

# MADEIRA

## Course Catalog



2026-2027



# Madeira's Mission

## Educational Philosophy

*At Madeira, we believe:* Learning is active and experiential, joyful and personal. Guided by caring, expert, demanding teachers who model the School's values, students learn in various settings, from classroom to playing field, to dormitory, to congressional office. Working toward one's personal best deepens the habits of mind that lead to lifelong learning. Learning is its own reward.

Learning results from an intentionally designed, innovative, developmental, rigorous and girl-centered curriculum, which builds critical thinking, creativity and problem-solving skills. Each student has opportunity to study discrete disciplines as well as explore connections between and across disciplines and learning environments.

Learning's purpose is not only for students to obtain the skills needed to thrive at college but also for students to understand themselves in relation to others, to be informed about their changing world, and to participate actively and confidently in life through leadership and service.



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# Overview

# Graduation Requirements

## Graduation Requirements for Students Who Entered in 9th Grade Class of 2029 & 2030

SUBJECT	REQUIREMENT
Art	3 credits
Co-Curriculum	3 one-mod internships (one in 10th, 11th, and 12th)
English	12 credits (3 credits per year)
History	9 credits + 1 credit of research, currently earned in US History (must include 9th, 10th, 11th grade history courses)
Mathematics	12 credits
Science	9 credits (must include Biology, Physics, and Chemistry)
World Languages*	9 credits
Design Thinking and Other Courses	Must complete Student Life and Design Thinking Lab courses, one coding credit, and one Design Thinking credit
Activities	9th and 10th grade — 3 seasons yearly, at least two of which must be team experiences. 11th and 12th grade — if Co-Curriculum internship is during the school year, no D block requirement during the season in which the internship falls, with a few exceptions (see course descriptions). Of the remaining 2 required, at least 1 must be movement related.

\*International student English is 6 credits and replaces the World Language requirement. Placement in the International Student English program is part of the admission decision.

# Graduation Requirements

## Graduation Requirements for Students Who Entered in 9th Grade Class of 2027 & 2028

SUBJECT	REQUIREMENT
Art	3 credits
Co-Curriculum	3 one-mod internships (one in 10th, 11th, and 12th)
English	12 credits (3 credits per year)
History	9 credits + 1 credit of research, currently earned in US History (must include 9th, 10th, 11th grade history courses)
Mathematics	12 credits
Science	9 credits (must include Biology, Physics, and Chemistry)
World Languages*	9 credits
Other Courses	Must complete Student Life and STEAM Fundamentals courses, one coding credit
Activities	9th and 10th grade — 3 seasons yearly, at least two of which must be team experiences. 11th and 12th grade — if Co-Curriculum internship is during the school year, no D block requirement during the season in which the internship falls, with a few exceptions (see course descriptions). Of the remaining 2 required, at least 1 must be movement related.

\*International student English is 6 credits and replaces the World Language requirement. Placement in the International Student English program is part of the admission decision.

# Graduation Requirements for Students Who Entered in 10th Grade Class of 2029

SUBJECT	REQUIREMENT
<b>Art</b>	<b>3 credits</b> (Or full-year credit in visual or performing arts at previous school)
<b>Co-Curriculum</b>	<b>3 one-mod internships</b> (1 in 10th, 11th, and 12th)
<b>English</b>	<b>9 credits</b> (3 per year)
<b>History</b>	<b>6 credits + 1 credit of research, currently earned in US History</b> (must include 10th and 11th grade history courses)
<b>Mathematics</b>	<b>9 credits</b>
<b>Science</b>	<b>6 credits</b> (must show completion of Biology, Physics, and Chemistry)
<b>World Languages*</b>	<b>6 credits</b>
<b>Design Thinking and Other Courses</b>	Must complete Student Life and Design Thinking Lab courses, one coding credit, and one Design Thinking credit
<b>Activities</b>	<b>9th and 10th grade</b> — 3 seasons yearly, at least two of which must be team experiences.  <b>11th and 12th grade</b> — if Co-Curriculum internship is during the school year, no D block requirement during the season in which the internship falls, with a few exceptions (see course descriptions). Of the remaining 2 required, at least 1 must be movement related.



\*International student English is 6 credits and replaces the World Language requirement. Placement in the International Student English program is part of the admission decision.

