Format: D

Grab your drills and saws and let's get ready to work! This course will offer you exposure to the tools, tips, and tricks needed to create your own special woodworking pieces. Whether you already know how to use a drill or miter saw, or whether you are unsure of what a Phillips head screwdriver is, this is the course for you! Projects will be adjusted to accommodate varying abilities!

Special Date(s): January 10, 2020; January 11, 2020; January 12, 2020

**Science and Society** | Anthony Baldrige | Format: B

The goal of this ECHO is to explore the relationship between scientific advances and society. We live in a world where science is politicized and scrutinized based on opinion and belief. What is the role of science in society? Can science be moral or immoral? To what extent does or should ethics play a role in scientific advancement? How should scientific advances and discoveries be integrated into our modern world? These are just a few of the questions this ECHO looks to explore.

**Sewing By Machine: Threading, Seaming, Embroidering** | Lois Howell | Format: D

In this ECHO, students will learn the basics of setting up and using a sewing machine. They will also plan and budget for project supplies that will culminate with a shopping trip to Jo Ann's Fabrics. Projects to complete will be a pair of pajama pants and a pillow case (including personalized embroidery designs) for each student.

**Sports Medicine, Concepts in Injury and Sports Science** | Alan Stiver | Format: A

This module is designed to introduce students to concepts in Sports Medicine and sports injury. Students will gain a functional understanding of how the body adapts to physical activity and become aware of the most common types of sports injuries and how the body heals itself. Students will also be introduced to medical terminology, orthopedic anatomy, physiology, therapeutic modalities, rehabilitation, and will learn basic concepts in Exercise Physiology as it pertains to injury prevention. This will be achieved through lecture and hands-on experience.

**The Business of Restaurants: Beyond the Dining Experience** | Todd Gilbert | Format: A

The Restaurant Experience is a full module on the ins and outs of the service industry. Beginning with an appetizer on the history of restaurants and finishing with a dessert of student presentations and proposals (on your very own restaurant and concept), our class will spend each Saturday exploring, understanding, and discussing many aspects of visiting and opening a

restaurant business. From food trucks to food sources, back of the house language to front of the house hospitality, little budgets to big chains, and anything in the middle, we will take a thorough look into the restaurant industry and learn to effectively evaluate a company's brand.

**The Flow of the Century** | Andrew Borneman | Format: B

What do Shakespeare and Kendrick Lamar have in common? They both like to "flow." They both have beats. They both use alliteration, anaphora, onomatopoeia. They both rap about love. We will look at all kinds of rap and hip-hop artists from the past 30 years, artists like the Notorious B.I.G, Tupac, RaKim, A Tribe Called Quest, and Jay-Z just to name a few and see what they have in common with poets like Sylvia Plath, Percy Shelley, John Keats, and Robert Frost. We will examine rap and hip-hop the same way we do poetry and note similarities and differences in language and theme. We will consider the influence of race and class struggles of the last 30 years compared with various poets' personal and political crises from the last few hundred years. Students will create their own flows, their own rap, their own poetry and personal essays that reflect and describe this creativity. Student's final presentations of poetry and performance portfolios will accompany a trip to a local rap or hip-hop show.

**The Holocaust (Winter Offering)** | Jillian Nataupsky | Format: B

This course will provide students with the history of the Holocaust, including the causes, effects, aftermath, and long lasting legacy. We will also discuss the concept of guilt and responsibility and what role we as world citizens play in preventing future genocides. The class will largely be discussion-based and interdisciplinary. We will examine writing, literature, art, and film to learn about the Holocaust.

Note: This ECHO will meet on four Friday's and one Saturday to allow for a trip to the Maltz Museum of Jewish Heritage.

**Urban Planning and Placemaking: Rethinking the City** | Sarah Horgan | Format: E

This module will introduce students to the challenges and opportunities of two downtown districts - Cleveland's downtown and urban neighborhoods and Hudson's downtown shopping district - and ask them to envision new ways to use and develop the space. While tackling a design problem for each location, participants will learn about the basics of urban planning and placemaking and work together in teams to come up with a design plan to rebuild sections of each urban area. Urban planning is a dynamic profession that works to improve the welfare of people and their communities by creating more convenient, equitable, healthful, efficient, and attractive places for present and future generation. Placemaking is a multi-faceted approach to the planning, design and management of public spaces. Put simply, it involves looking at, listening to, and asking questions of the people who live, work and play in a particular space, to discover their needs and aspirations. This information is then used to create a common vision for that place. For the culminating exercise each team will pitch their vision to a panel of local experts who will award a prize to the best design.

