

Mirus Academy Course Catalog

ELECTIVE CLASSES

2022-2023



MIRUS ACADEMY

Independent High School

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What Elective Classes Should I Choose?

- To meet graduation requirements, students need to earn 6-7 credits each school year. This means that students should plan to earn **1-2 elective credits** each school year in addition to their core academic credits.
- In selecting each year's electives, we encourage students to choose courses that they find interesting or want to know more about. Every elective course is considered "college-preparatory", so we hope students will follow their interests and use their elective courses to discover more about the world!

Graduation Requirements

In accordance with the educational standards set by the State of Texas, students need 26 credit hours for graduation. The credit requirements for Mirus Academy are listed below.

To graduate with 26 credits, students should plan to take 6-7 credits each school year. This means that students should plan to earn **at least 1-2 elective credits** each school year, in addition to their core academic credits.

- 4 -- English
- 4 -- Math (*including Geometry + Algebra 2*)
- 4 -- Science (*including Biology + a Physical Science*)
- 4 -- Social Studies (*Geography + World History + US History + Government/Economics*)
- 2 -- Foreign Language (*both credits must be in the same language*)
- 2 -- Seminar (*Seminar is a ½ credit class required each year a student is enrolled at Mirus*)
- 1 -- Worldview (*such as Psychology, Sociology, Anthropology, Art Appreciation, Music Appreciation, Mythology*)
- ½ -- Technology (*Computer Applications is required beginning with the Class of 2024*)
- 4 ½ -- Elective courses (*as needed for a total of 26 credits*)

Please see the current [GRADUATION REQUIREMENT](#) document for the suggested course sequence by grade level.

Red, Blue, & Green Graduation Cords

The elective courses you take will determine the color of graduation cord that you will receive at graduation. Every Mirus student will earn at least one cord. Some students earn 2 cords, and rarely they may earn all 3.

HUMANITIES CORD

The Red Humanities Cord may be earned in one of 2 ways:

- Complete 2 elective credits in English, Social Studies, and/or Foreign Language (*in addition to the courses required for graduation*)
- Or, complete 1 credit of Fine Arts each year of high school (*4 credits total*)



S.T.E.M. CORD

The Blue STEM Cord may be earned in one of 2 ways:

- Complete 2 credits of math beyond the level of Algebra 2
- Or, complete 2 elective credits of Technology or Science (*in addition to the courses required for graduation*)



MULTIDISCIPLINARY CORD

The Green Multidisciplinary Cord may be earned by:

- Completing at least 4 elective courses in a variety of subjects (*Courses used for the Green cord may not be used to meet the requirements for the Red or Blue cords*)



Elective Courses: 2 Options

At Mirus Academy, the **core classes** (English, Math, Science, Social Studies) are in a traditional classroom setting with teacher-directed instruction. For **elective classes**, Mirus students have 2 choices:

Option 1: Online Classes during School Hours

- ❖ Students work on their online courses during their designated Study Hall class period.
- ❖ The courses are self-paced (“asynchronous learning”), but Mirus Academy facilitates the courses via daily check-ins and weekly due dates.
- ❖ Unless otherwise noted, online classes are provided through Stride/K12, one of the nation’s largest providers of online high school courses for schools.
- ❖ Every course has an assigned teacher. For Stride/K12 courses, the online teacher is available via email as well as phone call or chat during posted office hours. Mirus Academy teachers are available to help answer questions and facilitate students’ communication with the online teacher.

Option 2: In-Person Classes after School Hours

- ❖ Mirus contracts with educational organizations to provide after-school classes to Mirus students.
- ❖ The courses are via teacher-led group instruction (“synchronous learning”).
- ❖ These after-school classes are held on the Mirus campus but may also have students from other schools who come to the Mirus campus for class.
- ❖ Courses provided through educational vendors are not included in Mirus Academy’s tuition. These courses incur an additional fee paid directly to the vendor.
- ❖ Courses provided through educational vendors are graded as Pass/Fail rather than with a letter grade.

General Electives

Introduction to Business

0.5 Elective credit upon course completion

Prerequisite: none

Are you considering a career in business? This course provides an overall exploration of business careers so students can better assess which pathway they may want to pursue. Students study the concepts of marketing, financial management, and human resource management, in addition to other common business related functions. Students complete projects to develop a deeper understanding of the roles these business functions play.

1. How Businesses Work & Types of Businesses
2. General Management, Business Law & Ethics
3. Business Information, Accounting, Financial Analysis, & Data
4. Human Resources
5. Operations Management, Inventory, Supply Chain, Quality Control
6. Administrative Support & Business Communication



Principles of Business 1 & 2

0.5 Elective credit upon each course completion

Prerequisite: none

Discover the fundamental knowledge that will help you pursue a career in business. In the first semester, you'll focus on different types of businesses and economic systems, as well as the impact of technology on business, business ethics, and social responsibility. During the second semester, you'll learn how to create successful marketing strategies to sell your product or service. And, you'll study the basics of finance, including accounting, budgeting, and investing. This course will help you determine if a career in business is right for you!

Principles of Business 1

1. Fundamentals of Business
2. Types of Businesses
3. Economics of Business
4. Business Ethics
5. Global Impact on Business
6. The Role of Government
7. The Importance of Data
1. Marketing
2. Market Segmentation
3. The Marketing Mix
4. Principles of Money
5. Basic Financial Management
6. Business Finance
7. Basics of Finance
8. Business Careers



Business 2 is the 2nd semester option which builds upon the material learned in the 1st semester course. Completion of both courses earns 1.0 credit.

Career Exploration

0.5 Elective credit upon course completion

Prerequisite: Enrolled in 11th or 12th grade

Students explore their options for life after high school and implement plans to achieve their goals. They identify their aptitudes, skills, and preferences and explore a wide range of potential careers. They investigate the training and education required for the career of their choice and create a plan to be sure that their work in high school is preparing them for the next step. They also receive practical experience in essential skills such as searching and applying for college, securing financial aid, writing a resume and cover letter, and interviewing for a job.

1. Telling Others Who You Are
2. Exploring Careers
3. Exploring College and Other Options
4. Making a Plan
5. Getting into College
6. Finding and Keeping a Job



Criminal Justice 1 & 2

0.5 Elective credit upon each course completion

Prerequisite: none

Have you ever wondered what steps take place as people move through the court system? The criminal justice system is a very complex field that requires dedicated people willing to pursue equal justice for all. Explore different career choices and how the correctional system and trial process all work together to maintain social order.

Criminal Justice 1

1. Overview of Criminal Justice
2. History of the Criminal Justice System
3. US Laws: Freedom versus Responsibility
4. Introduction to Careers in Criminal Justice

Criminal Justice 2

5. Inside the Courtroom
6. The Juvenile Justice System
7. Correctional Facilities
8. People Skills in Criminal Justice



Criminal Justice 2 is the 2nd semester option which builds upon the material learned in the 1st semester course.

Completion of both courses earns 1.0 credit.

Criminology

0.5 Elective credit upon course completion

Prerequisite: none

Why do certain people commit horrible acts? Can we ever begin to understand their reasoning and motivation?

Perhaps. The mental state of a criminal can be affected by many different aspects of life: psychological, biological, sociological, all of which have different perspectives and influences. Investigate not only how these variables affect the criminal mind but also how crimes are investigated and handled in the criminal justice system.

1. The World of Criminology
2. Biological and Psychological Theories of Crime
3. Labeling, Conflict, Environmental, and Radical Theories
4. Violent Crimes and Crimes Against Property
5. White-Collar, Corporate, and Public Order Crimes
6. Criminal Case Process
7. Enforcing the Law and the Nature of the Courts
8. Overview of Punishment and Corrections



Culinary Arts 1 & 2

0.5 Elective credit upon each course completion

Prerequisite: none

Thinking of a career in the food service industry or looking to develop your culinary skills? This introductory course will provide you with basic cooking and knife skills while preparing you for entry into the culinary world. Discover the history of food culture, food service, and global cuisines while learning about food science principles and preservation. Finally, prepare for your future by building the professional, communication, leadership, and teamwork skills that are critical to a career in the culinary arts.

Culinary Arts 1

1. The Safe Kitchen
2. Knife Skills
3. Food Safety
4. Cuisine and Culture
5. Garde Manger: The Cold Kitchen
6. The Principles of Food
7. Professionalism
8. Leadership, Teamwork, & Ethics

Culinary Arts 2

1. The Healthy, Sustainable Kitchen
2. Tools of the Trade
3. Stocks, Sauces, and Soups
4. Baking: Breads, Cakes, & Cookies
5. Culinary Business & Entrepreneurship
6. Service, Style, and Satisfaction
7. Choosing Your Culinary Career
8. Networking for Success



Culinary Arts 2 is the 2nd semester option which builds upon the material learned in the 1st semester course. Completion of both courses earns 1.0 credit.

NOTE: Students taking this course will have cooking projects that will require food ingredients and basic cooking supplies. These cooking projects will need to be completed at home outside of school hours.

Digital Media

0.5 Elective credit upon course completion

Prerequisite: none

Discover your talent for building digital media applications using text, graphics, animations, sounds, videos, and more! Learn about the elements that make impressive media, such as typography, color theory, design, and manipulation. Explore careers to apply your digital media skills and find your place in this fast-paced and exciting field!