# Graduation Requirements

## Graduation Requirements for Students Who Entered in 10th Grade Class of 2028

SUBJECT	REQUIREMENT
Art	<b>3 credits</b> (Or full-year credit in visual or performing arts at previous school)
Co-Curriculum	<b>3 one-mod internships</b> (one in 10th, 11th, and 12th)
English	<b>9 credits</b> (3 credits per year)
History	<b>6 credits + 1 credit of research, currently earned in US History</b> (must include 10th and 11th grade history courses)
Mathematics	<b>9 credits</b>
Science	<b>6 credits</b> (must include Biology, Physics, and Chemistry)
World Languages*	<b>6 credits</b>
Design Thinking and Other Courses	Must complete Design Thinking Lab course and one coding credit at Madeira (or credit from previous school)
Activities	<b>9th and 10th grade — 3 seasons yearly, at least two of which must be team experiences.</b> <b>11th and 12th grade — if Co-Curriculum internship is during the school year, no D block requirement during the season in which the internship falls, with a few exceptions (see course descriptions). Of the remaining 2 required, at least 1 must be movement related.</b>

\*International student English is 6 credits and replaces the World Language requirement. Placement in the International Student English program is part of the admission decision.

# Graduation Requirements

## Graduation Requirements for Students Who Entered in 10th Grade Class of 2027

SUBJECT	REQUIREMENT
Art	<b>3 credits (or full-year credit course in visual or performing arts at previous school)</b>
Co-Curriculum	<b>3 one-mod internships</b> (one in 10th, 11th, and 12th)
English	<b>9 credits</b> (3 credits per year)
History	<b>6 credits + 1 credit of research, currently earned in US History</b> (must include 10th, 11th grade history courses)
Mathematics	<b>9 credits</b>
Science	<b>6 credits</b> (must include Biology, Physics, and Chemistry)
World Languages*	<b>6 credits</b>
Other Courses	Must complete one coding credit at Madeira (or credit from previous school)
Activities	<b>9th and 10th grade</b> — 3 seasons yearly, at least two of which must be team experiences. <b>11th and 12th grade</b> — if Co-Curriculum internship is during the school year, no D block requirement during the season in which the internship falls, with a few exceptions (see course descriptions). Of the remaining 2 required, at least 1 must be movement related.

\*International student English is 6 credits and replaces the World Language requirement. Placement in the International Student English program is part of the admission decision.

# Graduation Requirements

## Graduation Requirements for Students Who Entered in 11th Grade Class of 2028

SUBJECT	REQUIREMENT
Art	<b>3 credits</b> (Or full-year credit in visual or performing arts at previous school)
Co-Curriculum	<b>2 one-mod internships</b> (one in 10th, 11th, and 12th)
English	<b>6 credits</b> (3 credits per year)
History	<b>3 credits + 1 credit of research, currently earned in US History</b> (must include 11th grade history course)
Mathematics	<b>6 credits</b>
Science	<b>3 credits</b> (must include Biology, Physics, and Chemistry)
World Languages*	<b>3 credits</b>
Other Courses	Must complete one coding credit at Madeira (or credit from previous school)
Activities	<b>11th and 12th grade– if Co-Curriculum internship is during the school year, no D block requirement during the season in which the internship falls, with a few exceptions (see course descriptions). Of the remaining 2 required, at least 1 must be movement related.</b>

\*International student English is 6 credits and replaces the World Language requirement. Placement in the International Student English program is part of the admission decision.

## Graduation Requirements for Students Who Entered in 11th Grade Class of 2027

SUBJECT	REQUIREMENT
<b>Art</b>	<b>3 credits</b> (Or full-year credit in visual or performing arts at previous school)
<b>Co-Curriculum</b>	<b>2 one-mod internships</b> (1 in 11th and 12th)
<b>English</b>	<b>6 credits</b> (3 credits per year)
<b>History</b>	<b>3 credits + 1 credit of research</b> , currently earned in US History (must include 11th grade history course)
<b>Mathematics</b>	<b>6 credits</b>
<b>Science</b>	<b>3 credits</b> (must show completion of Biology, Chemistry, and Physics)
<b>World Languages*</b>	<b>3 credits</b> (of the same language)
<b>Other Courses</b>	Must complete one coding credit at Madeira (or credit from previous school)
<b>Activities</b>	<b>11th and 12th grade</b> – if Co-Curriculum internship is during the school year, no D block requirement during the season in which the internship falls, with a few exceptions (see course descriptions). Of the remaining 2 required, at least 1 must be movement related.

\*International student English is 6 credits and replaces the World Language requirement. Placement in the International Student English program is part of the admission decision.



# Course Selection Process & Timeline

## New Student Course Registration:

Please be on the lookout for more information from the Academic Office regarding course registration for new students.

### What to expect each month:

<b>April</b>	A letter with course registration information will be sent to the newly admitted student and family. New students take the Math and World Language placement tests the end of April.
<b>May &amp; June</b>	Families will schedule virtual meetings with the Academic Dean to discuss Academics for the 2026–2027 school year.
<b>July</b>	Schedules are posted in the student portals. A survey will be available for students to add electives.



