THE MASSACHUSETTS SCHOOL OF SCIENCE, CREATIVITY AND LEADERSHIP

Electives Catalog

Comprehensive List of Upper School Electives

This catalog includes descriptions of the courses we have taught, who has taught them, and when. The catalog represents a snapshot in history of what has been taught; future offerings are dynamic so we can respond to the interests of the students and teachers in the community.

In the back of the catalog is a Frequently Asked Questions section and an Appendix with a sample of the Elective Selection Form students use to rank their choices, as well as a snapshot of the document we use to track which electives students have taken. Akin to a liberal arts program, we want our students to have a wide range of exposure to topics they can't get enough of and topics they might not have considered before. We expect them to take two courses in each of these three categories: Art/Tech/Engineering, Humanities/Social Sciences, and Natural Sciences/Math.

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Art/Tech/Engineering

AR/VR Experience Creation

Taught by Danny Fain
Offered in 2023-24, T2

In this elective course, students delved into the emerging technologies of Augmented Reality (AR) and Virtual Reality (VR), focusing on both understanding and practical skills. The course aimed to foster appreciation of the potential of AR and VR in various contexts, while also developing proficiency in creating interactive experiences. Students learned how AR can enhance appreciation of the real-world by overlaying digital elements on physical objects, while VR creates immersive environments for embodied exploration. Understanding the nuances of storytelling in different modalities helped students appreciate how narrative structures and engagement vary between AR and VR experiences. Students also honed their skill in the art of game design, crafting scenarios with meaningful choices and feedback mechanisms, while experimenting with the intricate balance between technical components, player agency, and game structure.

In our first mini-project of the term, students explored the new Adobe Aero authoring platform on both iPads and laptops, to create image-based AR experiences. Then in our second “toe-dipping” project, students learned to use the CoSpaces web-based VR authoring platform to build immersive experiences, which can be played on phone-based VR headsets. Some students additionally chose to experiment with the Zoe Immersive authoring platform for in-VR experience creation, using Meta Quest headsets. Beyond technical skills, the course also emphasized communication and collaboration: students were encouraged to share work-in-progress with, and receive feedback from, classmates through our Google Classroom, individual playtests, and sometimes whole-class show-and-tells. The culmination of the course was the final project, in which students had the freedom to work individually or in pairs to create either an AR or a VR experience in a storytelling or game format. Their work was guided by a comprehensive rubric, used for self- and teacher-evaluation of project drafts. Among the various requirements of the project were: providing a specific role/perspective for the observer/player, offering meaningful interaction choices, giving the observer/player feedback based on their actions, and incorporating community connection through features/aspects unique to the Acera School. Through the hands-on exploration and creative expression facilitated in this course, students gained valuable technical skills, honed their communication and collaboration abilities, and learned to craft engaging experiences that transcend traditional storytelling and game-play.

Audio & Video Production

Audio Production, Design, and Engineering

Taught by Linwood Harper
Offered in 2023-24, T1

This course is geared towards the aspiring and curious audio engineer, musician, and lover of all things sound! Students will be introduced to the Digital Audio Workstation (DAW) worlds of Soundtrap and Ableton. We will also use guided lessons from the Berklee College “Take Me to the River” curriculum which explores the cultural roots of New Orleans music. Through this and a series of exercises, students will become proficient at recording, mixing, EQing, scoring short films, and producing a podcast.

Filmmaking

Taught by Jamie Schefen
Offered in 2023-24, T1

Learn the art of filmmaking through practicing the fundamentals of cinematography and editing. Students will spend the start of the trimester learning how to use professional equipment, learning how to craft a cohesive story through film, and studying screenwriting. Then, students will learn how to edit their creations in Adobe Premier. They will explore the art of editing, with different methods and techniques, to best tell their story. Open to any ages, and those who have not taken this course before!

Intro to Digital Audio, Mixing and Sound Design

Taught by Linwood Harper
Offered in 2022-23, T1

Students will learn the basics of the DAW (digital audio workstation) using Soundtrap and Ableton Live as the software platforms. Students will also learn basic functionality of hardware such as programmable piano and drum controllers, microphones and audio interfaces. Through weekly, bi-weekly, group, individual and “do-now” assignments, students will explore projects that cover various areas of professional audio production (e.g. audio editing, beatmaking, podcasting, music composition, sound design, performance art).

Intro to Video Editing

Taught by Linwood Harper
Offered in 2022-23, T2

Intro to Visual Editing and Audio scoring : This class will focus on visual editing and digital storytelling. Students will learn the foundational structures of building video and audio elements to tell a story. Students will analyze various visual formats (shorts, podcasts , documentaries, films, commercials, visual art & NFTs) for style, technique, approach and overall message. Through weekly assignments, students will complete exercises and learn editing techniques such as: fading, titling, audio mixing, foley, transition effects, multi-layer editing (V1, V2 , V3 , A1, A2, A3). Materials and programs used: Final Cut PRO X, Ableton Live (for advanced audio editing and foley projects), Soundtrap, Splice, Google Sample.

Media Mashup: Ableton, Adobe, and the Internet

Taught by Linwood Harper
Offered in 2023-24, T3

In this class you will be learning advanced techniques in audio editing, music creation, video production and resources from the internet (AI tools, stock libraries, etc). Your weekly and bi-weekly projects will involve elements from each of these areas.

Telling Your Story Through Filmmaking

Taught by Jamie Schefen + Linwood Harper
Offered in 2022-23, T3

Learn the art of filmmaking through practicing the fundamentals of cinematography and editing. Students will spend the start of the trimester learning how to use professional equipment, learning how to craft a cohesive story through film, and studying screenwriting. Then, students will learn how to edit their creations in Adobe Premier and the complexities in audio editing through Ableton, Live, and Soundtrack. They will explore the art of editing, with different methods and techniques to best tell their story.

Video Editing and Creative Storytelling

Taught by Linwood Harper
Offered in 2023-24, T2

This Video Editing and Storytelling elective gave students an opportunity to study and develop skills in video editing, as well as to hone their storytelling skills in a variety of ways. The primary software we used was Adobe Premiere, and students also explored an additional video-editing tool of their choice. Additionally, we students accessed the internet to source materials to edit and narrate. Each student worked individually on projects, and on one occasion on a group project. Class assignments were given weekly. Projects included the following:

- Intro to WEVIDEO
- Video collage
- Group project (If I could change the world) *students were given a fictional $1,000,000 budget
- Suspense and video game trailer
- Panama vlog (Using footage of a trip to the Panama Jazz festival & Canal)

Computer Programming with Python

Taught by Sinclair Target
Offered in 2022-23, T3

This class will introduce students to computer programming in one of the world's most popular programming languages, Python. By working on a series of increasingly sophisticated programming projects, students will learn about important concepts such as variables, loops, and object-oriented design. We will also try to demystify computers by exploring the basics of how they work. There will be a final programming project where students can build whatever they'd like, including games, so bring your creativity!