1. Digital Media: Current Issues & Careers
2. Introduction to Digital Images
3. Photographs and Graphic Images
4. Editing and Distributing Digital Images
5. Creating Animations
6. Digital Video: Pre-Production
7. Digital Video: Production & Post-Production
8. Multimedia Presentations



As part of this course, students will utilize media design software such as Vecteezy, Powtoon, Canva, Gimp, etc. (no additional cost)

Digital Photography 1 & 2

0.5 Elective credit upon each course completion

Prerequisite: none

Have you wondered how professional photographers manage to capture that perfect image? Gain a better understanding of photography by exploring camera functions and the elements of composition while putting theory into practice by taking your own spectacular shots! Learn how to display your work for exhibitions and develop skills important for a career as a photographer.

Digital Photography 1

1. Taking The First Shot
2. Moving Into Manual
3. A Snapshot of History
4. The Nature of Light
5. Creative Composition
6. Producing Great Images
7. Manipulation & Management
8. Presenting Your Work

Digital Photography 2

1. Real Life in Pictures
2. Style and Genre
3. There's an App for That
4. Composing Meaning
5. Productive Critique
6. Photography & Community
7. Portfolios & Professionalism
8. Presenting Your Portfolio



Digital Photography 2 is the 2nd semester option which builds upon the material learned in the 1st semester course. Completion of both courses earns 1.0 credit.

NOTE: Students will need access to a digital camera that has both manual and automatic control. Students may borrow the school's camera to use at school, if needed.

Family & Consumer Science

0.5 Elective credit upon course completion

Prerequisite: none

In this course, students develop skills and knowledge to help them transition into adult roles within the family. They learn to make wise consumer choices, prepare nutritious meals, contribute effectively as part of a team, manage a household budget, and balance roles of work and family. And, they gain an appreciation for the responsibilities of family members throughout the lifespan and the contributions to the well-being of the family and the community.

1. Money & You: Being a Responsible Consumer
2. A Balanced Family and Work Life
3. Living a Healthy Life
4. Raising Children
5. Supporting the Community



Fashion Design

0.5 Elective credit upon course completion

Prerequisite: none

Are you a fashion trend follower? Are you drawn to how designers have pulled together fabrics and colors to create memorable pieces? Do you dream of designing your own line of clothing or accessories? Learn what it takes to get started in the fashion industry, from the careers available to new technology and trends reshaping the industry every day. Start creating!

1. Introducing Fashion Careers
2. Basic Skills for the Design Industry
3. Physical Tools for Fashion Designers
4. Sewing 101
5. Choosing Clothing
6. The Runway Gives Back
7. Putting It into Practice
8. Entrepreneurship: Ready for Business



NOTE: Students taking this course will have sewing projects that will require the use of a sewing machine and iron/ironing board provided by the student. These sewing projects will need to be completed at the student's home after school hours.

Introduction to Finance

0.5 Elective credit upon course completion

Prerequisite: none

This course surveys the basic personal financial needs of most individuals and emphasizes the basics of budgeting, saving, checking, investments, credit, the wise use of insurance, and paying and preparing income tax returns. From credit to insurance to taxes, a thorough understanding of financial concepts, with practical application through activities and projects, will enable students to leave this course with applicable, useful skills for life.

1. Developing a Sound Financial Life
2. Understanding Credit
3. Spending Money
4. Banking & Insurance
5. Investing Money



Fitness & Wellness 1 & 2

0.5 Elective credit upon each course completion

Prerequisite: None

Your health is more than skin deep—or should we say muscle deep? There are many factors that influence your fitness from biological predispositions to the foods you eat, the sleep you get, your psychology, and more! This course will go beyond the superficial of fitness and dig into the science behind it. You will explore the basics of how to assess your baseline fitness, design and implement a fitness plan, fuel your body to achieve your fitness goals, and stay safe while improving your health. Physical fitness is a journey, not a destination: start your expedition now.

Fitness & Wellness 1

1. What Is Physical Fitness?
2. The Science Behind Fitness
3. Taking Fitness to the Next Level
4. Planning for Fitness: Upgrading Your Life

Fitness & Wellness 2

5. Setting Goals and Making a Plan
6. Modern Fitness Technology
7. Fit for Life
8. Becoming a Fit Community



Fitness 2 is the 2nd semester option which builds upon the material learned in the 1st semester course. Completion of both courses earns 1.0 credit.

As part of this course, students will be designing and implementing a personal physical fitness program. Basic equipment, such as a stopwatch and measuring tape, are available from the school. Students will most likely find it easier to conduct their personal fitness exercising at home or at a gym, outside of school hours.

Principles of Health Science 1 & 2

0.5 Elective credit upon each course completion

Prerequisite: Biology

This course introduces students to the various disciplines within the health sciences, including toxicology, clinical medicine, and biotechnology. Students explore the importance of diagnostics and research in the identification and treatment of diseases. The course presents information and terminology for the health sciences and examines the contributions of different health science areas.

Health Sciences 1

1. The World of Health Sciences
2. Careers in Health Science
3. The Life Span
4. Technical Skills
5. Health and Wellness
6. Leadership and Teamwork
7. Health Communication
8. Ethics and Legal Issues
9. Safety
10. Informatics & Technology

Health Sciences 2

1. Health Care Systems
2. Communication in Health Care
3. Legal Responsibilities & Patient Rights
4. Health Care Workers' Responsibilities
5. Wellness
6. Workplace Safety
7. Emergency Care & Infection Control
8. Technology in Healthcare
9. Blood-borne Illnesses
10. Getting a Job in Healthcare



Health Sciences 2 is the 2nd semester option which builds upon the material learned in the 1st semester course.

Completion of both courses earns 1.0 credit.

History of Gaming

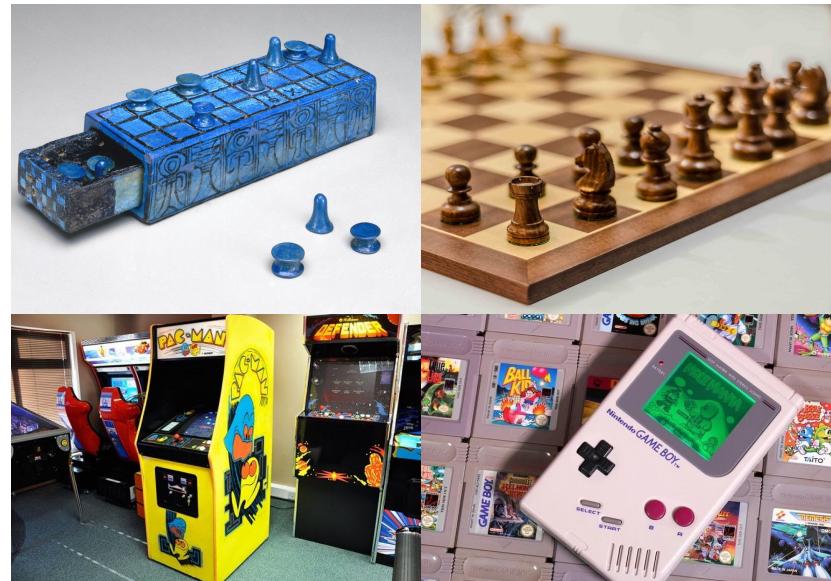
0.5 Elective credit upon course completion

Prerequisite: none

Games are a lot of fun, but are they important? Absolutely! Throughout history, humans have been captivated by games because they are a type of “simulation” that enables us to work out “cause and effect” scenarios without facing the dire consequences that may occur in real life. By playing games, we learn to predict outcomes, calibrate our reactions, explore our choices, and develop strategic skills that will extend far beyond the fun of playing a simple game.

In this course, you will explore the history of games while also gaining an understanding and appreciation of the historic context that led to the development of different types of game and game play.

- Introduction to Games
- Games in Early History
- Card Games & Board Games
- Role-Playing Games
- Early Video Games
- Home Consoles
- The Internet & Gaming
- Input Devices
- The Psychology of Gaming
- Gaming Today & In the Future



“History of Gaming” course is provided through Mirus Academy. The course is centered on curriculum provided by PBS Studio’s “Crash Course” video series plus many other sources for reading, writing, and exploring games from ancient times to the present.

Interior Design

0.5 Elective credit upon course completion

Prerequisite: none

Do you have a flare for designing and decorating? Interior designers do it all—from planning the color scheme to choosing furniture and light fixtures—with the end goal of creating a space where people can live or work comfortably, safely, and happily. In this course, you will learn about color, texture, trends and styles over time, how homes are built, and “green” options for homes and businesses. Most importantly, you’ll learn how to work with a client to meet their unique needs and style requirements.

1. Introducing: Interior Design Careers
2. Basic Skills for the Design Industry
3. Tools of the Trade
4. Types of Houses and Buildings
5. Basics of Decorating
6. Trends in Interior Design
7. Putting it Together: Designing Your Space
8. Look to the Future: Your career



NOTE: As part of this course, students will download and utilize virtual design software (no additional cost).

Nutrition & Wellness

0.5 Elective credit upon course completion

Prerequisite: None

To keep our body and our mind running like finely tuned machines, we need to use the right fuel. For humans, that means nourishing our bodies with the right foods. In this course, you'll explore how food affects essential aspects of your life from your weight to how you age to how well you think. You'll also examine how outside influences—family, peers, and the media—can affect your diet and your perception of food and how to set yourself up for nutritional success.

