# 2025-2026 Course Catalog

Trimester 1

| Seminar 1 | | |
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| **Seminar Information** | **Seminar Description** | **Standards Offered** |
| **STEM Project Studio**<br><br>Teacher: Chris<br><br>Location: Greenbrier | **Project Development Seminar: Technology, Science, and Design Thinking**<br><br>This advanced seminar is designed for students who have completed foundational work in Technology, Science, and Design Thinking and are ready to take their learning further through independent and collaborative project development. Students will strengthen their project | ***Standards will be further individualized based on individual student needs and project choices.**<br><br>**Design Thinking**<br>● Advanced Technology Integration (Mastery Credit)<br><br>**Future Readiness**<br>● Problem Solving using Technology<br>Foundational Scientific Process |

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| | management skills while pursuing standards and advanced standards.<br><br>Participants will have the option to engage with pre-designed, technology-focused project challenges or to propose and develop their own original project idea. Emphasis will be placed on the full design cycle: identifying authentic problems, generating and refining ideas, prototyping solutions, testing and iteration, and presenting outcomes. Students will have the opportunity to use this project as part of the Defense Process.<br><br>Throughout the seminar, students will design and implement a structured feedback process to guide their progress, ensuring continuous improvement and accountability. By the end of the course, students will not only have produced a tangible project but also gained practical experience in applying design thinking to real-world challenges, managing complex tasks, and communicating their work to diverse audiences. | • Foundational Passion Project<br>• Foundational Problem Solving Through Inquiry<br>• Problem Solving Using Data<br><br>**Mathematics**<br>• Advanced Topics in STEM Mathematics (Mastery Credit)<br><br>**STEM Science**<br>• Advanced Topics in STEM Engineering (Mastery Credit)<br>• Advanced Topics in STEM Science (Mastery Credit)<br>• Computer Programming Advanced Mastery Credit |
| **History is Sick!**<br><br>Teacher: Ms. Annelise<br><br>Location: Horizon Hub | Science meets history in this seminar! You will explore how infectious diseases have shaped human history in dramatic and unexpected ways. From the Black Death of the Middle Ages, to colonial smallpox and malaria, to modern day HIV, ebola, and COVID-19 (and more!) we will study both the science of how diseases evolve, spread, and affect the body, and the history of how they've influenced societies and cultures into becoming the world we live in today. You will choose a disease that interests you and work on a long-term project (like a podcast, documentary, written publication, or museum exhibit) that | **STEM Science**<br>• Evolution - Principles/Content<br>• Evolution - Scientific Process OR Application<br>• Molecules to Organisms - Principles/Content<br>• Molecules to Organisms - Scientific Process OR Application<br><br>**Civic Engagement**<br>• Connections to the Present<br>• Historical Cause & Effect<br><br>**Communication Arts** |

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| | tells its story. Learn how something as small as a microbe can change the course of humanity!<br><br>*Note that many standards are offered. Those earned will be determined based on the focus you choose for your project and your depth and quality of research. | • Quality Supporting Evidence<br>• Information Integration<br>• Cite Sources in Text<br>• Script/Outline Writing<br>• Digital Media and Technology Integration<br><br>**Future Readiness**<br>• SMART Goal Management<br>• Utilizing Digital Documents to Collaborate<br>• Negotiating Conflict Constructively<br>• Creating Team Roles, Norms, and Responsibilities |
| **Science is Real!**<br><br>Teacher: Mr. K<br><br>Location: Lab | Science is Real is a seminar which will help you to answer the questions: What does it really mean to "know" something and how can I go about it? This seminar provides a foundation for students wanting to expand their vocabulary and learn about the fundamental physical nature of our universe- how atoms are formed, how atoms create molecules and how atoms and molecules interact and organize to make every material thing that is. (Including US!!) Though mathematics is often the language of science, and a necessary piece of our puzzle; emphasis will be placed on imaginative analogies, experiential learning, and conceptual understanding. | **STEM Science**<br>• Physical Science (Matter and Interactions Principles/Content)<br>• Physical Science (Matter and Interactions Scientific Process OR Application)<br>• Physical Science (Energy Principles/Content)<br>• Life Science (Ecosystems Scientific Process OR Application)<br><br>**Communication Arts**<br>• Proper Grammar<br>• Vocabulary<br><br>**Mathematics**<br>• Mathematical Modeling Foundational: Summarize, Represent, Interpret and Build Linear Models<br>• Reasoning and Explanation Foundational: Using Units to Solve Problems<br><br>**Future Readiness**<br>• Persevering in Addressing Challenges<br>• Foundational Problem Solving Through Inquiry<br>• Problem Solving to solve a specific problem |
| **Conscious** | In this creative journey, you will spark your imagination | **Design Thinking: Technical Skill**<br>• Observe and Define |