Engineering & Making

Collision Engineering: Protecting Fragile Objects

Taught by Tian Yao
Offered in 2022-23, T3

In this elective, you'll learn about collisions and why things get damaged when they hit each other. We'll use free-body diagrams, math models, and system models to understand forces, mass, speed, and energy. Then, you'll engineer something to protect a fragile object in a collision and pitch it to potential investors. It's hands-on and exciting!

Engineering Foundations: Design & Product Development

Taught by Alison Earnhart
Offered in 2023-24, T3

This hands-on course introduces students to the fundamentals of engineering and managing complex projects while also teaching an array of useful skills. Students will level up their abilities in 3D design and printing, 2D design and laser cutting, electronics and robotics, communication and group work, and planning and executing multi-faceted projects with peers. Students will use their newfound knowledge and skills to collaborate with Mr. Mohammed Tonkal from Tufts University to develop and complete a real-world engineering project, taking an idea from sketches and discussions all the way through prototype design and iterations to a final product ready for the public.

Makerspace Engineering

Taught by Alison Earnhart
Offered in 2023-24, T1

A course for highly motivated makers in Room 2 and above. We will come together as a group to master the skills and tools specific to the Acera Makerspace. Choose your specialties and level up to achieve "Expert" standing on the laser cutter, 3D printers, vinyl cutter, CAD design software, and more. Along the way, engage in stimulating building and design challenges that focus on the essentials of engineering habits of mind, including: persistence in the face of failure, collaboration and peer teaching, and thorough documentation.

Visual & Textile Arts

From Drawing to Sewing

Taught by Camila Garcia-Enriquez & Adrienne Jacobson
Offered in 2022-23, T3

Have you ever wanted to make your artwork into a textile? Then this class is for you! There will be two parallel explorations: One happens in sketch books, where you will develop art inspired by nature and explore different art-making techniques. The other happens within the realm of textiles, and will include exploring techniques such as punch needle, appliqué, fabric piecing and felting. For the final project, you will research underwater themes and create a pillow inspired by your art and textile explorations.

Inside the creator's notebook: Technical Drawing Skills

Taught by Camila Garcia-Enriquez
Offered in 2023-24, T1

It may seem strange to champion hand drawing, especially in view of the universal triumph of digital graphics like CAD, and even more so as AI-generated content is becoming the norm. But there's something very human and almost counter-culture about manually-crafted creations: they're visually expressive, they help you to think through your hands, and though they do allow you to visualize concepts more quickly, they also force you into a slower, more considered process during the initial stage of a project. In this art elective, you will acquire and hone technical drawing skills necessary to produce two-dimensional illustrations of three-dimensional objects and structures, also known as pictorial sketches. You will learn about orthographic projections; oblique, isometric and perspective drawing; as well as tonal shading. There will be many drawing exercises, visual and spatial reasoning exercises, as well as some 3D paper prototyping. Though not really a "drawing for engineering and architecture" class, this elective will certainly give you tools to more accurately and expressively communicate your ideas on paper.

Language of Prints

Taught by Camila Garcia-Enriquez
Offered in 2023-24, T2
Offered in 2022-23, T2

The focus of this elective was to develop printmaking skills, and to analyze works of art in technical and symbolic terms. The start of the trimester was dedicated to working on foundational exercises such as adapting sketches for carving, using different carving tools, creating textures on linoleum and learning printing and edition numbering routines. Towards the end of the trimester, students engaged in the study and analysis of print work. We spent an entire session discussing the meaning behind Elizabeth Catlett's linoleum print "Civil Rights Congress'' and the technical aspects that helped convey it. This was a segue into the students' final project, which was to choose a topic of personal relevance and visually communicate their views using the language of prints and the skills learned in class.

Spinning Animation

Taught by Camila Garcia
Offered in 2023-24, T3

In this hands-on elective we will learn about animation in a physical, *non-digital* manner. We will create cyclical animations (rather than stories) on paper strips and paper disks, and we will "play" these loops on turntables with the help of strobe lights. This setup takes inspiration from zoetropes and phenakistoscopes, which were optical devices from the 1800s that used the persistence of vision principle to create the illusion of motion. Similar to today's GIF animation, these can only show a short, continuous loop of motion, which will allow us to learn basic principles of animation while exploring some of the physical factors that make these gadgets work.

Upcycled Art

Taught by Stephanie McKay
Offered in 2022-23, T2

Students will research source materials such as glass, aluminum, plastic, and paper, examining recyclable and non-recyclable materials. Students will learn about the materials' uses and then use those materials to create a new work of 2D or 3D functional art.

Visual Storytelling

Taught by Claudia Thomas
Offered in 2022-23, T1 (w/ David Olson)
Offered in 2022-23, T2

Students will explore visual storytelling mediums including comics and animatics. As they learn the conventions of effective visual storytelling, they will use traditional and digital art techniques to tell their own stories.

Wearable Art

Taught by Adrienne Jacobson / Camila Garcia Enriquez
Offered in 2022-23, T1

The goal of this course is to develop a creative and aesthetic understanding of textiles and their similarities to common art-making processes. Students will translate drawing and mixed media studies into textile art, as well as developing skills in hand sewing, machine sewing, felting, quilting, embroidery, sewable circuits and more. For the final project, students will conduct visual and technical research in response to a theme and produce an upcycled garment. Throughout the course, students will document and track their progress in a portfolio.

Woodworking

Boatbuilding: CABBS Mini Skiff / Custom Boats

Taught by Josh Briggs
Offered in 2022-23, T3

Upper School and Upper School Bridge students will mix in this class to work on a couple different boats. Upper School students will either work on the CABBS mini skiff or will finish the custom boats from Trimester 1 this year. Upper School Bridge students will work on the CABBS mini skiff, the construction of which was cut short by the pandemic three years ago. This class is welcome to all skill and experience levels. Boatbuilding requires considerable precision and teamwork, and the class will be fast paced at times.

Boatbuilding: Plywood-on-Frame Boat

Taught by Josh Briggs
Offered in 2023-24, T1

In this energetic, hands-on class, we will embark on building a design for a plywood-on-frame boat for rowing/paddling and sailing. We may add a sailing rig if there is student interest and time. We will hold a launch event upon completion, and then each boat will be raffled off to interested families.

Boatbuilding: Six-Hour Canoe

Taught by Josh Briggs
Offered in 2022-23, T3

Students will finish building a Six-Hour Canoe, the construction of which was cut short by the pandemic three years ago. For students who participated in the custom design boats in Trimester 1 this year, there may be opportunities to finish and decorate their boats and build paddles or oars. This class is welcome to all skill and experience levels. Boatbuilding requires considerable precision and teamwork.