## Returning Student Course Registration:

### What to expect each month:

<b>MARCH</b>	A letter with course registration information will be sent to all returning students. Course registration forms will be posted in the student portal.  Course Registration forms and D block forms are due via the portal by March 13.
<b>APRIL</b>	Students will have the opportunity to meet with the Academic Office to discuss their courses for the following year during Mod 6.
<b>MAY</b>	Summer Work and Textbook Information Available in May
<b>JULY</b>	Schedules are posted in the student portals. A survey will be available for students to add electives.

## Textbooks:

Madiera partners with Follett to help facilitate the purchase of textbooks and digital content.

# Additional Information

Students may purchase textbooks from any supplier. Many of the textbooks come in a digital format that students may purchase. If you are purchasing books from an alternative supplier, please check the ISBN carefully. Title, author, and ISBN information can be found through [www.madeira.bkstr.com](http://www.madeira.bkstr.com). There is important information about textbook options and requirements listed under the "Section Notes" for many courses. Please read these notes carefully prior to purchasing. Follett's ordering system defaults to the lowest cost option. This is often the "rent" option. Please make sure to select the preferred purchasing option. All students are expected to have their textbooks for the first day of class.

## Summer Work:

Some courses have summer reading or work. For students, to access the summer work assignments, go to the 2025-2026 Summer Work Canvas page. This is best accessed through the Madeira website under Quick links, click Canvas. You will need to log in to your Microsoft 365 account to view this content. You will also see a tab for Textbooks and Supply Lists. If you do not see summer work listed for a particular course, there is no summer work for that course. Please confirm your schedule before starting any course summer reading or work. **Summer work will not be accessible until May.** For parents, to access the summer work assignments, you can go to your Blackbaud portal and information will be listed in your Dashboard.

## About D-block

### D-BLOCK PHILOSOPHY:

At The Madeira School, we believe that D block, which is the experiential wing of the academic curriculum, allows students:

- to develop a passion outside the academic realm
- to explore or deeply dive
- to be part of something larger than themselves
- to hone, practice and apply leadership skills
- to create their own path
- to build healthy habits to last a lifetime

### D-BLOCK REQUIREMENT



CONTINUES...

**9TH AND 10TH GRADE:** 3 seasons yearly, at least two of which must be team experiences.

**11TH AND 12TH GRADE:** if Co-Curriculum internship is during the school year, no D block requirement during the season in which the internship falls (with an occasional exception for students who want to continue riding and dance – see Ms. Mahoney for details). Of the remaining 2 seasons required, at least 1 must be movement related. If Co-Curriculum internship is not during the academic year, 3 seasons yearly, at least two of which must be team experiences. Movement D blocks include a D block where the student is physically participating in an endurance based non-stationary activity.

## AP Information

Since AP courses are designed toward this culminating assessment, and since some colleges award credit or consider scores for course placement, the School encourages students to take the exam. Students who choose to do so must follow all ordering deadlines set by the College Board and Academic Office. Students who order an exam but then cancel will be responsible for the accompanying fees from the College Board. Students are expected to attend all classes before and after their AP exams each day. Students who sit for an AP exams accrue absences in standard ways, unless they are sitting for an AP exam for a course they are enrolled in at Madeira.' They may be granted an extension to take tests, quizzes, and other assessments in those classes on the day of an AP exam. Teachers have the option of changing course deadlines to accommodate students taking multiple AP exams.

If a student chooses to register for a non-Madeira AP exam, they must contact the Academic Office before the deadline to receive the registration code. Students will be charged home. If the student adds the exam after the deadline, they will be charged a late fee in addition to the exam fee. If the student cancels after the deadline, the student will be charged a cancellation fee in addition to the exam fee.



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# Course Information

# Course Descriptions

## ART DEPARTMENT

### ART GRADUATION REQUIREMENTS: 3 CREDITS

#### STUDIO ART: DRAWING

1-block course; Open to grades 9–12

Drawing is the foundation course for students interested in visual arts and eager to expand their creative abilities. Students will be instructed in the use of the design elements and principles through projects such as mark making, perspective drawing, and still-life composition.

Prerequisites: None

#### STUDIO ART: 3D DESIGN

1–3 block course; Open to grades 9–12

3D Design is a course for students eager to advance their understanding of 3-dimensional art across a variety of media. Students will use various materials and techniques such as ceramic handbuilding, carving, modeling, fibers, textiles, and armature building to create 3-dimensional works of art.

Prerequisites: None

#### PROGRAMMING FOR THE VISUAL ARTS

1-block course; Open to grades 9–12

This course is an introduction to computer programming within the context of the visual arts. Utilizing the Processing language, students will learn basic coding techniques, explore the fundamentals of computer graphics and create interactive drawing programs.