Special Date(s): February 28, 2020; February 29, 2020; March 1, 2020

Note: This is a full ONE weekend commitment. This ECHO will meet on week 5 winter session at the following times: Fri. 7-9:30 p.m.; Sat. 11-5 p.m. and Sun. 11 a.m. - 4 p.m.

Students must be available and FREE that weekend if they wish to take this module.

**Virtual Trip to Spain: A Taste of Lorca** | Aida Campos-Nava | Format: B

This module will serve as an introduction to Spanish art, literature, as well as cuisine. Students will

reproduce an Islamic influenced stained glass window, read and analyze *The House Of Bernarda Alba*, written by the famous Spanish playwright Federico García Lorca, watch a movie based on the play, and cook tapas. This module will be taught in English.

## SPRING MODULES

**∞: Proof, Paradox, and Perpetuations of Mathematical Infinity** | Hardy Gieske | Format: A  
Much of mathematical truth rests on assumptions involving infinity and the infinitesimal, notably in Calculus and Number Theory. But what is mathematical infinity? What is the smallest number? Is the infinite actually conceivable or are we limited to illusions and metaphors? What contradictions arise in mathematics and elsewhere when infinity “enters the room?” How does infinity translate into other aspects of the human existence such as our perceptions of the universe, time, language, logic, and even consciousness and artificial intelligence? Students in this module will write mathematical proofs in response to proofs, thought experiments, philosophy readings, and student work. To culminate, they will make 5-10 minute videos in which they write proofs, explicate paradoxes, or present short essays on topics of their choosing.

**Battle of the Ages** | Jimmy Moynahan | Format: A  
From Troy to Alexander the Great to 300 to the Battle of Salamis and even Gladiator, ancient warfare has been glorified in Hollywood countless times. This module will introduce and investigate famous ancient battles that continue to fascinate society today and compare them with how they are portrayed on the big screen. The module will focus on studying these battles from a historical standpoint looking at the people who fought in the battles, the weapons they used, their cultures and then using that information to analyze how Hollywood portrayed the battle.

**Building Blocks: Architectural Primer of the Western Reserve** | Diccon Ong | Format: A  
We will be partnering with the Hudson Heritage Association. The goal of the module is to introduce students to the world of residential (and some public building) architecture. We will principally be focusing on the town of Hudson--and perhaps the academic and faculty homes of WRA. Students will learn about the historical evolution of home building as well as the design elements associated with various architectural eras. Some original research may also be done on structures within Hudson.

**Climate Change Science: What do we know and what does it mean?** | Michael Hulver | Format: A  
“Climate Change” is a hot topic in today’s world: in science, popular media, and politics. This course will examine climate in light of traditional and recent research through exploration of these questions. What is climate and how does it differ from weather? How can climate change? What do we know about climate change through the Earth’s history? How do we measure climate and climate change? Can we tell if it is caused by human activities? What does climate change mean to the planet and us?

**Ekphrastic Writing** | Patricia Campbell | Format: E  
Ekphrasis/ecphrasis (Gk ‘description’) is for our purposes here loosely defined as the intense

pictorial description of an object or experience. This very broad term has been limited by some to the description of artobjects and even to the self-description of objects whose visual details are significant. A more generous account would define ekphrasis as the virtuosic description of physical reality (objects, scenes, persons) in order to evoke an image in the mind’s eye as intense as if the described object were actually before the reader. The Horatian (and Renaissance) authoritative pronouncement seemed to suggest that such description, sometimes in the form of poetry, should yield, to paraphrase, the resemblance by imagery, or portrait, alluding to the painter’s term, that which yields to the eye to create a visible representation of the thing described...” In short, students will experience a variety of artistic experiences and afterward write about the very essence of what they undergo, as if to place their audience in the very moment they first felt the intense heat of the glass blower’s ovens; experienced glass turn molten; witnessed the impact of an evolving stage—set, lighting, props, special effects, costumes, players—take shape as a three-dimensional work of art; or discovered a distinct pattern in roof-top tiles, an onion dome among the windows and roofline of a familiar building, or realized that Doric columns stand sentry on the very street we walk every day. For this ECHO module, we rely on Format E, the alternative format, so plan on one extended Saturday and at least one Thursday night, possibly two, as admission to the Akron Art Museum is free on Thursday nights! Any remaining sessions will meet on Saturday mornings from 9-11:30 a.m.