Exploration in Woodworking Joints

Taught by Josh Briggs
Offered in 2023-24, T3

In woodworking, parts are held together at joints. In this class, students will explore several joints, from the butt joint to the mortise and tenon, from the box joint to the lap joint. Projects will be desktop scale, and students will learn to make joints with a variety of hand tools such as saws, chisels and planes. There will also be power tool use at times. We will start off with a primer on sharpening and caring for planes and chisels. We will often do repeated practice on scrap wood to refine technique. All are welcome in this foundational and exploratory woodworking class.

Model Sailboat “Footy”

Taught by Josh Briggs
Offered in 2023-24, T2

This ambitious elective had students set out to build their own one-foot long “Footy,” a remote control model sailboat consisting of no less than ten different types of materials. This project was “scratch built,” meaning it was not a kit, and students, together with me, selected the Papaya III design, published by Mario Stiller in 2008, from several online published designs due to its clarity of presentation and doable building steps. This designer produced a six sheet design packet, in German and with metric units, which was great practice for students, most of whom had not seen design plans in another language and in different units of measurement. There were basic pictorial instructions for the hull construction. Stiller was less prescriptive with instructions for rigging and electronics, where he only showed a couple of images of a finished model. Students did a great job building the hulls. All of the steps required focus, precision and patience. They often had to fix mistakes and fill gaps so the boat would be strong and watertight. Several steps required creative approaches specific to their models. Students marked and/or made patterns for the parts, cut them out at scale, then gradually attached them together with super glue and thickened epoxy (depending on the step).
The basic hull consisted of several wooden panels that were attached together. We used a combination of white cedar, balsa sheets, and marine plywood (for the rudder, keel and areas needing more strength). Other materials used include carbon fiber for the mast and spars, brass tubing and stainless steel wire for the rudder tube and guide, aluminum tubing for the the mast tube and boom sleeve, ripstop nylon for the sails, polyester fishing line for the running rigging, a modified lead fishing weight for the keel, and closed cell foam for the bow. Unfortunately, in this first offering of this class, we ran out of time and did not finish construction of the complete sailing rig and electronics. All of the boats, however, have nearly or fully completed hulls with keels and rudders attached. I am making time available during lunches through May for students to make more progress on the boats this spring.

We’re Gonna Build a Bigger Boat

Taught by Josh Briggs
Offered in 2022-23, T1

In this design-build class, students will team up and build two boats from a 5-ft by 10-ft sheet of marine plywood and softwood lumber. This class will produce a one-person boat with more capacity than the standard plywood versions built in previous classes here. Students will team up and create designs on paper, make scale models, and run tests on their designs in water, including scaled versions of US Coast Guard tests. Each team will settle on a single design and then proceed to build it at full scale. The great majority of the time will be spent building the boats. Two boats will be produced in this class, and we will do a formal launch in spring.

Art/Tech/Engineering

These boats will be raffled off to students in the class. Students need not be experienced in woodworking and boatbuilding but must be willing to learn in this fast-paced and team-oriented environment. Your designs will also be presented at a national boatbuilding educators conference this November!

Humanities/ Social Sciences

A History of Public Education in the US

Taught by Vered Brooks
Offered in 2023-24, T1

What is the purpose of public education? Is it to create an educated population? Is it to teach civic education so that we have an engaged citizenry? Is it to provide social mobility, or inversely to emphasize and codify social class distinctions? Is it to create a cooperative workforce? Is it to provide socialization and assimilation for children so that they fit into our society regardless of their family backgrounds? Or is it maybe just to provide child care? These purposes and more have all been driving influences behind America's public education system. All of this begs yet another question: does education look different if it is trying to achieve a different end? This course will explore the history of education in the US, critically examining the system we have today, the purposes it serves, and what purpose we believe it should serve. We will then consider what changes to our system would help promote the purpose we believe to be paramount in the 21st century.

Asserting Agency: The US Civil Rights Movement

Taught by Vered Brooks
Offered in 2023-24, T3

Our central text for this course will be the graphic novel series March, a memoir of the experiences of John Lewis. Lewis was a leader in the Civil Rights Movement who marched with Martin Luther King Jr., spoke at the historic march on Washington, and for many years was a Congressman from Georgia. This incredible 3-part book not only highlights the challenges, but also the many successes of the movement, and the methods they use to achieve success. This elective will use the graphic novel as a jumping off point to explore the various social and political elements that led to the events we read about, and the other contemporaneous events occurring and supporting the civil rights movement around the country and the globe. We will closely examine primary source documentation to begin to draw our own conclusions about events of the time, and the course will culminate in a research paper that digs more deeply into contemporary issues of interest, which will help us learn how to utilize more academic resources to bring researching and writing to a higher level.

Esperanto and the hope for a unified world

Taught by Viktor Grigoryan
Offered in 2023-24, T1

Esperanto is a planned auxiliary language, and (arguably) the most successful constructed language to date. In this class we will learn the language itself, and explore the social-historical context in which the language was born and continued to gain in popularity. Esperanto means “one who hopes”, and the hope for an improved human communication is ingrained in the unique cultural attributes of the language. The intentional simplicity of Esperanto makes it easy to learn, allowing one to reach working fluency within months. And having learned Esperanto, studies show, one is primed for an easier go of learning other languages, including continued improvement in our native languages. So whether you are fascinated with the hope for a unified world through a universal language, or are ready to embark on the joyful scholastic hobby of language-learning, come join as in this full-of-hope class of linguistic romantics.

Ethics and Contemporary Issues

Taught by Ruma Dutta
Offered in 2022-23, T1

This elective will explore philosophical questions that challenge and explore the fundamental ways in which we think and act. We will ask questions and engage in discussions that will allow us to challenge and justify our moral commitments. Is there such a thing as right or wrong? Are there any moral facts? Is morality a matter of taste and culture? How do we, as a society, go about deciding an appropriate standard of behavior? We will explore these questions and more through the lens of classical and contemporary texts and through everyday examples. We will look at primary sources, diagram arguments, and construct our own arguments in coming up with a course of action. Our culminating activity will be an Ethics Bowl, which will give students the chance to discuss real-life ethical issues, defend positions that they think are reasonable, and provide each other with constructive criticism. An external judge will determine the winner based on the strength and cohesion of the arguments.

Generative AI - How, Why, Why Not?

Taught by Danny Fain
Offered in 2022-23, T3

Have you heard of, maybe even tried-out, ChatGPT, DALL-E, or other software tools that produce information (text, images, sounds, or video) just from simple prompts? Accelerating use of generative AI in many contexts is taking the world by storm, with all sorts of creative, social, and ethical implications. After learning a little about the creation and function of the current crop of tools, we will examine their effects, at levels ranging from the individual to the community, including consideration of benefits, problems, risks, and possible solutions. Depending on students' interests, we are likely to focus our investigations within the domains of education, news reporting, and/or the arts. Expect a moderate amount of weekly homework utilizing digital media, including some collaborative project work. (Did ChatGPT generate this description?)