Prerequisites: Studio Art: None.

Meets Design Thinking credit and art credit.

#### DESIGN ARTS & MEDIUMS

1-block course; Open to grades 9–12

Digital Arts & Design is for students interested in developing skills using digital tools for artistic creation

and visual communication. Students will learn a variety of software, including Adobe Design Suite, TinkerCad, Fusion360, and more, used in creating animation, digital illustration, graphic design and branding, 3D modeling, and industrial and package design. Projects will be student-centered, emphasizing creative problem-solving and real-world applications.

Prerequisites: None.

Meets Design Thinking credit and art credit.

#### STUDIO ART: PAINTING

1–3 block course; Open to grades 9–12

Painting is for students who are eager to advance their painting skills and develop greater understanding of selected painting styles and mediums. Students will learn to create using acrylics, watercolors, gouache, and mixed media.

Prerequisites: Studio Art: Drawing

#### STUDIO ART: PRINTMAKING

1–3 block course; Open to grades 9–12

Printmaking is a course intended for students who are interested in advancing their understanding of the elements and principles of design through the medium of printmaking. Students will work with a wide range of materials and processes such as collagraph, linoleum cut, drypoint, and relief printing.

Prerequisites: Studio Art: Drawing

#### STUDIO ART: FASHION DESIGN & FABRICATION

1-block course; Open to grades 9–12

This class will focus on creating a fashion collection from

start to finish. In this class students will use multiple art mediums such as collaging, color theory, textile making, repeat pattern and fashion rendering to create a fashion collection. Students will create a mood board, color plates, fabric designs, fashion renderings and a final portfolio. Students will leave class knowing how to read a pattern, make a flat pattern and create a garment using hand sewing and machine sewing skills.

Prerequisites: Studio Art: 3D Design OR Studio Art: Drawing.

Meets Design Thinking credit and art credit.

### **INDUSTRIAL DESIGN & FABRICATION**

1-block course; Open to grades 10–12

In this second level Design Thinking course, students will focus on the use of Fab Lab tools (laser cutters/3D printers) and design software (Adobe Illustrator, Tinkercad, Blender, etc.) to explore user interfacing with different areas of industrial design. The main project will take students through the Design Thinking process to eventually create a scaled-down prototype piece of furniture.

Prerequisites: Design Thinking Lab.

Meets Design Thinking Requirement.

### **ENVIRONMENTAL DESIGN & FABRICATION**

1-block course; Open to grades 10–12

In this second level Design Thinking course, students will focus on the use of design software (CAD drafting/3D modeling) and woodworking tools to explore environmental challenges and design. The main project will take student through the Design Thinking process and build woodworking skills to eventually create a full scale installation to “rewild” areas of campus.

Prerequisites: Design Thinking Lab.

Meets Design Thinking Requirement.

### **STUDIO ART: CERAMICS**

1-block course; Open to grades 9–12

This course will introduce students to building and exploring clay, the basic techniques involved in ceramic construction, and the chemistry involved in the firing process. Various glaze and decoration techniques for finishing work will also be introduced. Emphasis will be placed on the design elements and principles. Focus will

be on the various techniques: pinch, coil and slabs and throwing on the wheel. Functional as well as sculptural applications based on form will be also explored.

Prerequisites: Studio Art: 3D Design or Studio Art: Drawing.

### **STUDIO ART SEMINAR**

3-block course; Open to grades 10, 11 and 12

In this advanced level course, students will work towards expanding their artistic practice, developing breadth across various mediums, and depth within a specific artistic medium of their choice. Students will develop skills in presenting their work through gallery displays, portfolios, and an online presence. Finally, students will work towards building an artist’s resume and CV.

Prerequisites: At least three blocks of Studio Art and/or Photography classes.

### **PHOTOGRAPHY: DARKROOM**

1-block course; Open to grades 9–12

Students will learn how to use and control a school-supplied 35mm SLR film camera, develop negatives, create contact sheets and print photographs. In the process, they will learn how cameras work as well as the fundamentals of composition.

Prerequisites: None

Meets Design Thinking and art credit

### **PHOTOGRAPHY: DIGITAL**

1-block course; Open to grades 9–12

Students will further their photography skills by learning how to use their own digital camera (see special note) in Manual mode. The course includes a variety of compositional techniques, Photoshop editing skills, and beginning portfolio development.

Prerequisites: None

Special notes: Students must supply their own DSLR camera that is capable of being used in Manual mode.

### **PHOTOGRAPHY: ALTERNATIVE PROCESSES**

1-block course; Open to grades 9–12

This course introduces students to the fundamentals of non-silver alternative photographic processes with emphasis on technical skills, and critique of photographic

work. Among the processes studied: Caffenol development, and medium and large format photographic processes. Students will learn skills related to safe chemistry usage, scanning, Photoshop manipulation to create and print digital negatives, paper coating and contact printing techniques.