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| **Creativity**<br><br>Teacher: Ms. French<br><br>Location: IDL | and build confidence by creating projects that showcase your ideas and style. You will dive into three tracks—Art, Writing, and Music—while exploring themes like resistance, ritual, observation, intuition, imperfection, voice, and collaboration. Each week you'll start with an inspiring piece of writing about the creative process, focus on a key idea, and take on a hands-on project prompt. You'll also get space for sketching, writing, and reflecting. The journal you will create is meant to capture and document your creative process—where you work things out, explore ideas, and track your growth. It will serve as both your creative lab and your evolving portfolio, giving you room to experiment, make mistakes, and discover your voice.<br><br>By the end, you will have a combined journal-portfolio of original work, reflections, sketches, and writings, stronger creative habits, and the excitement of sharing your projects in a final showcase. You will discover what fuels your creativity and how to keep that flow alive. | • Interpret<br>• Create<br><br>**Design Thinking: Design Thinking and Innovation**<br>• Connect and Empathize<br>• Ideate<br>• Prototype and Test<br><br>**Design Thinking: Reflection and Presentation**<br>• Reflect and Refine<br>• Present<br>• Relate and Extend<br><br>**Communication Arts: Creative Written Expression**<br>• Sensory and Vivid Language<br>• Reflective Writing<br>• Organization in Drafting<br>• Revision<br>• Proper Grammar |

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| **Financial Planning**<br><br>Teacher: Mr. Sasveld<br><br>Location: Galaxy Brain | First things first, this is a seminar for students with jobs or who have had paid jobs in the past. If you haven't had a job yet, this seminar is offered every school year and you will have the opportunity to take it at a later time!<br><br>We need money to survive, and this seminar is focused entirely on how to manage all of the money that you've spent countless hours working hard to earn! This seminar is broken down into four interconnected but distinct aspects of financial planning, which are: Taxes, Budgeting, Credit, and Investing. Throughout the seminar, students will be creating and adding to a financial portfolio that is separated into these four sections. At the conclusion of the seminar, students will choose one of these areas to dive deep into and complete an extensive project that will outline their future. Additionally, students will have all of the knowledge that they need in order to go out into the real world and be a smart, self-interested consumer. | **Personal Finance**<br>• Financial Mindset<br>• Money Management<br>• Using Economics in Life<br>• Saving<br>• Credit and Debt<br>• Investing<br>• Education and Employment |
| **The Other Side of History**<br><br>Teacher: Mr. E<br><br>Location: Time Machine | Maybe you have heard the expression, "History is written by the victor." But what does that mean? In this class we'll take a look at events throughout history such as Christopher Columbus exploring the "New World" to President Truman dropping the Atomic Bomb on Japan. Throughout the class we will be doing a lot of reading on primary and secondary sources to understand these historical accounts at the time they happened. What were the natives thinking when they saw Columbus walk across that beach? What was on the minds of those walking through the devastation of Hiroshima? In the end you will get the opportunity to tell the unsung story of a historical event of your choosing. Perhaps you want to tell the Arabic side of the Crusades? Or do you want to tell the | **Exploring Perspectives: Cultures in History**<br>• Perspectives through Documents<br>• Cultural Historical Comparisons<br>• Power, Privilege and Dominant Culture<br>• Themes in Exploring Perspectives: Cultures<br><br>**Creative Written Expression**<br>• Sensory and Vivid Language<br>• Understanding word meaning and choice<br><br>**Future Readiness**<br>• Exploring Perspectives in a Specific Hot Topic Issue of Choice |