Geopolitics

Taught by Ruma Dutta
Offered in 2022-23, T3
Offered in 2023-24, T1

We will be focusing on the politics of geography and the newspaper will be at the core of everything we will be doing. Looking at a diverse range of publications (e.g., The New York Times, The Financial Times, The Wall Street Journal, and The Economist), we will be discussing what it would mean to start learning the back-story to any news article of global significance. What questions would we ask to learn more? How do we decide on the credibility of sources? How do maps enlighten us as we learn? We will also be using software tools and coloring books to gain important content knowledge, and to gain an understanding of how maps and borders have contributed to decades of tension, insecurity, or collaboration.

History of Financial Speculation

Taught by Ruma Dutta
Offered in 2023-24, T3

While the speculative spirit can be traced back to Roman times, we'll be looking at the history of stock market speculation from the seventeenth century to the present day. We'll study the mechanics behind speculative manias, fads, and delusory crowd behavior. We'll look at the tulip scandal in 17th century Holland, at the height of which a single tulip bulb sold for ten

times the price of a house. We'll also look at more modern bubbles and their own examples of extravagant behavior (such as booking two seats on the Concorde to fly a cake from Paris to New York in time for a birthday party). Through the lens of financial history, we'll read about the Dutch Golden Age, the Industrial Age, the Gilded Age, the Stock Market Crash of 1929, more recent Internet bubble behavior, and anything else related that might strike our interest. In studying patterns behind financial events, we'll also look at patterns behind human behavior. What is cognitive dissonance? How do crowds behave irrationally? What triggers a mania?

Important Trials and Court Decisions in US History

Taught by Bob Defandorf
Offered in 2022-23, T2

Some of the most important decisions affecting our lives occur in courtrooms. From the John Peter Zenger trial in 1735, which was a major free-speech landmark, to Obergefell v. Hodges in 2015, which established the right to same-sex marriage nationwide, we will examine trials and court decisions that have influenced our society in significant ways. Our explorations will include the historical context in which each case took place, the trials themselves, and the results they produced. One aspect of the course will be writing about the cases from multiple perspectives.

Leaving a Mark

Taught by Jamie Schefen, Josh Briggs, Camila Garcia-Enriquez
Offered in 2022-23, T2

As a complement to the Acera-Escola L'Horitzo school exchange this winter, Acera students in this class will examine different forms of public art and create their own, with the goal of displaying them in indoor spaces. Students will work with different themes to communicate their vision of the world, our cultures, and/or our cultural experiences. They will do so by conducting different types of research, visiting local museums and other public spaces where these types of works are displayed, as well as by designing and producing works in one of several choices of media, from digital ones such as photography, video & sound, to more traditional tactile forms such as visual arts and woodwork. Students will be working with specific teachers based on their choice of medium. For example, students interested in woodworking will work with Josh; students interested in working with digital media will work with Jamie; and students interested in visual arts will work with Camila. They will have ample studio time to make their ideas come to life in Trimester 2 before, during and after the exchange.

Literature and the Child

Taught by Ruma Dutta
Offered in 2022-23, T3

In this elective, we'll be looking at how literature has explored childhood. We'll look at what literature says about children and we'll look at how it has used children as a vehicle to address societal concerns. Finally, we'll look at the evolution of literature aimed at children.

In the course of the elective, we'll be reading extracts from Jane Eyre (Charlotte Brontë), with its full-blooded and passionate child protagonist and where the adult reader is without question on the side of the child. We'll also look at writing by Charles Dickens, which puts the lens on serious societal concerns through the eyes of his young protagonists. This is a far cry from earlier literature where it was considered to be the duty of the adults to frighten children away from doing "wrong" by way of cautionary tales and fables.

Finally, we'll look at modern children's literature, and ask ourselves how fantasy addresses morality and rule-breaking, as well as serious topics such as anger, death and judgment. The class will also include a Creative Writing component, with the final product being a piece of writing, such as a short story.

Philosophy: Ethics and Contemporary Issues

Taught by Ruma Dutta
Offered in 2022-23, T2

This elective will explore philosophical questions that challenge and explore the fundamental ways in which we think and act. We will ask questions and engage in discussions that will allow us to challenge and justify our moral commitments. Are there any moral facts? Is morality a matter of taste and culture? How do we, as a society, go about deciding an appropriate standard of behavior? We will explore these questions and more through the lens of classical and contemporary texts and through everyday examples. We will look at primary sources, diagram arguments, and construct our own arguments in coming up with a course of action. Our culminating activity will be an Ethics Bowl, which will give students the chance to discuss real-life ethical issues, defend positions that they think are reasonable, and provide each other with constructive criticism.

Psychology & the Iliad

Taught by Renee Scherer
Offered in 2023-24, T3

Emotion—and the concepts of mind, memory, and motivation—is the opening and defining topic of one of the most important works of ancient Western literature, Homer's Iliad. The epic poem is perhaps most well known as being the surviving story that best describes the siege of the city of Troy, but it begins not with battle, not with a description of armies or fighters, nor with any of the infamous duels between heroes. Instead, the Iliad begins with a call to the Muse to "sing the rage of Peleus' son Achilles." The topic of the poem is thus named as rage, not war. But why? This class will examine the relationship between psychology and literature exploring the complexities of human nature, emotions, and behaviors as depicted in the characters and events of the Iliad. By examining themes such as honor, pride, love, grief, trauma, and the impact of war on individuals and groups, students will gain insights into psychological phenomena that transcend time and culture. We will draw from texts and topics common to AP Psychology courses, focusing especially on: social psychology; biological bases of behavior; sensation and perception; consciousness and memory; motivation, emotion, and personality; stress, anxiety, and PTSD. We will use learning about these topics to engage in close readings of the Iliad that critically analyze characters' motivations, interpersonal dynamics, and psychological struggles, while also considering the socio-historical context in which the epic was composed. Students should expect to complete significant reading/listening of Robert Fagles' translation of the Iliad (the audiobook is excellent and will be available for parallel reading), and guided excerpted reading of David Myers' Psychology for the AP Course. We will engage in class readings, discussions, and interdisciplinary explorations. Students will complete an individual project applying their learning.

Revolt, Rebel, Resist: Histories of Anti-Colonial Dissent

Taught by Renee Scherer
Offered in 2023-24, T2

What role does resistance play in society? How does history record challenges to power? This class examines the ways in which the processes of colonization and colonialism in the Americas have encountered resistance. Contrary to much of our popular understanding of history, colonialism has not been an inevitability. Rather, it has been challenged throughout the Americas by a wide variety of self-empowering, dissenting peoples. We will especially highlight acts of revolt, rebellion, and other forms of resistance centering Black and Indigenous peoples, women, laborers, and youth. We will define and compare the concepts of “revolution” and “resistance” through theoretical readings and discussion, building a framework for understanding forms of dissent that may be violent or non-violent, active or passive, individual, or collective, physical or intellectual. All students will complete a scaffolded individual research project on an example of historical dissent in any geographic area of personal interest.