Prerequisites: Darkroom or Digital Photography.  
Meets Design Thinking Requirement and art credit. Not offered in 26-27.

## Acting/directing electives offered on a rotating basis, as directed by student enrollment.

### ACTING I: ACTING SKILLS

1-block course; Open to grades 9–12

Students will learn techniques and develop acting skills through ensemble work, monologues, scene work, and a mock audition experience. In this class students will focus on script analysis, character development, and voice and body awareness.

Prerequisites: None

### ACTING II: ACTING STYLES

1-block course; Open to grades 9–12

Building on skills learned in Acting I, students will explore various theatrical styles including Shakespeare, Restoration, and farce. Through warm-ups, voice and movement exercises, script analysis, and monologue and scene work, actors will apply acting techniques to each style.

Prerequisites: Acting I, or permission of the instructor

### PUBLIC SPEAKING

1-block course; Open to grades 9–12

From casual announcements to formal presentations, we are tasked with public speaking daily. Students will learn techniques for harnessing their authentic presentation style to engage an audience including projection, articulation, body language, vocal tone, and eye contact. Focusing on the link between public speaking and storytelling, the class will culminate in students giving a speech in the Ignite style.

Prerequisites: None

### AUDITION TECHNIQUES

1-block course; Open to grades 9–12

Whether training to be a professional actor, prepping for a job interview, or for college interviews, this course will help you develop the skills of commanding the room. Through text analysis, monologues and cold reads, actors will gain an understanding of character development, storytelling, vocal technique and body awareness which will serve them well in any audition room as well as any interview. This class will culminate in a mock audition experience.

Prerequisites: None

### DIRECTING

1-block course; Open to grades 10–12

Students will learn techniques and develop skills in Directing through the examination of open scenes, contemporary scenes and play planning. Students will gain an understanding of directing through research, text analysis and collaborative exploration.

Prerequisites: None

### THE ACTOR'S VOICE

1-block course; Open to grades 9–12

Building on the vocal technique learned in Acting I, students will expand their vocal skills and usage into a variety of voiceover techniques, character voices, and more. Students will engage with the international phonetic alphabet to learn how to accurately identify sound changes to capture different dialects and accents with care. Prerequisites: Acting 1, participation in a theatre D block, or permission of the instructor.

Prerequisites: Acting I, or permission of the instructor.

## Evening Classes:

### STAGECRAFT

Open to grades 9–12 Mods 1 through 6 on Wednesdays, 6:30–9:00 pm

Additional hours required for play and musical set builds and tech weeks.

Stagecraft is a year-long, hands-on course in technical theatre and production design. Students will have the opportunity to learn scenic construction, scenic painting, properties and costume construction, lighting and sound

engineering principles, technical drawing, and the production design process for theatre. Students will experience a variety of projects from sketches to building to deconstruction and along the way will learn to solve problems in creative and collaborative ways. Newly enrolled students in Stagecraft may only be allowed to participate in 1 production (play or musical) as an actor each year. Earns three academic credits. Course may be repeated. Enrollment is limited to 25 students.

Prerequisites: None

Meets Design Thinking and Art credits

NOTE: Students on Varsity teams (Field Hockey, Volleyball, Tennis (fall and spring), Basketball, and Lacrosse) should not sign up for Chamber Orchestra or Madeira Chorus during that season, or Stagecraft, or any E block Activity (Global Youth Leadership or Robotics) as the time requirements overlap.

### MADEIRA CHORUS

Open to grades 9-12 Mods 1 & 2, Mods 3 & 4, Mods 5 & 6 on Mondays and Thursdays, 6:30pm– 8 p.m.

This large vocal ensemble class provides both beginner and advanced singers the opportunity to develop their choral and solo singing in a group experience, exploring a broad repertoire of music – from classical to contemporary, both accompanied and a cappella. Students prepare for two-to-three concerts and/or festivals per year. Students will also develop new or build upon existing music theory, ear training, and sight singing skills. Mods 1 & 2 will focus on classical repertoire, Mods 3 & 4 will focus on contemporary & pop, while Mods 5 & 6 will focus on Musical Theatre. Students must participate in all dress rehearsals and performances. Earns one academic credit per section taken. Course may be repeated.

Prerequisites: None

NOTE: Students on Varsity teams (Field Hockey, Volleyball, Tennis (fall and spring), Basketball, and Lacrosse) should not sign up for Chamber Orchestra or Madeira Chorus during that season, or Stagecraft, or any E block Activity (Global Youth Leadership or Robotics) as the time requirements overlap.