**Lights! Camera! Action!** | Caitlin Fritz | Format: A  
You shouldn’t dream your film, you should make it!” - Steven Spielberg. In this class, participants will create a short film from pre to post production. Each student will take on a Hollywood role (actor, producer, writer, director, art designer, camera crew,etc.) as we cover the basics of how to break down a script, film and edit using Adobe Premiere Pro. The class will culminate with a viewing of all the finished films!

**Needles and Numbers: How Fiber Arts Can Make Complicated Math Ideas Simple** | Tiffany Ott | Format: A  
Some math ideas are just plain confusing, but we can better understand them with the simple tools of a needle and yarn! Based on the book, “Crocheting Adventures with Hyperbolic Planes” by Diana Taimina, come explore hyperbolic planes, psuedospheres, and catenoids while you learn how to crochet during this ECHO. Part art class, part math inquiry, part relaxation with one of the oldest stress relieving hobbies in history. Let’s crochet some math!

**News and Social Media** | Sarah Forrer | Format: B  
Where do you get your news? This module explores news and how we process it. From traditional media to social -- what sources do you rely on, trust the most and why? From editorial to advertorial, we’ll explore traditional print media and television. We’ll draft press releases and discuss distribution. We’ll take a deep dive into social media and how it’s used for marketing and sharing news. During one of our sessions, students will visit a local news station in downtown Cleveland. (This class will meet for four Fridays and one extended weekend day to visit a news station.)

**Pay to Play: Economics in Sports** | Tyler Stokes | Format: A  
How much of a financial impact did LeBron James have on the city Cleveland? Should college athletes be paid? How has the “Moneyball Approach” impacted other sports? Students in this course will be asked to interpret and discuss sports, athletes, and organizations/programs through an economic lens.

### **Re-Cycle** | Ralf Borrmann | Format: A

The purpose of this module is twofold: the first is to familiarize the students with the history, the mechanics, and the physics of bicycles as mode of transportation around the world. The second very practical goal is that each student learns about basic bike maintenance such as fixing flat tires, replacing parts, making general adjustments and tune-ups, etc. This class is hands-on, at the shop, with tools, and getting your hands dirty. The participants work in teams on discarded bicycles that were given to the group and will be donated to local charities once they are repaired and safe to use. We often assemble a functioning bike with parts from different bicycles ("Frankenstein-bikes") and there is a lot of room for creativity. The group also maintains and repairs the bicycles of the WRA bike program.

### **Rock n' Soc: Using Popular Music to Think Theoretically** | Khalid Madhi | Format: A

The purpose is to introduce key social scientific concepts that are expressed in song lyrics. As such, some guiding questions can facilitate in-class conversations that address such questions as: What are the political themes in Beyoncé's or Bruce Springsteen's songs. How do Dolly Parton and Koko Taylor negotiate their domesticities in their fight to "keep their man"? Why does French Hip Hop have more literary and philosophical references than its American counterpart? Is Rage Against the Machine an anarchist group? How much Foucault did Pink Floyd read? And did they predict the rise of Trump? Why are live performances a manifestation of what sociologists call "group solidarity"? Who are "the Benjamins," and what would it mean for Taylor Swift and Zayn Malik to "Live Forever"?

### **Technology and You: Learn how to work with our Robot overlords of the Future!** | Brian Schwartz | Format: B

Enhance your knowledge of technology and the world around you. Improve your job outlook by learning the basic skills that you will need while job hunting later in life! Learn the basics of Microsoft Windows and Apple Mac OS, the components inside your computer, basic troubleshooting, server hardware, and more. We will also discuss the latest in technology news from computers, cell phones, tech companies, and more.

### **The Holocaust (Spring Offering)** | Jillian Nataupsky | Format: B

This course will provide students with the history of the Holocaust, including the causes, effects, aftermath, and long lasting legacy. We will also discuss the concept of guilt and responsibility and what role we as world citizens play in preventing future genocides. The class will largely be discussion-based and interdisciplinary. We will examine writing, literature, art, and film to learn about the Holocaust.

Note: This ECHO will meet on four Friday's and one Saturday to allow for a trip to the Maltz Museum of Jewish Heritage.

### **Upcycling** | Johnny Buck | Format: A

Upcycling is a creative and innovative way to reuse and repurpose otherwise unwanted and unused materials such as tables, bureaus, chairs and sofas to name a few. Some pieces just need a new coat of paint, fresh new jazzy fabric or new bright hardware. Trash to some -- treasure to us! This class will explore methods of painting like stenciling, printing, crinkle painting and other ideas and concepts we might find. The possibilities are endless. If you are up for some creative fun join Mr. Buck on a journey to recycle and give new life to some old and unwanted furniture! At the end of this we will auction off items to raise money for local charity.