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| | British side of the Revolutionary War? | |

## Seminar 2

| Seminar Information | Seminar Description | Standards Offered |
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| **Whatcha Wondering?**<br><br>Teacher: Ms. Meredith<br><br>Location: Speakeasy | In this seminar, you will turn your curiosities and wonderings into developed, thorough research projects and high-quality artifacts. Throughout the trimester, you will work collaboratively and independently.<br><br>In addition to Inquiry Research and Future Readiness standards, you have the opportunity to work on earning additional standards from other content areas based on the topic of your research.<br><br>You will be the one to ask the questions, look for answers, and develop new ideas. ***You will build a portfolio of documentation that tells the story of your research and creative processes. You will determine what artifacts are the best vehicle to share your findings and create them.*** Along the way, you will get peer and teacher feedback to support you.<br><br>So, have you ever wanted to make a series of paintings, write a collection of poems, conduct a long-term experiment, or engage in a community service project that lasts more than an afternoon? Any of those options (and more) could be yours, all you have to do is ask a question. | **Communication Arts: Inquiry Research**<br>• Quality Supporting Evidence<br>• Information Integration<br>• Organization in Drafting<br>• Revision<br>• Proper Grammar<br>• Vocabulary<br>• Cite Sources in Text<br><br>**Future Readiness:**<br>• Persevering in Addressing Challenges<br>• SMART Goal Management<br>• Foundational Passion Project<br>• Foundational Problem Solving through Inquiry<br><br>*Students are able to tie in additional content-area standards to this seminar based on the topic of their research project.* |
| **No Hablo Español** | ¡Bienvenidos! Have you ever overheard someone speaking another language and thought, “Dang, it would | **Electives - Beginner World Languages**<br>• Beginner World Languages (Mastery Credit) |

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| **Spanish 1**<br><br>Teacher: Ms. Brand<br><br>Location: Time Machine | be cool to know what they're saying." Are you interested in learning more about Spanish-speaking countries, culture, history, or traditions? Do you hope to study languages in the future, or work/go to school in another country? If so, this could be the class for you!<br><br>In this course, students will learn basic Spanish language patterns and vocabulary. The focus is on all four language skills; reading, writing, speaking, and listening, as well as the culture of the Spanish speaking world. Topics covered include common expressions of greeting, introductions, nouns and articles, the Spanish alphabet, numbers, vocabulary associated with school, friends, family, and names for people, as well as present tense verb conjugations. Students will be required to participate in small group presentations in order to demonstrate speaking skills and for teachers to provide students with feedback on their spoken Spanish.<br><br>Take a step outside of your comfort zone and give Spanish a try! | ● Interpersonal Communication of a World Language<br>● Presentational Speaking of a World Language<br>● Presentational Writing of a World Language<br>● Interpretive Reading of a World Language<br>● Interpretive Listening of a World Language<br><br>**Future Readiness**<br>● Persevering in Addressing Challenges<br>● Self Advocacy<br>● Foundational Passion Project<br><br>**Civic Engagement - Exploring Perspectives**<br>● Cultural Historical Comparisons<br>● Power, Privilege and Dominant Culture |
| **Game Theory**<br><br>Teacher: Chris<br><br>Location: Greenbrier | Games play an increasingly important role in modern life and allow participants opportunities to model events without the consequences of reality. How do we know if we are using the right strategy and making the best possible decision? Game theory is a branch of mathematics that help us answer these questions as we face daily dilemmas and conflicts, by modeling them as mathematical games. By studying the strategic interactions of individuals, we can explore situations and possible outcomes from significant global events involving | **Communication Arts**<br>● Technical Writing<br><br>**Design Thinking**<br>● Problem Solving Using Technology<br>● Advanced Technology Integration (Optional)<br><br>**Future Readiness**<br>● Foundational Problem Solving Through Inquiry<br>● Problem Solving Using Data<br>● Problem Solving to solve a specific problem<br>● Using Economics in Life |