### CHAMBER ORCHESTRA

Open to grades 9-12 Chamber Orchestra: Mods 1 & 2, Mods 3 & 4, Mods 5 & 6 on Tuesdays and Thursdays, 6:30-8:30 p.m.

Chamber Orchestra is open to all instrumental musicians including but not limited to strings, winds, brass, percus-

sion, piano, and non-traditional instruments with approval. The group prepares both large and small ensembles for four to six concerts per year while exploring and learning a wide range of musical styles, idioms, and historical contexts. Required in class rehearsal time is not to exceed four hours most weeks. Students must participate in all dress rehearsals and performances. Earns one academic credit per section taken. Course may be repeated.

NOTE: Students on Varsity teams (Field Hockey, Volleyball, Tennis (fall and spring), Basketball, and Lacrosse) should not sign up for Chamber Orchestra or Madeira Chorus during that season, or Stagecraft, or any E block Activity (Global Youth Leadership or Robotics) as the time requirements overlap.



## Additional Arts Opportunities Sponsored by the Arts Department

### **TECH EVENTS CREW**

Yearlong non-D Block activity; Open to grades 9-12

Tech Events Crew is a hands-on introduction to basic theatre technology focusing on stage crew and booth operations. Students of every level gain a working knowledge of theatre terminology and handle all operations involved in running special events and All School Meetings throughout the school year. In addition to crew/booth responsibilities, students will learn specialized carpentry, painting, lighting, and sound skills through monthly workshops and seminars. Includes teaching workshops and staffing events.

### **INTERNATIONAL THESPIAN TROUPE**

International Thespian Troupe (ITS) Troupe #1548 is the theater honors program through Madeira Arts, celebrating students who love theater both onstage and behind the scenes. Members take part in productions, leadership opportunities, and outreach events like the Virginia Thespian Festival, where students can attend workshops, audition for colleges, and have their performance or technical work adjudicated. The troupe is student-led by an elected board and provides a way to recognize and honor the dedication, hard work, and excellence of our outstanding thespians.

### **STUDENT ROCK BAND - FUNCTION IN DISASTER (STUDENT-RUN)**

This student run rock band performs throughout the year at various school events and arts showcases. Auditions are held at the start of the school year and rehearsals are organized by the students each week.

### **STUDENT ACAPELLA GROUP – SWEET TI (STUDENT-RUN)**

This student run acapella group performs throughout the year at various school events and arts showcases. Students select and arrange acapella versions of music in a wide range of styles and genres for performance. Auditions are held at the start of the school year, and rehearsals are organized by the students each week.

## CO-CURRICULUM

### CO-CURRICULUM GRADUATION REQUIREMENTS: SOPHOMORE CO-CURRICULUM, JUNIOR CO-CURRICULUM, SENIOR CO-CURRICULUM

Co-Curriculum is an essential part of Madeira's mission of launching women who will change the world. Co-Curriculum is a graduation requirement: 10th graders are required to complete the Serving Others and the Local Community Placement, 11th graders are required to complete the Effecting a Change in a Democracy Placement, and 12th graders are required to complete the Pursuing a Passion or a Curiosity Placement. Madeira's Co-Curriculum Program provides opportunities for progressive degrees of independence and is designed to respond to the needs of students at each level of their development.

The Co-Curriculum Office works individually with students helping them identify their skills, interests, and passions, while also collaborating with them to identify appropriate placements where they will challenge themselves and grow as independent young women. In addition to providing logistical support, the Co-Curriculum Office oversees a curriculum designed to help students reflect upon their experiences and individual growth. Students are assessed on various assignments and projects and receive a letter grade based on these assessments. The name of their placement and the letter grade earned by a student will appear on the final transcript, but the grade is not a part of a student's overall grade point average.

#### SOPHOMORE CO-CURRICULUM/ SERVING OTHERS AND THE LOCAL COMMUNITY

1 Mod, Required for 10th Graders

Service is one of the pillars of Madeira's founding and is the foundation for sophomore Co-Curriculum. Students will explore the concepts of social responsibility and civic engagement by serving organizations Madeira has partnered with in the local community. Students serve at these partner organizations in teams of three to ten students. About four times a mod, students remain on campus to participate in Learning to Serve Discussions and Guided Team Meetings, to reflect on their volunteer experiences and practice the skills they need to best serve others. Once a mod, students build their team skills at Calleva, the outdoor leadership program on Madeira's campus.

The sophomore Co-Curriculum program helps students examine three essential questions

*What is our responsibility to others?*

*How do we best serve others?*

*How do we develop the character and skills needed to serve others as individuals and as a team?*

Students are assessed on their ability to work as a member of a team, think creatively about local community challenges, demonstrate an understanding of those they serve, and persuasively present their ideas.