Sci-Fi & Medical Ethics

Taught by Renee Scherer
Offered in 2023-24, T1

Science fiction isn’t “just” aliens and time travel. In fact, even aliens and time travel ask us to think about our own lives and the problems we encounter. This class considers how science fiction on the page and on the screen has thought about issues of medical ethics. In tales from Frankenstein to Star Trek to Spirited Away, the audience is encouraged to consider common medical ethics issues such as:

- What rights do patients have?
- How should we make decisions when resources are limited?
- How might patients be kept safe, and their conditions and treatment confidential?
- Do patients need to consent to treatment?

Our class will use these and similar questions arising from ethical issues to examine and consider a range of science fiction media from the 19th century to today. Expect to practice close reading, active discussion, analytical thinking and writing, and to learn and practice film analysis. Some readings/viewings will be whole-class, while others will be offered as student-selected options. Each student (or group) will complete a reflective project investigating an issue of medical ethics or subgenre of science fiction.

Social Impact of Artificial Intelligence

Taught by Danny Fain
Offered in 2023-24, T1

You may already have played with generative AI tools—such as ChatGPT or DALL-E—and wondered about their effects on schools and society. What about the effects of other kinds of AI, such as facial recognition, embodied systems (robots, self-driving cars), and medical research? Accelerating use of AI in many contexts is transforming our world, with all sorts of financial, social, and ethical implications. While learning a little about the creation and function of some current tools, we will examine their impact at levels ranging from the individual to the community, including consideration of benefits, problems, risks, and possible solutions. Depending on students' interests, we are likely to focus our investigations within the domains of education, law/justice, or health/well-being. Expect a moderate amount of weekly homework utilizing digital media, including some collaborative project work.

Sociology: Deviance & Social Control

Taught by Jamie Schefen
Offered in 2022-23, T1

This course examines questions like: What type of social norms does our society create and live by, and why? Who breaks social norms? Who gets labeled as deviant? What do deviant sub-cultures look like? How do social norms affect the beliefs that people hold? We will look at the functions of deviance, what productive deviance can look like, and examine how sub-cultures form that create new sets of norms. This can look like examining social movements, "cults" (or new religions), crime, and the relationship between marking deviance and marginalized groups (specifically BIPOC and queer folks) throughout American history.

Speculative Fiction

Taught by Vered Brooks
Offered in 2022-23, T1

As more and more stories break traditional genre categories (what do you call a book about the Napoleonic Wars with dragons?), “speculative fiction” becomes an increasingly useful term. Together we will explore possible futures and alternate histories and realities. We will read short stories that explore all of these things, and find our own questions (or speculations) to write about. You can think of this course as a chance to explore the question “how might the world be different if....?” and to write explorations of the worlds created as well as of characters who might interact with those worlds. Each student will fully think through at least one of those speculative worlds, and explore one or more complete narratives in that world.

The Holocaust and Human Behavior

Taught by Vered Brooks
Offered in 2023-24, T2

This course will follow the basic outline of the Facing History and Ourselves curriculum: The Holocaust and Human Behavior. The course will look at the events of this time period through the lens of understanding the importance of identity as part of how Germany moved from being a relatively accepting society to being one of rigid rules and mass genocide. In our current climate it is all the more important that we learn from the terrible history of this and other genocides, and ask how we can stand up to prevent victimization. The class will examine German and American propaganda, and consider what social science teaches about the influence of authority over our behavior. The writing for this class will be primarily reflective, as we try to process how people can make such disastrous decisions, and what we can do to contribute to a world where we are confident such things cannot happen again.

US Government

Taught by Bob Defandorf
Offered in 2022-23, T1
Offered in 2023-24, T2

We will start by delving deeply into the Constitution to understand the essential structure of the federal government, then use that as a jumping-off point for tracing the development of our government over time. We will examine both the substantial features and strange quirks of our governmental and electoral system. Why do we have an Electoral College? How do cases make their way up to the Supreme Court? What is gerrymandering? If you wonder about these or have other questions of your own about how our government works, this is a place where we can answer them.

World Building + Creative Writing

Taught by Jamie Schefen
Offered in 2023-24, T2

How do we establish worlds and their systems in our creative writing? In this course, we will read and write fantasy and realistic fiction with well thought out worlds. We will explore how to become better storytellers by thinking through what our worlds look like, sound like, and feel like. This class is a chance to work on your craft as a writer, reader, and creative thinker.

Natural Sciences/ Math

Astronomy Part 1: The Night Sky

Taught by Alison Earnhart
Offered in 2024-2025, T1

Part 1 of a year-long offering on Astronomy. Beginning with the ancient pan-cultural custom of watching the sky and learning to tell time and navigate, students will: develop a familiarity with the Northern Hemisphere constellations, build and use astronomical observing tools, and reflect on the historical development of humanity's understanding of their place in the Universe. This course will feature a mix of hands-on activities and labs as well as more traditional lecture-style content. Students will develop research and note taking skills, and will be expected to formulate and write personal responses to scientific and philosophical inquiries.

Astrobiology

Taught by Alexis Hibbler and Tory Campbell
Offered in 2023-24, T3

Have you ever wondered where you came from? How did it all begin? Have you ever looked up at the sky and wondered how we are all connected by a single origin point? Or why can we be so similar and simultaneously different? Why is one planet huge but less dense? What defines us and our environment? How do we describe growth and change? Are we alone? In our pursuit of understanding, let us embrace the mysteries that unite and inspire us, ever-reaching towards the infinite possibilities that await!

Astrobiology

Taught by Alexis Hibbler
Offered in 2022-23, T3

Astrobiology is an interdisciplinary class which merges chemistry, biology, physics, and geology to investigate the origins of life on earth and potential for origins of life in the universe. The course will be formed around the following three main themes:

- How does life begin and evolve? (Where did we come from?)
- Does life exist elsewhere in the universe? (Are we alone?)
- What is life's future on earth and beyond? (Where are we going in space?)

We will also explore such interesting concepts such as deep time, the nature of first contact, and the grabby aliens hypothesis. Classwork will consist of labs, independent research and presentations, and infrequent homework assignments (as needed).