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| | diplomacy, politics, economics and transportation. Participants in this seminar will use their understanding of zero-sum games, two person non-zero-sum games, sequential games, multiplayer games, linear optimization, and voting and power theory to learn how to take into account strategic considerations when making a decision and make predictions about how individuals or organizations will behave. We will also play and examine the strategies behind cracking several popular games. | **Mathematics**<br>● Reasoning and Explanation Foundational: Translate between graphic, tabular and equation forms of a function<br>● Mathematical Modeling Foundational: Interpreting Categorical and Quantitative Data<br>● Mathematical Modeling Foundational: Calculate Expected Values<br>● Mathematical Modeling Foundational: Evaluate Outcomes<br>● Mathematical Modeling Foundational: Probability Informed Decision Making<br>● Mathematical Modeling Foundational: Summarize, Represent, Interpret and Build Linear Models<br>● Mathematical Modeling Advanced Statistical Analysis: interpret nonlinear models (Optional)<br>● Mathematical Modeling Advanced NonLinear Modeling: Use technology to build and analyze nonlinear models (Optional)<br>● Mathematical Modeling Advanced NonLinear Modeling: Prepare and label primary sources and data sets for modeling and analysis (Optional) |
| **Life in Plastic**<br><br>Teacher: Ms. Annelise<br><br>Location: Horizon Hub | Is it fantastic? Or is it leading us to an environmental crisis? In the 20th century, plastics were celebrated as revolutionary - a lightweight, durable, and hygienic way of creating and transporting goods. But in the 21st century, plastics have become a global concern, as microplastics infiltrate ecosystems, food chains, and even our bodies. Are the benefits worth the costs? And what will happen to all this plastic in the future?<br><br>In this seminar, you'll explore plastics from the inside out. Through lab tests and microscopy, you'll investigate the chemical properties of polymers and | **STEM Science**<br>● Ecosystems - Principles/Content<br>● Ecosystems - Scientific Process OR Application<br>● Matter and Interactions - Principles/Content<br>● Matter and Interactions - Scientific Process OR Application<br><br>**Design Thinking**<br>● Create<br>● Connect and Empathize<br>● Prototype and Test<br><br>**Future Readiness**<br>● Problem Solving to Solve a Specific Problem<br>● Exploring Perspectives of Local Issues |

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| | even create your own bioplastics. You will join community clean-ups to witness the local impact of plastic waste, and study current research on how microplastics affect human health. You'll analyze recycling systems (and learn why much of our plastic isn't actually recycled!) and design your own "upcycled" creations. Finally, you'll propose innovative strategies to reduce the harms of plastic in our bodies, our communities, and our world. | |
| **Theatre: The Ultimate Collaborative Art Form**<br><br>Teacher: Mr. K<br><br>Location: Lab | Students in this class will work with a teacher-artist from the Milwaukee Repertory Theater to explore the current production of Come From Away. With this partnership, students will be exposed to the ins and outs of theater production. This class also includes an Immersion Day at the Milwaukee Rep, where students attend a live performance of the production and then get a behind-the-scenes look at how to produce a professional show. Alongside this work with the Rep, students will also hone their own creative skills by creating and performing an exploration/adaptation of the play with Mr Koehler. What that adaptation looks like, and the particular way you will collaborate in its creation (performer, designer, manager, etc…) is waiting to be discovered and experienced by you. The only ability required is your AVAILability!! | **Civic Engagement**<br>• Belief Systems<br><br>**Communication Arts**<br>• Proper Grammar<br>• Vocabulary<br>• Persuasive and Creative Speaking<br>• Speaker Evaluation<br>• Script/Outline Writing<br>• Class discussion<br>• Understanding Word Meaning and Choice<br><br>**Future Readiness**<br>• Persevering in Addressing Challenges<br>• Advanced Topics in Leadership |
| **Seminar 3** | | |
| **Seminar Information** | **Seminar Description** | **Standards Offered** |

# The Horror!

Teacher: Ms. Meredith

Location: Speakeasy

~It's baaaaaaack!~

In this seminar, we will read and analyze horror stories as a class, in small groups, and independently. Students will pick one of two options for their final projects: creation or curation. Students will also choose the type of stories they want to analyze or create throughout the seminar (short stories or short films).