#### JUNIOR CO-CURRICULUM/ EFFECTING CHANGE IN A DEMOCRACY

1 Mod, Required for 11th Graders

Junior Co-Curriculum and the U.S. History course are an integrated program. In their U.S. History courses, students will develop knowledge and practice skills that will help them in their internship on Capitol Hill. During the internship, students will have hands-on experience that will inform their final research project for U.S. History.

Because of its unique connection to the Capitol Hill internship program, U.S. History is a four- mod course. All students will complete the first mod of U.S. History course before going to their internship on Capitol Hill. During their first mod of U.S. History, students will develop a working knowledge of how the U.S. government functions and what role Capitol Hill plays. In addition, students will work with their history teacher to practice the oral and written skills, awareness of current events, and the research skills necessary to work in a Congressional Office. Students also will identify a national policy issue that is important to them.

During their Congressional internship, students will submit a variety of assignments to the Co-Curriculum Office that will help them reflect upon their experience and their national policy issue. This policy issue will be the focus of their Co-Curriculum capstone project, the research-based culmination of their internship experience, as well as the final research project in U.S. History. In addition to their daily duties as Congressional interns, the Co-Curriculum Capstone project gives students the opportunity to apply skills learned in the classroom – quantitative and analytical reasoning skills, oral and written communication skills, and research and tech skills – to effect change.

### SENIOR CO-CURRICULUM/ PURSUING A PASSION OR CURIOSITY

1 Mod, Required for 12th Graders

The Senior Co-Curriculum experience, by allowing students to participate in an internship of their choosing, provides an opportunity to pursue a passion or area of interest and to check their ideal vision against reality. Throughout their internships, students will submit reflections and various research assignments based on their experiences. Students will be challenged to investigate the internship's industry or field of study, focusing on the trends and issues facing the field and the opportunities that exist within it as a career

path. Additionally, students consider the ways that they might be a leader in the field or industry, reflecting on how their placement site is meeting its goals and thinking of the ways it might improve.

Seniors are eligible to apply for a Global Internship outside of the immediate Washington, DC area. A separate application is required for a Global Internship. Rising seniors are eligible to apply for an internship the summer between their junior and senior year. A separate application and approval required for a Summer Internship.

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# Co-Curriculum Internship Program

## Placement Process and Timeline

**Each year students have progressing levels of choice and independence in their internships:**

Sophomores rank their preferences among the current placement offerings, juniors are paired with partner offices where they can learn more about their issues areas, and seniors pursue a placement that matches their passions or career interests. The first step in the placement process is the Academic Office scheduling the mod the student will go to their Co-Curriculum internship. Below you will find a general timeline of the placement process for each grade. If you have any questions about the placement process, please contact the Co-Curriculum Office at 703-556-8277.

## SOPHOMORE CO-CURRICULUM

Sophomores will complete Co-Curriculum in either Mod 1, 3, 5, or 7.

**Spring and  
Summer Before 10th Grade**

- Introduction to Sophomore Co-Curriculum in 9th Grade Student Life class.
- Academic Office builds student's schedule, including the mod student will have Co-Curriculum.
- All sophomores and families receive information from the Co-Curriculum Office about the process.

**1 month before Mod**

- Information about current Sophomore placement offerings is available to students for their research.
- Students complete survey indicating their preferences for placements.
- Co-Curriculum Office assigns students to placements based upon preference and notifies students and advisors of their placements.

**2 weeks before Mod**

- Information is sent to students and families about transportation to and from Sophomore placements, mod schedule, attire, and other logistical information about the Mod.

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## JUNIOR CO-CURRICULUM

Juniors have Co-Curriculum in Mods 2, 3, 4, 5, and 6. In some rare occasions due to scheduling conflicts, juniors may have Co-Curriculum in Mod 7. Junior Co-Curriculum is completed in the same year a student completes U.S. History, typically the junior year. Students are matched with partner offices where they can learn more about their issue area they identified in their U.S. History class.

### Spring and Summer Before 11th Grade

- Junior Placement Process explained during Junior class meeting in Spring.
- Academic Office builds student's schedule, including the mod student will have Co-Curriculum.
- All juniors and families receive information from the Co-Curriculum Office about the process.

### 1-2 months before Co-Curriculum Mod

- Students and families receive communication outlining process and some logistical information.
- Students have initial placement meeting with Co-Curriculum Office.
- Students submit updated resume and indicate issue area.
- Resume, cover letter, and other application materials reviewed and approved by Co-Curriculum Office.