Atmospheric Chemistry, Natural Disasters, Mass Extinction Events, and Evolution

Taught by Tory Campbell
Offered in 2023-24, T1

The intention of this class is to investigate the interplay between Earth's ever-changing environment and the evolution of life. We will be exploring some of the most recent natural disasters and how they relate to shifts in atmospheric chemistry, ultimately looking at how this impacts mass extinction events, the environment, and changes the shape of evolution. Students will learn about the vital link between atmospheric conditions, biodiversity, and evolution. Additionally, the hope is that it will foster a holistic understanding of Earth's dynamic history, the resilience of life, and the importance of scientific inquiry in comprehending the past, present, and future of our planet.

Civic Ecology

Taught by Ashley Metz
Offered in 2022-23, T1

Civic ecology examines the social and ecological results of positive human impact on the environment. In this class we will explore people, places, and practices that are restoring nature and revitalizing communities all over the world. Even better than that, we will join them! We will collect anecdotal and scientific data to prioritize stewardship actions, engage in existing or initiate our own civic ecology projects, and build relationships with and among the human and nonhuman members of our community. Are you sick of hearing about the problems we face as a planet and feeling overwhelmed, depressed, or maybe even helpless? Are you intrigued by the link between social and environmental solutions? Would you like to actually DO something to enact lasting change? This may be the class for you!

Classical Physics

Classical Physics: Statics and Dynamics

Taught by Alexis Hibbler
Offered in 2023-24, T1

In this course we will learn to describe how things move and why they move. We will use the process of science to discover and discuss how fundamental forces shape our world, bridging the gap between the physics of the past and the research of today.

Classical Physics: Energy, Collisions, Momentum, Impulse, & Circular Motion

Taught by Alexis Hibbler
Offered in 2023-24, T2

In this elective, we'll delve into the fascinating realms of energy, collisions, momentum, impulse, and circular motion. Throughout the trimester, we'll unravel historical collisions that shaped our universe, like the formation of the moon which was a cataclysmic event when a protoplanet collided with Earth. We'll also discuss real-life collisions – like that memorable incident involving me, a Home Depot pole, and my dad's car.

Our exploration will spark curious questions about why cars stay on course during turns, the gravitational force felt on thrill rides, and the mysterious stability of satellites in orbit.

But if these cosmic mysteries don't pique your interest, fear not! This elective offers a chance to improve important skills and habits of mind that'll serve you well beyond your time at Acera, setting the stage for success as you venture into high school.

Classical Physics: Torque, Rotational Motion, and Statics

Taught by Alexis Hibbler
Offered in 2023-24, T3

In the third trimester of Classical Physics, we will delve into the intriguing topics torque, rotational motion, and statics (the study of equilibrium systems). Finally moving beyond the simple point-mass model, we explore the dynamics of more complex systems.

As we transition into the month of May, our focus shifts from classical to quantum systems. Here, we delve into wave-particle duality (a fundamental concept that challenges traditional notions of matter and energy), explore the profound implications of the photoelectric effect, interference patterns and atomic spectra. Join me on this enlightening journey into the forefront of physics exploration, where classical boundaries blur and modern wonders abound!

Classical Physics: Force and Motion

Taught by Alexis Hibbler
Offered in 2022-23, T1

Students will explore the physics principles that describe motion through lab work, computer simulation, and classical problem solving. They will also gain insight into everyday scientific practice: setting up and running experiments, keeping a lab notebook, and presenting findings. Some questions we will explore in this course are: How do we describe motion? What causes objects to move? What are some of the forces we see in everyday life? How are force and motion connected?

Classical Physics: Forces, Momentum & Collisions, Energy & Work, and Circular Motion

Taught by Alexis Hibbler
Offered in 2022-23, T2

Students will explore the physics principles that describe motion through lab work, computer simulation, and classical problem solving. They will also gain insight into everyday scientific practice: setting up and running experiments, keeping a lab notebook, and presenting findings. Some topics we will explore in the second trimester are: Forces, Momentum & Collisions, Energy & Work and Circular Motion.

Classical Physics: Energy, Electromagnetism, & Optics

Taught by Alexis Hibbler & Adrienne Jacobson
Offered in 2022-23, T3

In the third sequence of physics, we will cover work and energy, electromagnetism and optics. This class has an algebra math requirement, so as long as you've seen at least two trimesters of algebra you should be able to do the work. Each unit, we have a combination of direct instruction, problem solving sessions, labs and investigations to explore each topic. We also

have homework assignments, which are usually 4-5 problems long and due a week after being assigned. For the hands-on part of the course, we will have a large design challenge (energy unit), electromagnetism lab, and optics lab.

Electronics & the Physics of Electricity

Taught by Alison Earnhart
Offered in 2022-23, T3

In this lab-focused course, students will learn the fundamental physics and nature of electricity and its practical applications to analog and digital electronics systems. Assuming no prior experience, students will develop an intuitive understanding of how electricity flows as well as practical skills such as circuit building, measuring the voltage & current of electrical systems, soldering physical components, and coding microcontrollers such as Arduino and Micro:Bit. After a series of skills and knowledge building labs, students will have the opportunity to design and build their own capstone project that allows for a deeper dive into content of their choice.

Environmental Citizen-Science

Taught by Danny Fain
Offered in 2023-24, T3

Want to discover more of the natural and human-made environment surrounding Acera, while contributing to professional scientific research work? This hands-on course will take an observational, “citizen-science” approach to learn about our environment. While deepening your understanding of natural systems, you will collect and analyze measurements in various outdoor locations, comparing your observations with those made by others. Homework will occasionally be assigned. Practice your skills in data gathering, analysis, visualization, and presentation, while contributing to a scientific research initiative (through the NASA GLOBE project) and perhaps making a difference in our community!

Exploring sound: the Math and Science of musical instruments

Taught by Viktor Grigoryan
Offered in 2022-23, T3

This class is a STEM exploration of the world of sound and musical instruments. We'll grapple with questions around what sound is (physics) and how we are able to hear it (biology), how musical instruments are built to produce different sounds (art & engineering), and the structures behind the organization of sounds into music that make it so pleasing to the ear (math). We'll also build some simple musical instruments, and experiment with composing and playing simple tunes on them.

Henry Molaison, Hebb's Theory, and Action Potentials

Taught by Tory Campbell
Offered in 2023-24, T1

This interdisciplinary course offers an exciting journey into the realms of biology and neuroscience. Students will explore the mysteries of life at the cellular level while delving into the intricacies of the human brain. The neuroscience segment of the course delves into key topics such as neuron function, action potentials and the brain's remarkable ability to adapt (neuroplasticity). Engaging hands-on activities, including mirror tracing, will allow students to experience these complex concepts firsthand. The curriculum also introduces famous case studies like Henry Molaison and incorporates Hebb's rule to illustrate how experiences mold our brains. The goal is that at the end of the course, students will have ignited their curiosity about the biochemistry of life and the inner workings of the human brain.