1. Health, Nutrition, and Wellness
2. Managing Your Nutrition & Health
3. Healthy Meal Planning
4. Outside Influences
5. Considering Food Safety
6. Health and Wellness Challenges
7. Social & Emotional Health
8. Global Health and Wellness



NOTE: This course requires students to participate in a cooking project in their home kitchen outside of school hours

Personal Financial Literacy

0.5 Elective credit upon course completion

Prerequisite: none

This course covers the most current and relevant financial topics that impact today's students. Topics including budgeting, identity theft, saving, investing, risk management, and careful use of credit. This course teaches students how to plan and manage their personal finances; how to live a financially successful life; and what their financial responsibilities are as citizens.

1. How Your Choices Affect Income
2. Income, Benefits, and Taxes
3. Your Purchasing Power
4. Financial Decisions and Planning
5. The Banking System
6. Personal Risk Management
7. Buying Decisions
8. Preserving Your Credit
9. Credit Problems and Laws
10. Basics of Saving and Investing
11. Saving and Investing Options
12. Buying and Selling Investments



Study Skills for Academic Success

0.5 Elective credit upon course completion

Prerequisite: None

Students learn essential academic skills within the context of their learning style, individual learning environment, and long-term goals. This course helps students develop habits for more successful reading, writing, studying, communication, collaboration, time management, and concentration. It also provides insights into how the brain works when they are learning, and ways to maximize its potential.

1. Reaching Your Academic Potential
2. Your Mind and Your Mindset
3. Learning as Process and Preference
4. Effective Work Habits
5. Memory and Studying for Tests
6. Taking Tests
7. Making Decisions and Setting Goals
8. The Career Ahead
9. Reading, Writing, & Math
10. Communication
11. Research
12. Creativity and Collaboration



Wildlife Ecology 1 & 2

0.5 Elective credit upon each course completion

Prerequisite: None

This course explores wildlife ecology and management in today's world. The course provides students with the history and administration of natural resources, as well as broader concepts that impact everyone, including conservation, endangered species, and human impacts on wildlife. Students also focus on how to identify species, including wild animals in their habitats. Finally the course helps students view their role in the future and how a better understanding of the natural world can prepare them for success.

Wildlife Ecology 1

1. History of Wildlife Management
2. Importance of Natural Resources
3. Wise Use of Natural Resources
4. Wildlife Management Administration
5. Habitat Requirements of Wildlife
6. Human Impact on Wildlife Habitat
7. Wildlife & Sport Hunting
8. Modern Wildlife Management
9. Modern Waterfowl Management
10. Endangered Species
11. Wildlife Parks and Zoo

Wildlife Ecology 2

1. Mammals
2. Nonindigenous Species
3. Upland Game Birds
4. Water Birds
5. Songbirds & Common Birds
6. Avian Predators
7. Shorebirds
8. Reptiles
9. Amphibians
10. Freshwater Habitats
11. Careers in Wildlife Management



*Wildlife Ecology 2 is the 2nd semester option which builds upon the material learned in the 1st semester course.
Completion of both courses earns 1.0 credit.*

English Electives

- All students take a core English class in 9th - 12th grade (4 credits total)
- English Electives are available for students who want to explore specific aspects of reading and writing in more depth

Creative Writing

0.5 English credit upon full-year course completion

Prerequisite: none

Are you ready to express yourself through writing? Creative writing is any writing that goes outside the bounds of normal professional, journalistic, academic, or technical forms of literature. Whether through prose or poetry, students will develop their writer's craft and learn not only how to write and improve upon their writing, but also how to give and receive constructive feedback.

"Creative Writing" is an in-person, teacher-led class that meets **Tuesdays** after school

This course incurs an additional fee which is paid directly to the Rising Voices Arts Community (fee TBA, financial aid may be available).



The graphic features the "Rising Voices" logo at the top, with "Rising" in black and "Voices" in a colorful, stylized font. Below it is the text "ARTS COMMUNITY". Underneath is the slogan "EMPOWERING INDIVIDUALS AND COMMUNITIES TO RAISE THEIR VOICES THROUGH THEATRE AND THE ARTS." A photograph of a diverse group of performers on stage is shown on the left. To the right, three statements are listed: "We engage in Creative expression.", "We work towards Equity.", and "We believe there is Strength in diversity." A "Who Are We?" button is in the top right corner.

Creative Writing is provided through Mirus Academy's partnership with the Rising Voices Arts Community, a non-profit organization in Katy dedicated to empowering people through arts education.

NOTE: Students must be enrolled in Creative Writing for the entire school year (two semesters) to receive 0.5 credit.

Gothic Literature

0.5 English credit upon course completion

Prerequisite: none

Since the eighteenth century, Gothic tales have influenced fiction writers and fascinated readers. This course focuses on the major themes found in Gothic literature and demonstrates how the core writing drivers produce a suspenseful environment for readers. It presents some of the recurring themes and elements found in the genre. As they complete the course, students gain an understanding of and an appreciation for the complex nature of Gothic literature.

1. GOTHICA: When Gruesome Is Delicious
2. FRANKENSTEIN: A Monster Is Born
3. FRANKENSTEIN: With Great Power Comes Great Responsibility
4. JEKYLL & HYDE: To Thine Own Self Be True
5. GOTHIC POETRY: Love from Beyond the Grave
6. DRACULA: The Blood Is the Life
7. DRACULA: The Hunter Becomes the Hunted
8. EDGAR ALLAN POE: The Monsters in Us



Journalism 1 & 2

0.5 English credit upon each course completion

Prerequisite: None

Does your curiosity lead you to the heart of the matter? Channel this curiosity into developing strong writing, critical thinking, and research skills to perform interviews and write influential pieces, such as articles and blog posts. Learn about the evolution of journalism and its ethics, bias, and career directions to forge your path in this field. Discover how journalism can lead to exciting careers that will put you right in the action.

Journalism 1

1. History of American Journalism
2. New Media Versus Old Media
3. Press Law & Journalistic Ethics
4. Rhetoric, Bias, & Point of View
5. Photojournalism & Advertising
6. Freelance Journalism
7. Documenting Life
8. Citizen Journalism

Journalism 2

1. How to Write News Stories
2. Researching Your Story
3. Using Sources
4. Preparing Posts for Publication
5. The Publication Process
6. Journalism's Changing Environment
7. Data & Journalism
8. Careers in Journalism



Journalism 2 is the 2nd semester option which builds upon the material learned in the 1st semester course. Completion of both courses earns 1.0 credit.

The background of the slide is a vibrant, abstract painting featuring a variety of colors including blue, red, yellow, and white. The brushstrokes are visible and expressive, creating a dynamic and artistic atmosphere.

Fine Arts Electives

- Fine Arts courses are optional, but we recommend that all Mirus students develop their artistic side by taking at least one Fine Arts course
- The following courses may be applied towards the required 1 “Worldview” credit: Music Appreciation, Art Appreciation, Art in World Cultures

Art Appreciation 1 & 2

0.5 Fine Arts credit upon each course completion

Prerequisite: World History is recommended

Students will develop their understand of art as they learn the major movements of art history while focusing on masterworks and the intellectual, technical, and creative processes behind those works. Students will also have the opportunity to develop their own artistic skills with opportunities for drawing, painting, sculpting, and other creative endeavors.

Art Appreciation 1

1. Understanding Art
2. Art of Ancient Times
3. Perspectives in Design from Many Cultures
4. The Renaissance

Art Appreciation 2

1. From Baroque to Romantic
2. From Realism to Post-Impressionism
3. Modern Times



Art Appreciation 2 is the 2nd semester option which builds upon the material learned in the 1st semester course.

Completion of both courses earns 1.0 credit.

Art in World Cultures

0.5 Fine Arts credit upon course completion

Prerequisite: none

Learn about some of the greatest artists in the world while also creating art of your own! This art course explores the basic principles and elements of art, how to critique art, and how to examine some of the traditional art of the Americas, Africa, and Oceania in addition to the development of Western art.

1. Introduction to the Visual Arts
2. The Elements and Principles of Art
3. Critiquing Art
4. Prehistoric Art
5. Ancient Art
6. Ancient Roman, Early Christian, and Medieval Art
7. The Renaissance
8. Art of the Americas
9. From the Baroque to the Romantics
10. Modern Art
11. African Art
12. Oceanic Art