- In a **creation project**, students will independently write their own horror story. Then, they will collaborate with other creators to make an anthology OR a film festival, depending on their project.
- In a **curation project**, students will independently select, read (or watch), and analyze various horror stories (or films). They will carefully compare, contrast, and organize these pieces to create an anthology OR a film festival.

Additionally, students will observe, analyze, and create various horror-themed art pieces to bring horror to life. Think of artifacts like cover art, character drawings, and short films.

NOTE: This seminar explores dark topics. Content warnings may include: death, suicide, murder, child abuse, self harm.

Students will have the ability to select stories that they want to read for most of the trimester. In cases where students choose to opt out of reading a story due to its content, they will choose a replacement story to read and analyze independently.

**Communication Arts: Literature Analysis**

- Text Analysis (Mastery Credit)
- Text Evidence
- Plot Analysis
- Analyze Author's Choice
- Determine Themes
- Understanding Word Meaning and Choice

**Design Thinking: Technical Skill**

- Observe and Define
- Interpret
- Create

**Future Readiness:**

- SMART Goal Management

## Computer Programming/ Game Development

Teacher: Chris

Location: Greenbrier

As the role of computers in modern life continues to expand, understanding the theory, design, development and applications of software and software systems becomes increasingly important to those who wish to understand the world we live in. Students interested in Computer Science can transfer this interest into careers in artificial intelligence, virtual reality, computer systems and networks, security, database systems, human computer interaction, vision and graphics, numerical analysis, data analytics, programming languages, software engineering, bioinformatics and theory of computing.

Learning how to design and write programs is just one aspect of computer science. This course will use computer gaming as a context to build the skills and methodology to solve increasingly complex problems and train programmers to systematically solve problems across disciplines. This course will begin with javascript and students will have the ability to use the Unity 3d engine using Mastery Coding's Game Development Pathway. Mastery Coding's flagship Game and App Development pathway uses cross-disciplinary, project-based learning to teach core Unity coding skills and offer a direct path to the industry-based Unity User: Programmer, Unity User: Artist, and Unity Certified Associate: Game Developer certifications.

In addition, advanced students will have the opportunity to explore robotics programming using FANUC RoboGuide software, FANUC Robotic Arm, and FANUC CNC simulator.

**Future Readiness**

- Problem Solving to solve a specific problem: Student can isolate a problem, and can identify and test the success of potential solutions

**Mathematics**

- Mathematical Modeling Elective: Central Tendency and Spread: Student can use statistics appropriate to the shape of the data distribution to compare center (median, mean) and spread (such as interquartile range and standard deviation) of two or more different data sets and to Interpret differences in shape, center, and spread in the context of the data sets, accounting for possible effects of extreme data points (outliers).
- Mathematical Modeling Elective: Solving design problems using geometry: Students can maximize characteristics, meet constraints, or maintain ratios in order to solve design problems.
- Mathematical Modeling Foundational: Interpreting Categorical and Quantitative Data: Students can represent data on two quantitative variables on a scatter plot, and describe how the variables are related. Students can summarize categorical data for two categories in two-way frequency tables. The student is able to interpret relative frequencies in the context of the data (including joint, marginal, and conditional relative frequencies) and recognize possible associations and trends in the data.

**Computer Science Application**

- Problem Solving using Technology: Decompose problems and subproblems into parts to facilitate the design, implementation, and review of programs through systematic analysis using constructs such as procedures, modules, and/or objects. Design solutions to complex, real world problems by breaking them down into smaller parts that can be solved through engineering.