Intermolecular Forces: Secret Glue of the Universe

Taught by Tory Campbell
Offered in 2023-24, T2

How does a gecko stick to almost anything? How do beads of water slide down a window in the rain? And how does a solid chocolate bar become a liquidy mess after it melts in your hand? In this science elective, we will unravel the secrets behind cohesion, adhesion, and the forces that bind molecules together, shaping the physical properties of substances. Through hands-on paper chromatography experiments, cutting-edge simulations, and engaging discussions, we will unlock the mysteries of the invisible forces that decide whether things are solid like a rock, liquid like your juice, or gas like the air you breathe. No previous chemistry knowledge required or expected.

Knitting and Math

Taught by Penny Sparrow
Offered in 2022-23, T2

How does knitting work? That's topology—a branch of math. How many stitches do I need? That's ratios. In this course you will learn how to knit, if you don't already know. If you do know, you will get a chance to practice and maybe learn some new stitches. We are going to make a Factor Quilt—each person is going to choose numbers between 1 and 100 and make a square with colors based on the prime factors of each number. Then we will sew the squares together to make a 10-by-10 quilt showing the factors by color.

Mathematical Biology

Taught by Viktor Grigoryan
Offered in 2023-24, T2

This is a mathematical exploration of some biological systems. We will study such topics as cardiovascular circulation and pulmonary gas exchange in humans, animal cell volume control, neuronal action potential, genetics, infectious diseases and population models, pattern formation and biological fractals, and more. No previous biology knowledge is expected; Algebra 1 is a necessary prerequisite. Be ready to be blown away by the power of math in the study of life.

Medical Specialists

Taught by Tian Yao
Offered in 2022-23, T1
Offered in 2022-23, T2

In this science class, we will play the role of medical specialists/diagnosticians and do a real case study of a 13-year-old girl, M'Kenna, who has recently started feeling sick all the time. We will diagnose her disease through hands-on projects and labs, collecting and analyzing medical data, and examining organ system structure and function. We will also explore how a breakdown within the human body can lead to dysfunction.

Science Foundations: Asking Questions, Making Discoveries

Taught by George Papayannis
Offered in 2023-24, T3
Offered in 2023-24, T2 (Original title: Intro to Science & Creativity)

Do you want to be among the next generation of scientists, innovators, and leaders of the world? Of course you do — you're at Acera! In this course you'll play with the foundational practices of scientists that lead to discoveries. We'll study the kinds of questions scientists have and the ways they go about answering them, and do our own investigations to try to make sense of the world around us. Have a deep question about something you want to investigate? Fantastic! We'll help you develop your question-asking and investigation skills to get answers, then figure out what those answers mean. No prior experience necessary.

Statistics

Taught by Penny Sparrow
Offered in 2022-23, T1

A soda manufacturer claims that 1 bottle in 6 has a prize revealed in the lid of the bottle, but you found only 2 such bottles in a batch of 30. Are you suspicious? In the course of this elective we will extend what you already know about statistics so that you have a variety of tools, amongst which are some that you can use to decide whether you have enough evidence that the manufacturer is lying. Data measures and displays, simulation, probability rules, Binomial and Normal distributions, and p-values are some of the tools.

Statistics 2

Taught by Penny Sparrow
Offered in 2022-23, T3

"More than 80% of Dentists recommend Colgate." This was a Colgate ad posted on billboards a few years ago. What does this mean? It's probably not what you think! In Stats 2 we will consider how to judge the statistics that we encounter, as well as finding out how Statistics can be used to assess whether a claim is true or false. You can do this course even if you did not take Stats 1 in the first trimester, though you will have to pick up on some ideas quickly.

Statistics & Data Science

Taught by Viktor Grigoryan
Offered in 2023-24, T3

Data is everywhere around us, and the rise in computing power in recent decades has enabled us to gather, mine, analyze and learn from these data to advance our understanding in almost all fields of knowledge. Additionally, mind-boggling amounts of new data are generated every day, and data literacy is becoming an essential skill in most fields of inquiry and professional careers. In this course we will learn how to think about, work with, analyze, interpret and communicate with data. Expect project-based explorations, opportunities for creative visualizations, and insightful story-telling with data.

2024-2025 T1 Electives

The Psychology of Polarization, Taught by Jamie Schefen: Through exploration of various psychological theories, we will explore how our brains are wired for dichotomous thinking, and how social media utilizes this to further political polarization. Additionally, we will explore the reasons and implications of people hunting each other's belief systems throughout history. We will look at both sociological and social psychology theories and read philosophical articles about the nature and ethics of belief. We will delve deeply into contemporary polarization and our tendency to police each other's belief systems online. Students will look at different experiences and case studies through the lens of the theories we studied to better understand why we tend to do this. We will have the chance to better understand social media algorithms and understand what we learned from Facebook wiki leaks about polarization and dichotomous thinking.

Physics: Kinematics and Dynamics, Taught by Alexis Hibbler. This trimester, we will explore the fundamental concepts of kinematics and forces, which form the foundation of all classical physics. By studying these principles, students will gain insights into a wide range of exciting applications, including sports, biomechanics, robotics, and engineering. In addition to mastering these topics, students will also develop essential skills such as using the metric system, understanding the scientific process, and creating theories. Understanding kinematics and dynamics will pave the way for countless avenues of exploration.

Social Impact of Artificial Intelligence, Taught by Danny Fain. You may already have played with (or seen an older friend use) generative AI tools, such as ChatGPT or DALL-E, and you might have wondered about their effects on schools and society. What about the effects of other kinds of AI, such as facial recognition, embodied systems (robots, self-driving cars), and medical research? Accelerating use of AI in many contexts is transforming our world, with all sorts of financial, social, and ethical implications. While learning a little about the creation and function of some current tools, we will examine their impact at levels ranging from the individual to the community.

Design-Build Studio: Moveable Playground Structures, Taught by Josh Briggs. Students will work as designers and builders in this class, and will have real work products used by the Acera community. They will, with Acera administrators as clients, and Acera students as end users, design and build moveable playground structures. Students will work in teams to research, brainstorm and present drawings and models of these structures. These structures were identified in the Acera Playground visioning process. Based on feedback, and in an iterative process, students will plan, draw, budget and build models and prototypes.

FREQUENTLY ASKED QUESTIONS

1. How do you pick which courses to offer to students?

Through the year we track which electives each Upper School student takes and expect them to take two electives each in the categories of Natural Sciences/Math, Humanities/Social Sciences, and Art/Tech/Engineering. The options on offer each trimester are tightly curated from a large list of options teachers propose over the summer and contribute to through the year. In the natural sciences, for example, we offer electives that allow students to access physics, chemistry, and biology in an interdisciplinary way, and give them exposure to topics that are current in the field. We build courses that allow students to enter them without prior experience, with a few having math prerequisites (usually Algebra 1) so students can dive deeply into technical topics. Throughout the year we listen to students and families and the world around us to ensure that we are offering courses that appeal to students, are relevant, and maintain our commitment to students understanding their abilities, developing their talents, and discovering new talents.