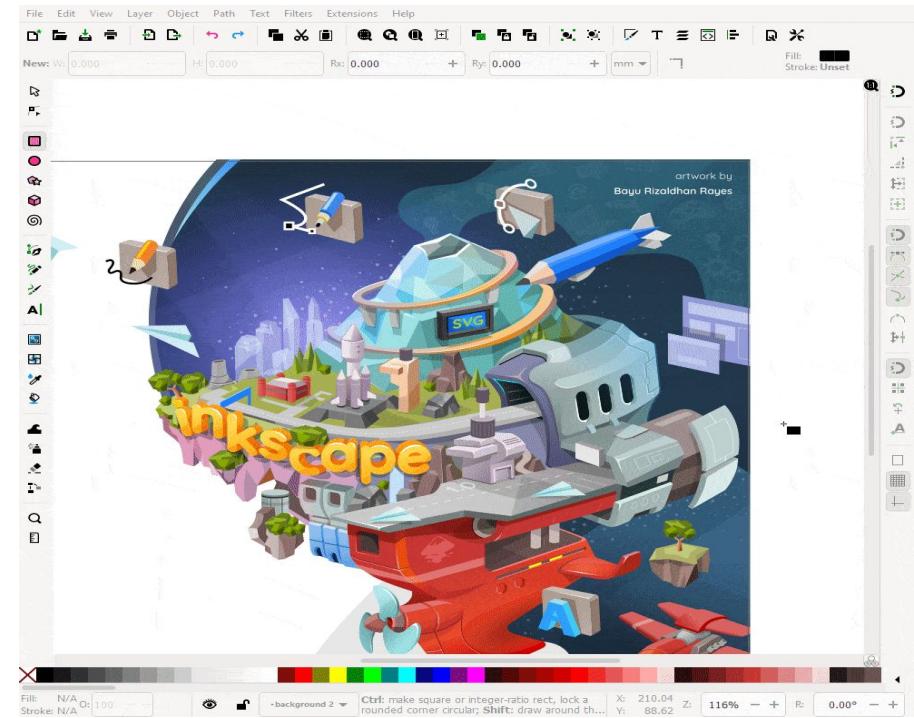
Digital Arts 1 & 2

0.5 Fine Arts credit upon each course completion

Prerequisite: none

In this exploratory course, students learn the elements and principles of design as well as foundational concepts of visual communication. While surveying a variety of media and art, students use the Inkscape software program to learn image editing, animation, and digital drawing as they combine artistic elements to create finished pieces that effectively communicate their ideas. In addition, they will explore career opportunities in the design, production, display, and presentation of digital artwork.

1. Using Your Hardware and Software
2. Intro to Digital Art
3. Repetition and Pattern
4. Contrast
5. Variety
6. Movement and Rhythm
7. Proportion
8. Balance
9. Emphasis and Dominance
10. Harmony and Unity



Digital Arts 2 is the 2nd semester option which builds upon the material learned in the 1st semester course.

Completion of both courses earns 1.0 credit.

NOTE: As part of this course, students will be required to download and utilize the Inkscape software (no additional cost).

Music Appreciation

0.5 Fine Arts credit upon course completion

Prerequisite: none

Do you love music? Listening to music becomes much more meaningful when you understand the history and structure behind that music. This course explores many aspects of music from reading music to understanding the origins of today's popular music. You'll learn a lot and hear some incredible music along the way. No prior music experience is necessary!

1. Intro to Music

- What is music?
- Ancient Music
- Medieval Music
- The Renaissance
- Reading Music
- The Orchestra

2. Classical Music

- Baroque Period
- Classical Period
- Romantic Period
- Ballet
- Opera
- Modern Period

3. American Popular Music

- Early American Music
- The Late 1800s
- Jazz & Early 1900s
- 1950s - mid 1960s
- Late 1960s - 1970s
- The 1980s - 1990s



Music Appreciation is an online course written and administered by Mirus Academy.

As part of the course, students are required to watch a full-length classical music performance (a band concert, symphony, ballet, or opera). A live performance is strongly preferred, but an online video recording may be substituted upon parent request.

Studio Arts

0.5 Fine Arts credit upon full-year course completion

Prerequisite: none

Are you ready to express yourself through art? This course is designed for students to explore an overview of visual art processes and techniques. The projects offered in the course will enable students to problem solve while making art. An appreciation of art history will be incorporated into the course in conjunction with each unit. Students will also participate in classroom critiques of their work and others'. Through critiques, students will learn how to analyze and discuss classic and contemporary art images and look at the historic/social context as it applies to the artwork. The course will culminate in a student art exhibit.

"Studio Arts" is an in-person, teacher-led class that meets **Wednesdays** after school

This course incurs an additional fee which is paid directly to the Rising Voices Arts Community (fee TBA, financial aid may be available).



The graphic features the "Rising Voices" logo at the top, with "Rising" in black and "Voices" in a colorful, stylized font. Below the logo is the text "ARTS COMMUNITY". Underneath that is the slogan "EMPOWERING INDIVIDUALS AND COMMUNITIES TO RAISE THEIR VOICES THROUGH THEATRE AND THE ARTS." On the left side, there is a photograph of a group of performers in a stage production. To the right of the photo are three columns of text: "We engage in Creative expression.", "We work towards Equity.", and "We believe there is Strength in diversity." A small "Who Are We?" button is located in the top right corner of the graphic area.

Studio Arts is provided through Mirus Academy's partnership with the Rising Voices Arts Community, a non-profit organization in Katy dedicated to empowering people through arts education.

NOTE: Students must be enrolled in Studio Arts for the entire school year (two semesters) to receive 0.5 credit.

Theater Arts

0.5 Fine Arts credit upon full-year course completion

Prerequisite: none

Are you ready to express yourself on stage? The purpose of this theatre course is to develop the whole person. Through participation in theatre, students will develop confidence, dynamic speaking abilities, focus, improved memorization skills, an understanding of the importance of collaboration, and the ability to adapt and improvise under pressure. This course will include basic acting skills such as voice and movement for the actor, character development, script analysis, and improvisation. In addition, students study theatre history as well as design elements in lighting, stage, and costuming. Students enrolled in this class will work on all aspects of the end-of-semester productions including creating set pieces, lighting, sound, props, posters, and playbills.

"Theater Arts" is an in-person, teacher-led class that meets **Thursdays** after school

This course incurs an additional fee which is paid directly to the Rising Voices Arts Community (fee TBA, financial aid may be available).



The graphic features the "Rising Voices" logo at the top, with "Rising" in black and "Voices" in a colorful, stylized font. Below it is the text "ARTS COMMUNITY". Underneath that is the slogan "EMPOWERING INDIVIDUALS AND COMMUNITIES TO RAISE THEIR VOICES THROUGH THEATRE AND THE ARTS." To the left is a photograph of a theatrical performance with multiple performers on stage. To the right are three columns of text: "We engage in Creative expression.", "We work towards Equity.", and "We believe there is Strength in diversity." A small "Who Are We?" button is in the top right corner.

Theater Arts is provided through Mirus Academy's partnership with the Rising Voices Arts Community, a non-profit organization in Katy dedicated to empowering people through arts education.

NOTE: Students must be enrolled in Theater Arts for the entire school year (two semesters) to receive 0.5 credit.

Science Electives

- Mirus students are required to earn at least 4 credits in Science
 - ◆ 1 credit of Biology
 - ◆ 1 credit of Physical Science (Integrated Science, Chemistry, and/or Physics)
 - ◆ 2 additional credits
- Mirus Academy provides traditional, classroom science classes to meet the 4-credit requirement. But, Science Electives may be used for 2 of the required credits, if desired

Agriscience 1 & 2

0.5 Science credit upon each course completion

Prerequisite: Biology

The word “agriculture” often evokes images of farms, fields, and livestock, and while all of these representations are correct and essential, the field of agriculture is so much more! In this course, you’ll explore how agriscientists play key roles in improving agriculture, food production, and the conservation of natural resources along with the technologies used to keep the field thriving.

Agriscience 1

1. Importance of Agriscience
2. Agriscience & the Environment
3. Plant Science
4. Animal Science
5. Animal Biology and Pest Control
6. Technology and Agriscience
7. Careers in Agriscience
8. Agribusiness Management

Agriscience 2

1. Horticulture & Plant Science
2. Identifying & Classifying Plants
3. Plant Growth & Development
4. Soil Science
5. Irrigation and Watering
6. Fertilizer and Pest Management
7. Landscape Science
8. Plant Management



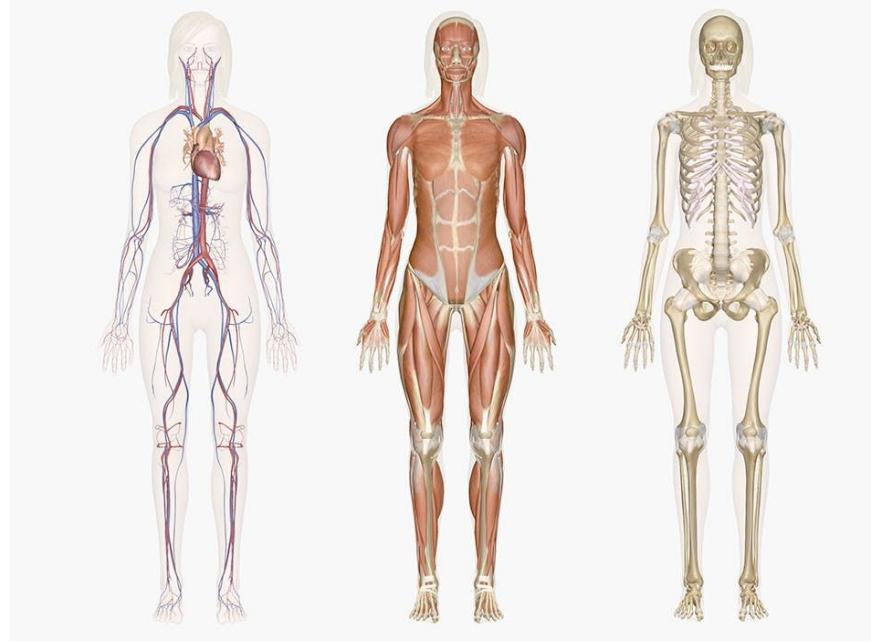
Agriscience 2 is the 2nd semester option which builds upon the material learned in the 1st semester course. Completion of both courses earns 1.0 credit.