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| | **Students who have already taken computer programming ARE ENCOURAGED to take the course as many times as desired in order to learn new languages and to pursue industry certifications. These students will work with the instructor to develop a portfolio demonstrating proficiency or mastery in advanced standards.** | • Program Development: Design, iteratively develop and evaluate programs with documentation that include nested loops and compound conditionals for the purpose of practical intent, personal expression or to address a societal issue.<br>• Program Documentation: Create artifacts by using procedures within a program, combinations of data and procedures, or independent but interrelated programs and document design decisions using text, graphics, presentations, and or demonstrations in the development of complex programs. Create procedures with parameters to organize code and make it easier to reuse. Incorporate existing code, media and libraries into original programs and give attributions, and demonstrate code reuse by creating programming solutions using libraries and APIs.<br>• Simulation Design: Student presents an approved text based or two dimensional simulation or game with accompanying process documentation.<br>• 3d Simulation Design: Student presents an approved three dimensional simulation or game with accompanying process documentation. (Optional)<br>• Computer Programming Advanced Mastery Credit: Student presents a portfolio of 4 fully developed programs complete with documentation of design, iteration, and testing process. (Optional)<br>• Computer Programming Advanced Mastery Credit Portfolio #1: Student presents an approved piece of advanced programming complete with documentation of design, iteration, and testing process utilizing Unity Gaming Engine. (Optional) |
| **Pathways High Floor Plan**<br><br>Teacher: Mr. Sasveld | Our school building has a lot of unknown areas to explore! In this seminar, students will be enhancing their structure and generalization skills by creating floor plans of every single room in our school building! Students will work in teams to map out the school floor by floor by drawing | STEM Mathematics - **Structure and Generalization**<br>• *Congruence, Similarity, and Equivalence*<br>• *Measurement and Dimension*<br>• *Use geometric shapes, their measures, and their properties to describe objects*<br>• *Circles* |

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| Location: Galaxy Brain | accurate, to-scale drawings of each and every room in the building. Teams will then combine their floors to create a blueprint of the entire school building which we will compare to existing blueprints to see how well we did. Then students can take it to the next level by designing a 3-dimensional and to scale model of the building. | • *Sine, Cosine, Tangent*<br><br>Design Thinking - **Design Thinking and Innovation**<br>• *Ideate*<br>• *Prototype and Test*<br><br>Elective Future Readiness - **Collaboration and Working Together**<br>• *Negotiating Conflict Constructively*<br>• *Creating team roles, norms, and responsibilities* |
| **Power and Resistance: Global History**<br><br>Teacher: Ehrenberg<br><br>Location: Time Machine | This course explores the recurring theme of power and resistance in world history, from ancient empires to modern protest movements. Students will study how rulers gain and maintain power, how ordinary people resist, and how those struggles shape societies. Through primary sources, debates, role-plays, documentaries, and creative projects, students will connect past and present resistance movements and ask: What patterns repeat across time? | **Advocacy and Social Justice**<br>• Exploring Perspectives through Topics in Social Justice<br>• Civic Superpowers<br>• Themes in Global Citizenship: Advocacy and Social Justice<br><br>**Cultures in History**<br>• Cultural Historical Comparisons<br>• Power, Privilege and Dominant Culture<br><br>**Inquiry Research**<br>• Quality Supporting Evidence<br>• Information Integration |
| **Dual Enrollment: ENG-195**<br><br>Active Instruction (T/R/F 2:30-3:30pm)<br><br>Teacher: Ms. Maya Stahler & Ms. Mach<br><br>Location: Civic Square | Develops writing skills which include prewriting, drafting, revising, and editing. A variety of writing assignments are designed to help the learner analyze audience and purpose, research and organize ideas, and format and design documents based on subject matter and content. Also develops critical reading and thinking skills through the analysis of a variety of written documents. | **1 Communication Arts Credit for Dual Enrollment** |