2. How do students choose electives?

At the beginning of Trimester 1 and in the week or so before Trimesters 2 and 3, teachers “pitch” their offered electives to students in short, approximately 5 minute presentations that include time for questions and answers from the students. Students then complete an Elective Selections form, ranking their choices from most preferred to least preferred. Students are expected to take two electives from each of the three categories: Art/Tech/Engineering, Humanities/Social Sciences, and Natural Sciences/Math.

3. How do students get placed into their electives?

We truly try to be responsive to the needs of the students and families in front of us. The team (Director of Upper School, Core Teachers, Specialist Teachers) process students’ Elective Selection forms considering these main factors:

- students’ ranked choices
- size of classes
- courses students need to meet their 2-2-2 requirement (two of each category of elective)
- courses students have previously taken
- makeup of students in classes

If a student has a particularly strong desire to take more than two electives in a given category—usually to grow their skills in that area—we consult as a team to make sure the student can demonstrate balance of the three categories. For example, if a student wants to take more than two science classes at the expense of taking two art/tech/engineering classes, we will review the courses they have taken, and if, say, they have done ample art/tech/engineering work in IMPP, we will place them into an additional science.

It's a fun puzzle to figure out!

4. What happens if a student does not get their first choice elective?

Most students get their first choice elective, with some getting their second choice if a particular course is full or if a student needs to balance their electives according to the three categories. In rare circumstances a student will be placed into a third choice elective, and that will be accompanied with a conversation with them so they understand why.

5. Why don't you publish the elective lists and descriptions for families in advance of the students making selections?

We put a lot of care into the electives we offer students and the manner in which we place them into their electives. It has happened in the past when lists were shared with families ahead of students selecting their choices that some students chose electives they weren't enthusiastic about because their families urged them to take them. Because our model is built around students finding their intrinsic motivation to work, grow, and become the best version of themselves at Acera (part of the rationale for not having grades, an oft-used form of extrinsic motivation), it's important to us that students choose the electives that they want to choose. Again, remembering that the list of options we present to them is highly curated and that we track and monitor the electives that they have taken.

6. I see that [X] elective was offered. When will it be offered again?

Some of our electives are offered on a recurring basis, like U.S. Government and physics. Other are offered based on student or teacher interest and often have similar themes as other electives offered by the same teacher in their specialty area. Each trimester we strive to offer at least two courses each in the three main categories and check that there is enough differentiation between courses to give students variety.

7. What is an example of a course that has been offered based on student interest?

In 2021-22 a sixth grade student wrote a compelling letter to Ms. Courtney asking for a text-based programming elective. In 2022-23, we were able to find a software engineer to teach the Computer Programming with Python course to a student audience with a range of programming skills from fairly beginner to more advanced.

Appendix

Sample Elective Selection Form

Upper School Elective Selection

2023-24, Trimester 2

Name _____ Date _____

Core Teacher _____

Elective A (AM)

Instructions: Rank your top four choices (1 = most preferred, 4 = least preferred)

Course Name	Category	Ranking
Language of Prints	Art/Tech/Engineering	
AR/VR Experience Creation	Art/Tech/Engineering	
US Government	Humanities/Social Sciences	
World Building + Creative Writing	Humanities/Social Sciences	
Classical Physics	Natural Sciences/Math	
Intermolecular Forces: Secret Glue of the Universe	Natural Sciences/Math	

Elective B (PM)

Instructions: Rank your top four choices (1 = most preferred, 4 = least preferred)

Course Name	Category	Ranking
Model Sailboat "Footy"	Art/Tech/Engineering	
Video Editing and Creative Storytelling	Art/Tech/Engineering	
Revolt, Rebel, Resist: Histories of Anti-Colonial Dissent	Humanities/Social Sciences	
The Holocaust and Human Behavior	Humanities/Social Sciences	
Intro to STEAM	Natural Sciences/Math	
Mathematical Biology	Natural Sciences/Math	

Appendix

Snapshot of the “Tracking Enrollments” worksheet

In this document we track what electives each student has signed up for throughout the year, as well as track how many of each category of electives they have taken.

Yellow highlighted cells indicate students who have enrolled in more than two electives in a category.

Blue highlighted cells indicate students who have not taken an elective in a category.

D	E	F	G	J	K	L	M
Core Teacher	ATE	Hum/SS	Sci/Math	T1 Course - US B	T1 Type - US B	T2 Course - US A	T2 Type - US A
G-Vered	2	1	1	Audio	Art/Tech/Engineering	Prints	Art/Tech/Engineering
G-Vered	3	0	1	Audio	Art/Tech/Engineering	Prints	Art/Tech/Engineering
G-Vered	1	2	1	Audio	Art/Tech/Engineering	World Building	Humanities/Social Scienc
F-Renee	2	1	1	Audio	Art/Tech/Engineering	World Building	Humanities/Social Scienc
G-Vered	2	1	1	Audio	Art/Tech/Engineering	IMF	Natural Sciences/Math
F-Renee	2	1	1	Audio	Art/Tech/Engineering	IMF	Natural Sciences/Math
F-Renee	1	1	2	Audio	Art/Tech/Engineering	IMF	Natural Sciences/Math
F-Renee	2	2	0	Boatbuilding	Art/Tech/Engineering	AR/VR	Art/Tech/Engineering
F-Renee	3	1	0	Boatbuilding	Art/Tech/Engineering	AR/VR	Art/Tech/Engineering
G-Vered	3	1	0	Boatbuilding	Art/Tech/Engineering	World Building	Humanities/Social Scienc
G-Vered	1	2	1	Boatbuilding	Art/Tech/Engineering	Government	Humanities/Social Scienc
F-Renee	2	1	1	Boatbuilding	Art/Tech/Engineering	AR/VR	Art/Tech/Engineering
H-Ruma and Bob	2	1	1	Boatbuilding	Art/Tech/Engineering	Physics	Natural Sciences/Math
H-Ruma and Bob	1	1	2	Boatbuilding	Art/Tech/Engineering	Physics	Natural Sciences/Math
H-Ruma and Bob	1	1	2	Boatbuilding	Art/Tech/Engineering	Physics	Natural Sciences/Math
F-Renee	2	2	0	Education	Humanities/Social Sciences	Prints	Art/Tech/Engineering
H-Ruma and Bob	0	3	1	Education	Humanities/Social Sciences	IMF	Natural Sciences/Math
H-Ruma and Bob	1	2	1	Education	Humanities/Social Sciences	Physics	Natural Sciences/Math
H-Ruma and Bob	1	2	1	Education	Humanities/Social Sciences	Government	Humanities/Social Scienc
H-Ruma and Bob	1	2	1	Education	Humanities/Social Sciences	Government	Humanities/Social Scienc