Anatomy & Physiology 1 & 2

0.5 Science credit upon each course completion

Prerequisite: Biology

Considering a career in the medical field? If so, this science course is for you! Starting with the relationship between anatomy and physiology, students will then discover the purposes of human body structures, from microscopic processes at the cellular level to the structure, function, and interrelation of major organ systems. Students taking this course have the option to participate in a dissection lab, as desired.



Anatomy & Physiology 1

1. Human Body Organization
2. Chemistry of the Body
3. Skeletal System
4. Muscular System
5. Nervous System
6. Integumentary System
7. Blood
8. Cardiovascular System

Anatomy & Physiology 2

1. Lymphatic & Immune System
2. Respiratory System
3. Digestive System
4. Urinary System
5. Reproductive System
6. Endocrine System
7. Assessing & Documenting A&P
8. Science & Technology of A&P

Anatomy & Physiology 2 is the 2nd semester option which builds upon the material learned in the 1st semester course. Completion of both courses earns 1.0 credit.

Students enrolled in this course may choose to participate in a dissection lab each semester (facilitated/supervised by the Mirus Academy biology teacher).

Astronomy 1 & 2

0.5 Science credit upon each course completion

Prerequisite: One year of High School level science

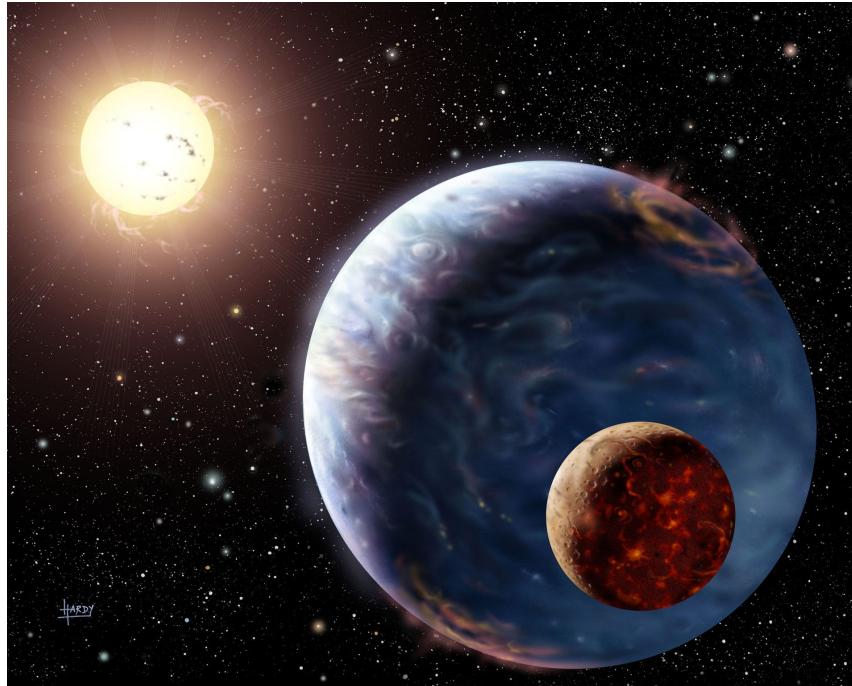
Follow your enthusiasm for space by introducing yourself to the study of astronomy. This course will include topics such as astronomy's history and development, basic scientific laws of motion and gravity, the concepts of modern astronomy, and the methods used by astronomers to learn more about the universe. Further knowledge is gained through the study of planets, galaxies, stars, and the origin of the universe.

Astronomy 1

1. The Universe
2. Techniques & Tools
3. The Earth, Moon, & Sun
4. Stars
5. Galaxies
6. The Milky Way
7. Black Holes
8. Astronomy Careers

Astronomy 2

1. Space Explorers
2. Inner Planets
3. Outer Planets
4. The Sun
5. Comets, Asteroids, & Meteors
6. Living and Working in Space
7. The Future of Space Travel



Astronomy 2 is the 2nd semester option which builds upon the material learned in the 1st semester course.

Completion of both courses earns 1.0 credit.

Forensic Science

0.5 Science credit upon course completion

Prerequisite: Two Credits of High School Science

This course surveys key topics in forensic science, including the application of the scientific process to forensic analysis, procedures and principles of crime scene investigation, physical and trace evidence, and the law and courtroom procedures from the perspective of the forensic scientist.

Through online lessons, laboratories, and analysis of fictional crime scenarios, students learn about forensic tools, technical resources, forming and testing hypotheses, proper data collection, and responsible conclusions.

1. Science & Crime Investigation
2. Evidence
3. Trace Evidence
4. Forensics of Certain Crimes
5. Forensics in the Legal System



Global Studies: Sustainable Living in Germany & Switzerland

0.5 Science credit upon return from our trip

Prerequisite: none

Are you ready to explore the world? Each year, Mirus students have the opportunity to travel to an exciting destination, and this year we're heading to Germany & Switzerland. This powerful, hand-on tour is specially designed to educate and inspire today's teens to tackle some of the most difficult challenges our planet faces. Both before travel and while on tour, students will learn about sustainability, urban design, and global climate change as we journey through two of Europe's most forward-thinking nations.

The course consists of 3 instructional classes held in the springtime plus an 10-day, fully-chaperoned trip in early June.

For details and pricing, please attend one of the information meetings scheduled throughout the school year.



Imagine yourself...
studying climate change
walking through a glacier
atop the Swiss Alps

Sustainable Living in Germany & Switzerland a 'STEM-Leadership' Tour JUNE 2023

Earn 0.5 SCIENCE CREDIT
while experiencing this once-in-a-lifetime adventure!

Today's Students are Tomorrow's Leaders! This powerful hands-on tour is specially designed to educate and inspire today's teens to tackle some of the most difficult challenges our planet faces.

- Learn about Germany and Switzerland's innovative sustainability efforts by interacting with state-of-the-art models of renewable energy, urban farming, and eco-tourism
- Be a part of the creative conversation as you embark on an urban quest of Freiberg-- a medieval city that has transitioned into one of the world's most eco-friendly green cities
- Visit the remains of the Berlin Wall, then work with an urban planner to discover how Berlin's industrial complexes are being re-purposed in innovative and exciting new ways
- Ride a cable car to the top of the Alps and study climate change while hiking in a glacier cave
- Head underground for an expert-led tour through a massive nuclear bunker, outfitted with hospital facilities, dormitories, and even a prison
- Hike with an environmental scientist through the Entlebuch Biosphere, a UNESCO natural reserve
- Plus much, much more on this 10-day tour of two of Europe's most forward-thinking nations

This science-based tour of Germany and Switzerland is provided through EF Tours, a global leader in student travel.

Veterinary Science

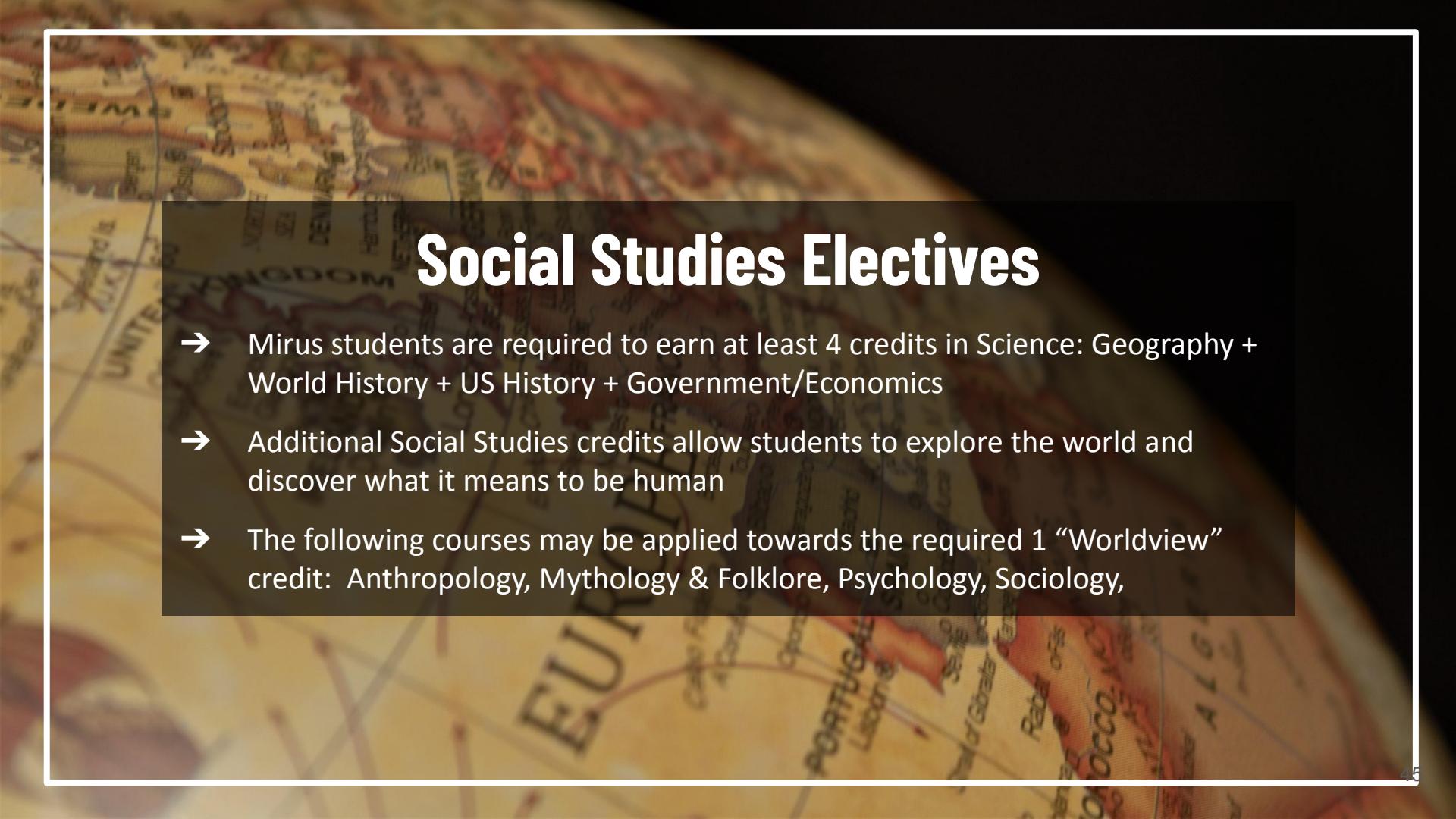
0.5 Science credit upon course completion

Prerequisite: Biology

As animals play an increasingly important role in our lives, scientists have sought to learn more about their health and well-being. Taking a look at the pets that live in our homes, on our farms, and in zoos and wildlife sanctuaries, this course examines some of the common diseases and treatments for domestic animals. Toxins, parasites, and infectious diseases affect not only the animals around us, but at times, us humans as well! Through veterinary medicine and science, the prevention and treatment of diseases and health issues are studied and applied.

1. Intro to Veterinary Science
2. Small Animal Medicine
3. Large Animal Medicine
4. Exotic Animal Medicine
5. Poisoning & Toxicology
6. Veterinary Parasitology
7. Zoonotic Diseases
8. Holistic Veterinary Medicine





Social Studies Electives

- Mirus students are required to earn at least 4 credits in Science: Geography + World History + US History + Government/Economics
- Additional Social Studies credits allow students to explore the world and discover what it means to be human
- The following courses may be applied towards the required 1 “Worldview” credit: Anthropology, Mythology & Folklore, Psychology, Sociology,

American Law

0.5 Social Studies credit upon course completion

Prerequisite: none

From traffic laws to regulations on how the government operates, laws help provide society with order and structure. Our lives are guided and regulated by our society's legal expectations. This course focuses on the creation and application of laws in various areas of society so that students gain an understanding and appreciation for the workings of our legal system and how laws are actually carried out.

1. The World of Law & Ethics
2. The Lawmaking Process
3. A Look Inside Our Courts
4. Criminal Law
5. Tort Law
6. Consumer Law
7. Family Law
8. Community Rights



Intro to American Law is provided through Stride/K12

Anthropology

0.5 Social Studies credit upon course completion

Prerequisite: World History is recommended

Anthropologists research the characteristics and origins of the cultural, social, and physical development of humans and consider why some cultures change and others come to an end. In this course, students are introduced to the five main branches of anthropology: physical, cultural, linguistic, social, and archeological. Through instruction and their own investigation and analysis, students explore these topics, considering their relationship to other social sciences such as history, geography, sociology, economics, political science, and psychology.

1. Intro to Anthropology
2. Physical Anthropology
3. Cultural Anthropology
4. Linguistic Anthropology
5. Social Anthropology
6. Archaeology
7. Field Studies



Anthropology is provided through Stride/K12

Archaeology

0.5 Social Studies credit upon course completion

Prerequisite: Anthropology is recommended

The field of archaeology helps us better understand the events and societies of the past that have helped shape our modern world. This course focuses on the techniques, methods, and theories that guide the study of the past. Students learn how archaeological research is conducted and interpreted as well as how artifacts are located and preserved. Finally, students learn about the relationship of material items to culture and what we can learn about past societies from these items.

1. The World of Archaeology
2. Recording the Past
3. Unearthing Ancient Civilizations
4. Cultural Origins
5. The Fossil Record
6. Social Organizations
7. The Survival of Ancient Text
8. Archeology & Modern Society



Archeology is provided through Stride/K12

Mythology & Folklore

0.5 Social Studies credit upon course completion

Prerequisite: None

Mighty heroes. Angry gods and goddesses. Cunning animals. Since the first people gathered around fires, mythology and folklore has been used as a way to make sense of humankind and our world. Beginning with an overview of mythology and different kinds of folklore, students will journey with ancient heroes as they slay dragons and outwit gods, follow fearless warrior women into battle, and watch as clever monsters outwit those stronger than themselves. They will explore the universality and social significance of myths and folklore, and see how these are still used to shape society today.

1. Intro to Mythology & Folklore
2. Warrior Women
3. The Heroic Monomyth
4. The Roles of Animals
5. The Social Significance
6. Myths of the World
7. Comparative Mythology
8. Modern Myths and Legends



Mythology & Folklore is provided through Stride/K12

Psychology

0.5 Social Studies credit upon course completion

Prerequisite: None

Why do humans think and act the way they do? To study psychology is to use your mind to study minds-- the reason why we do things, why we think things, and why we feel the way we do. In this course, you will explore the basic concepts of psychology, from Freud to modern neuroscience and from everyday behaviors to the depths of your subconscious. What does it mean to have good mental health? What is mental illness? Psychology seeks to find the answers to these questions and much more.

1. Methods of Study
2. Biological Basis of Behavior
3. Learning & Memory
4. Development & Individual Differences
5. Stress & Mental Illness



Psychology is provided through Stride/K12

Sociology 1 & 2

0.5 Social Studies credit upon each course completion

Prerequisite: None

Sociology is the study of people, social life, and society. In this course, students examine how society itself shapes human action and beliefs—and how in turn these factors reshape society itself. By examining social problems in our increasingly connected world, we learn how human relationships can strongly influence and impact their lives.

Sociology 1

1. Intro to Sociology
2. Our Culture
3. Socialization
4. Group Behavior
5. Deviance and Crime
6. Social Stratification & Class
7. Inequalities of Race & Ethnicity
8. Gender

Sociology 2

1. Marriage & Family
2. Religion & Education
3. Economy & Politics
4. Sport & Entertainment
5. Population & Environment
6. Cities & Urban Life
7. Social Movements
8. Social Change



Sociology is provided through Stride/K12

Sociology 2 is the 2nd semester option which builds upon the material learned in the 1st semester course. Completion of both courses earns 1.0 credit.

Technology Electives

- At a minimum, all Mirus students are required to have 0.5 technology credits for graduation. This technology credit is generally met by taking the required “Computer Applications” course the first semester at Mirus.
- To prepare for 21st Century careers, we recommend that students take at least one computer coding course (Computer Coding 1).

Biotechnology 1 & 2

0.5 Technology credit upon each course completion

Prerequisite: Biology

The fusion of biology and technology creates an amazing process and offers humanity a chance to significantly improve our existence, while simultaneously creating new challenges. In this course, you will explore a variety of topics, from storing food and improving agriculture to curing deadly diseases. You'll delve into the history of biotechnology as well as look to the future as we learn to unlock nature's secrets and change the world we live in.

Biotechnology 1

1. Biotechnology Basics
2. Beginning of Biotechnology
3. Food Preservation
4. Collection and Breeding
5. The Beginning of Genetics
6. Early Industrial Discoveries
7. Regulation of Biotech
8. Healing, Feeding, Fueling

Biotechnology 2

1. The Discovery of Antibiotics
2. Early Agricultural Biotechnology
3. Mapping the Human Genome
4. Industrial Biotechnology
5. Modern Agricultural Biotechnology
6. Pharmaceutical Biotechnology
7. The Future of Biotech: Innovation
8. The Role of Ethics & Public Policy



Biotechnology is provided through Stride/K12

*Biotechnology 2 is the 2nd semester option which builds upon the material learned in the 1st semester course.
Completion of both courses earns 1.0 credit.*

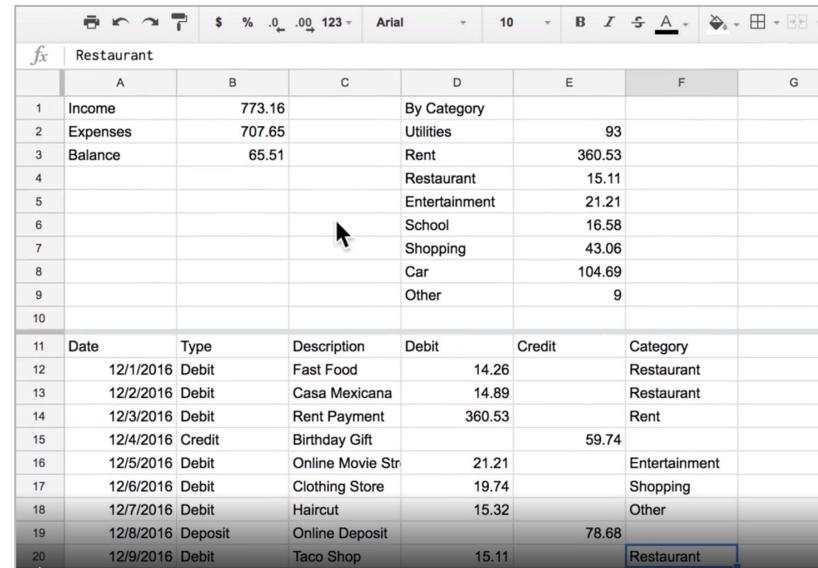
Computer Applications

0.5 Technology credit upon course completion

Prerequisite: none

Beginning with the Class of 2024, all students are required to take “Computer Applications” their 1st semester at Mirus Academy. This course ensures that students feel comfortable working with Google Suite applications, from organizing files in their Google Drive to creating documents, spreadsheets, forms and more. The course also includes instruction in navigating the internet safely and effectively. This is a self-paced and project-oriented class, so students may move through the course at a pace that matches their current skill level. Topics include:

- Using Google Classroom
- Using Google Drive to Organize Files & Folders
- Using Google Calendar to track Tasks & Due Dates
- Navigating Gmail
- Productivity Software: Word Processing, Spreadsheets, Slides
- Google Maps
- Effective Google Searches & Evaluating Online Sources
- Fact Checking & Evaluating Images/Video
- Tabs & Lateral Readings
- Using Wikipedia
- Data & Infographics
- Ads & Click Restraint
- History of Media
- Psychology of Media
- Being a Safe Consumer of online media



The screenshot shows a Google Sheets spreadsheet with the title "Restaurant". The first section contains a budget summary with rows for Income (773.16), Expenses (707.65), and Balance (65.51). The second section, titled "By Category", lists various expenses: Utilities (93), Rent (360.53), Restaurant (15.11), Entertainment (21.21), School (16.58), Shopping (43.06), Car (104.69), and Other (9). The third section, starting at row 11, tracks transactions with columns for Date, Type, Description, Debit, Credit, and Category. Transactions include a debit for Fast Food (14.26) and a credit for Birthday Gift (59.74). The final row shows a debit for Taco Shop (15.11) and a balance of 78.68.

	A	B	C	D	E	F	G
1	Income	773.16		By Category			
2	Expenses	707.65		Utilities	93		
3	Balance	65.51		Rent	360.53		
4				Restaurant	15.11		
5				Entertainment	21.21		
6				School	16.58		
7				Shopping	43.06		
8				Car	104.69		
9				Other	9		
10							
11	Date	Type	Description	Debit	Credit	Category	
12	12/1/2016	Debit	Fast Food	14.26		Restaurant	
13	12/2/2016	Debit	Casa Mexicana	14.89		Restaurant	
14	12/3/2016	Debit	Rent Payment	360.53		Rent	
15	12/4/2016	Credit	Birthday Gift		59.74		
16	12/5/2016	Debit	Online Movie Str	21.21		Entertainment	
17	12/6/2016	Debit	Clothing Store	19.74		Shopping	
18	12/7/2016	Debit	Haircut	15.32		Other	
19	12/8/2016	Deposit	Online Deposit		78.68		
20	12/9/2016	Debit	Taco Shop	15.11		Restaurant	

Computer Application is a course designed and administered by Mirus Academy based on Google's Applied Digital Skills curriculum.

Computer Coding 1 & 2

0.5 Technology credit upon each course completion

Prerequisite: none

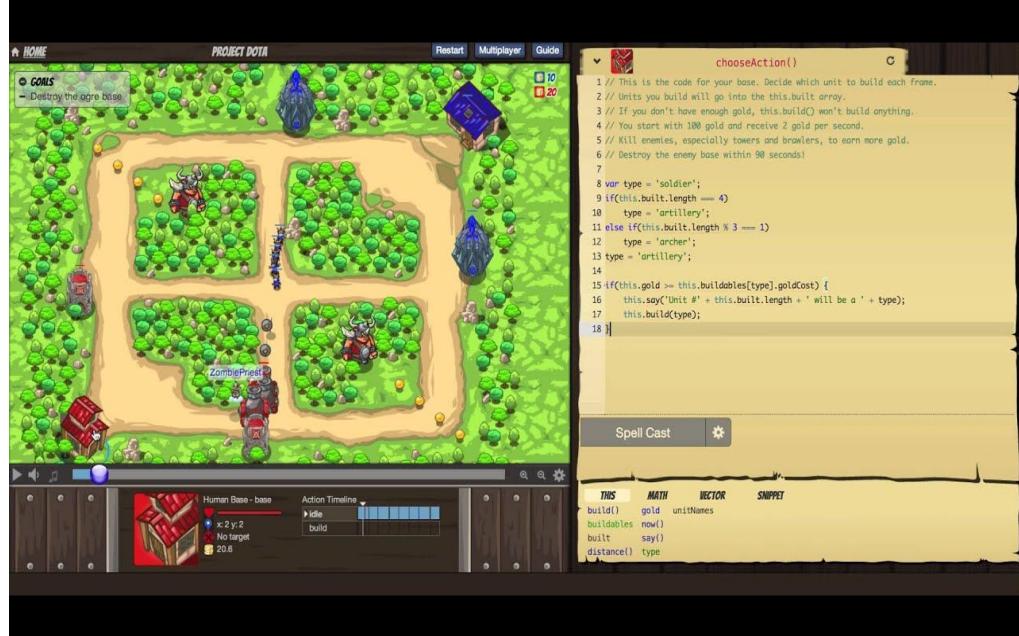
Using the award-winning **Ozaria** and **CodeCombat** curricula, students learn the basics of computer coding via a story-based coding adventure that teaches programming skills through engaging game play. The first semester focuses on basic commands and familiarity with programming logic. The second semester expands upon first semester skills and incorporates video game design. Students may choose either the **Python** or **JavaScript** programming language.

Coding 1

- Problem Solving
- Sequences & Algorithms
- Syntax & Arguments
- For Loops & While Loops
- Variables
- Debugging
- Functions
- Conditionals
- Comparators
- Data & Analysis
- Iteration
- Nesting

Coding 2

- Object Literals
- Math Library Operations
- Computation
- Modulo Operations
- Vectors
- Recursion
- Data Structures
- Function Definitions
- Vectors
- Drawing
- Graphics
- Game Design



Computer Coding 1 & 2 is administered through Mirus Academy utilizing the Ozaria and CodeCombat platforms.

Computer Coding 2 is the 2nd semester option which builds upon the material learned in the 1st semester course.
Completion of both courses earns 1.0 credit.

NOTE: No software downloads are required. Students work within the Ozaria and/or CodeCombat platforms to write and run their programs.

AP Computer Science Principles

1.0 Technology credit upon course completion

Prerequisites: Enrolled in Algebra 2 or higher and a commitment to a rigorous, year-long college level course.

Advanced Placement Computer Science is a year-long, college-level course that introduces students to the foundational concepts of computer science and prepares them to pass the College Board's AP Computer Science Principles exam at the end of the school year. With a focus on creative problem solving and real-world applications, this course provides students the opportunity to explore several important topics of computing using their own ideas and creativity, use the power of computing to create artifacts of personal value, and develop an interest in computer science that will foster further endeavors in the field.

1. Web Development
2. Introduction to Programming
3. Programming with JavaScript
4. JavaScript Control Structures
5. Functions and Parameters
6. Basic Data Structures
7. Digital Information
8. The Internet & Its Effects
9. Data



AP Computer Science Principles is a TWO semester course and both semesters are required for course completion.

Students enrolling in this course will take the College Board's AP Computer Science Principles exam in May.

NOTE: Students will learn programming basics with JavaScript, HTML, and CSS. No software downloads are required. Students will work on the CodeHS platform and will write and run programs in their browser using the CodeHS editor.

AP Computer Science

1.0 Technology credit upon course completion

Prerequisites: Enrolled in Algebra 2 or higher, 1 credit of coding, and a commitment to a rigorous, year-long college level course.

Advanced Placement Computer Science is a college-level Java programming course. Fundamental topics in this course include the design of solutions to problems, the use of data structures to organize large sets of data, the development and implementation of algorithms to process data and discover new information, the analysis of potential solutions, and the ethical and social implications of computing systems. AP Computer Science A course is a year-long course designed to help students master the basics of Java and equip them to successfully pass the College Board's AP Computer Science exam at the end of the school year.

1. Primitive Types
2. Using Objects
3. Boolean Expressions
4. If Statements
5. Iteration
6. Writing Classes
7. Array
8. ArrayList
9. 2D Array
10. Inheritance
11. Recursion

```
86 // trim(trim(realpath($_SERVER['DOCUMENT_ROOT'])) ) .  
87  
88 $SESSION['_CAPTCHA']['config'] = serialize($captcha_config);  
89 return array(  
90     'code' => $captcha_config['code'],  
91     'image_src' => $image_src  
92 );  
93 }  
94  
95 if( !function_exists('hex2rgb') ) {  
96     function hex2rgb($hex_str, $return_string = false, $separator = ',') {  
97         $hex_str = preg_replace("/[^0-9A-Fa-f]/", '', $hex_str); // Gets a proper hex string  
98         $rgb_array = array();  
99         if( strlen($hex_str) == 6 ) {  
100             $color_val = hexdec($hex_str);  
101             $rgb_array[0] = 0xFF & ($color_val >> 0x10);  
102             $rgb_array[1] = 0xFF & ($color_val >> 0x8);  
103             $rgb_array[2] = 0xFF & $color_val;  
104         } elseif( strlen($hex_str) == 3 ) {  
105             $rgb_array[0] = hexdec(str_repeat(substr($hex_str, 0, 1), 2));  
106             $rgb_array[1] = hexdec(str_repeat(substr($hex_str, 1, 1), 2));  
107             $rgb_array[2] = hexdec(str_repeat(substr($hex_str, 2, 1), 2));  
108         } else {  
109             return false;  
110         }  
111     }  
112     // Draw the image  
113     if( isset($_GET['c']) ) {  
114         $image_src = hex2rgb($_GET['c']);  
115     }  
116 }  
117  
118 // Draw the image  
119 if( isset($_GET['c']) ) {  
120     $image_src = hex2rgb($_GET['c']);  
121 }
```

AP Computer Science is a TWO semester course and both semesters are required for course completion.

Students enrolling in this course will take the College Board's AP Computer Science exam in May.

*NOTE: No additional software is required.
Students will work on the CodeHS platform and will write and run programs in their browser using the CodeHS editor.*

Intro to Engineering

0.5 Technology credit upon course completion

Prerequisite: none

This introductory course guides students through an investigation of many different engineering careers. Students are introduced to the basics of engineering, learn how to turn problems into ideas, and develop a basic understanding of civil, mechanical, chemical, and biological engineering.

1. Development & Understanding of Engineering
2. Making Problems into Ideas
3. From Sketches to Products
4. Civil Engineering
5. Mechanical Engineering
6. Chemical Engineering
7. Biological Engineering
8. Impossible Engineering



Principles of Engineering 1 & 2

0.5 Technology credit upon each course completion

Prerequisite: Geometry

This course is designed to give students strong problem-solving skills and a solid foundation in fundamental principles they will need to become analytical, detail-oriented, and innovative engineers. The course demonstrates how engineers apply physical and chemical laws and principles, as well as mathematics, to design, test, and supervise the production of millions of parts, products, and services that people use every day.

Principles of Engineering 1

1. Intro to the Engineering Profession
2. Preparing for an Engineering Career
3. Introduction to Engineering Design
4. Engineering Communication
5. Engineering Ethics
6. Fundamental Dimensions and Units
7. Length and Length-Related Variables
8. Time and Time-Related Variables
9. Mass and Mass-Related Variables
10. Force and Force-Related Variables

Principles of Engineering 2

1. Temperature Variables
2. Electricity Related Variables
3. Energy and Power
4. Computational Engineering Tools
5. Engineering Drawings & Symbols
6. Engineering Materials
7. Mathematics in Engineering
8. Probability and Statistics
9. Engineering Economics



Engineering 2 is the 2nd semester option which builds upon the material learned in the 1st semester course.

Completion of both courses earns 1.0 credit.

Game Design 1 & 2

0.5 Technology credit upon each course completion

Prerequisite: none

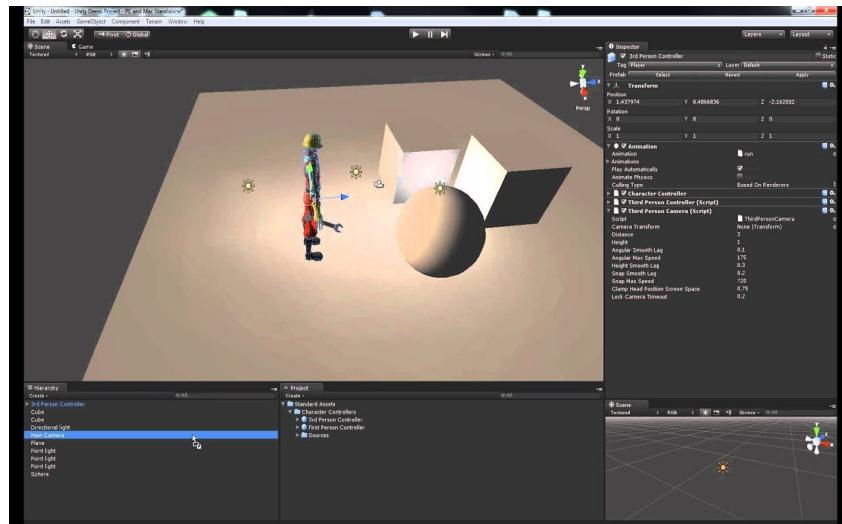
This course will give you the skills to conceptualize, design, and fully create your very own video 2D and 3D video games. Explore various software and hardware, sharpen your coding skills, learn about game storylines, player progression, and algorithmic decision making. This course allows you to analyze player goals, player actions, rewards, and challenges, among many other game play components. You will utilize 21st century skills involving creativity, critical thinking, communication, collaboration, and technical expertise, putting you at the forefront of a future in technology!

Game Design 1

1. A History of Gaming
2. What's in a Game?
3. Game Pieces
4. Game Mechanics
5. Game Design Documents
6. Narratology: Storytelling in Games
7. The Business of Game Design
8. Let's Make a Game

Game Design 2

1. Principles of Game Design
2. Creating 3D Game Content
3. History of Video Games
4. Narratology: Storytelling in Games
5. Game Design Documents
6. Environment and Level Design
7. Programming Concepts
8. Developing Game Mechanics
9. Game Rules
10. Event Modeling, Simulation, Testing
11. UI and Audio
12. The Business of Video Game Design



Game Design 2 is the 2nd semester option which builds upon the material learned in the 1st semester course.

Completion of both courses earns 1.0 credit.

NOTE: As part of this course, students will be required to download and utilize software (no additional cost). Game Design 1 uses Gimp and Unity. Game Design 2 uses Gimp, Unity, Blender, Audacity, Jing, and Openshot.

Robotic Science 1 & 2

0.5 Technology credit upon each course completion

Prerequisite: 1 credit of High School level science

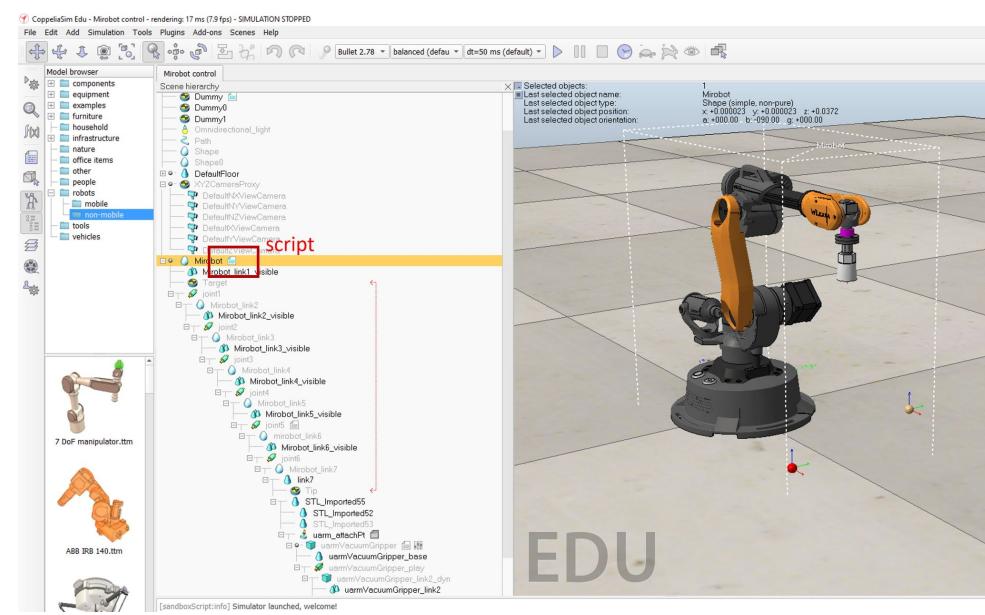
Are you fascinated with how machines work? Robots are machines, and they are all around us, from helping doctors in surgeries to helping to keep our homes clean. In the first semester, you will explore the physics, mechanics, motion, and the engineering design and construction aspects used to develop robots, and you'll learn how models are created through both sketches and software. Second semester, you will learn to manipulate electrical signals to create logic and memory, how to quantify the physical world through variables, and how to have an impact through tools as you take an idea from initial planning to a completed project.

Robotic Science 1

1. Work with Robots
2. Health and Safety
3. Machines & Mechanisms
4. Building a Model
5. Robot Mechanics & Motion
6. Robot Physics
7. Engineering Design Methods
8. Keeping Robots Happy

Robotic Science 2

1. Power Supplies & Energy Sources
2. Tech Systems
3. Robotic Programming
4. Sensors and Circuitry
5. Output Systems
6. Tools, Equipment, and Materials
7. Artificial Intelligence
8. To the Drawing Board



Robotics 2 is the 2nd semester option which builds upon the material learned in the 1st semester course.

Completion of both courses earns 1.0 credit.

As part of this course, students will download and utilize Onshape and CoppeliaSim software (no additional cost; you will need a 2-button mouse with scroll wheel). The 2nd semester course requires an Arduino Ultimate Starter Kit + LCD Module which may be purchased through the school (approx. \$60)

Sustainable Energy & Technology

0.5 Technology credit upon course completion

Prerequisite: None

This course examines the impact of human activities on sustainability while exploring the basic principles and technologies that support sustainable design. Students learn about the potential for emerging energy technologies such as water, wind, and solar power. They find out how today's businesses are adapting to the increased demand for sustainable products and services. In this course, students develop a comprehensive understanding of this fast-growing field.

1. Exploring Systems
2. Waste Management
3. Green Energy
4. Green Transportation
5. Green Agriculture
6. Green Manufacturing & Construction





MIRUS ACADEMY

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