### 1-3 weeks before Co-Curriculum Mod

- Students are paired with an office and submit required application materials.
- Co-Curriculum Office monitors status of application and provides updates to students.
- Students may be asked to interview with potential Congressional Offices by phone or video.
- Co-Curriculum Office holds training sessions to prepare students for working on Capitol Hill.
- Co-Curriculum Office notifies students once the placement has been confirmed.

### FAMILIES AND STUDENTS WANTING TO SECURE THEIR OWN INTERNSHIP

Students and families may decide to secure an internship on their own using their own network or personal contacts. Please notify the Co-Curriculum Office at the start of your mod's placement process, so we can provide you with you information about our program that you can give to the office and ensure you are not contacting offices where we already are working to place students. The Co-Curriculum Office needs at least three weeks to secure an internship, so if your plans to find your own internship change, please let us know before three weeks out from the start of your Co-Curriculum Mod.

## SENIOR CO-CURRICULUM

Seniors have Co-Curriculum in Mods 2, 3, 4, 5, and 6. In some rare occasions due to scheduling conflicts, seniors may have Co-Curriculum in Mod 7. The senior year Co-Curriculum internship is an opportunity for students to explore their passions or career interests. The Co-Curriculum Office can help students think about their options and potential internship placements. Seniors have the option of completing their requirement with a Global Internship (outside the vicinity of the Metro Washington, D.C. area) or in the summer between their junior and senior year. Students wishing to have a Global Internship or summer internship must complete a separate application with the Co-Curriculum Office and follow a different timeline, as identified on the application.

### Spring and Summer Before 12th Grade

- Co-Curriculum Office explains Senior Placement Process during Junior class meeting.
- Academic Office builds student's schedule, including the mod student will have Co-Curriculum.

### 1 Month before Co-Curriculum Mod

- Initial placement meeting with Co-Curriculum Office.
- Students submit most updated resume with Co-Curriculum Office.
- Students research Madeira partners and shares interests with Co-Curriculum Office.
- Co-Curriculum Office researches potential new partners if student interests do not match current partners.
- Resume, cover letter, and other application materials reviewed and submitted by Co-Curriculum Office.

### 1-3 Weeks before Co-Curriculum Mod

- Students conduct a phone or video interview with potential supervisor.
- Co-Curriculum Office holds an orientation to prepare students for their Co-Curriculum Mod.
- Students and Families receive communication outlining process and some logistical information.
- Final Placement is confirmed.

### FAMILIES AND STUDENTS WANTING TO SECURE THEIR OWN INTERNSHIP:

Students and families may decide to secure an internship on their own using their own network or personal contacts. Please notify the Co-Curriculum Office at the start of your mod's placement process, so we can provide you with you information about our program that you can give to the office and ensure you are not contacting offices where we already are working to place students. The Co-Curriculum Office needs at least three weeks to secure an internship, so if your plans to find your own internship change, please let us know before three weeks out from the start of your Co-Curriculum Mod.

For more information regarding Madeira's Co-Curriculum program, please contact the Co-Curriculum Office by telephone at **703.556.8277** or by email at **co-curriculum@madeira.org**.

## DESIGN THINKING & OTHER COURSES

**GRADUATION REQUIREMENTS:** Must complete Student Life and Design Thinking Lab courses, plus one additional Design Thinking course. All new incoming 10th graders enroll in the Design Thinking Lab.

### STUDENT LIFE

2-block course; Required of all ninth graders

The Student Life ninth grade curriculum focuses on knowledge and skills Madeira students will need as community members and into their future. We engage students in the examination of who they are as individuals, how they influence and are influenced by others, and how they can care for themselves and cultivate healthy and inclusive communities. Each student will develop and apply essential life skills as she builds a deeper understanding of herself and of those around her. Students will be assessed through experiential activities, inquiry-based projects, presentations, journal entries, papers, and class participation. This course is taught by faculty and staff members from various departments, giving students the opportunity to learn from community members not usually found in the classroom. These faculty and staff members bring their unique, professional perspectives to the curriculum.

Prerequisite: None

### MINDFULNESS AND THE BRAIN

1-block course; Open to grades 9-12

Mindfulness practice involves paying attention to the present moment in a specific and deliberate way without judgment. Research shows that mindfulness can have a profound impact on the way neurons fire in the brain and subsequently the way different regions in the brain, most notably the prefrontal cortex, communicate with each other. In other words, mindfulness practice can permanently influence how we think. Through examination of the work of Daniel Siegel, Jon Kabat-Zinn, and others, students will investigate the anatomy, functions, and interconnectedness of the brain, how the brain continues to change over the lifespan, and how mindfulness practice impacts the brain's functions and by extension, one's ability to make decisions, regulate emotions, and interact with others. This course will provide each student the opportunity to explore the basic tenets of

mindfulness, experience different ways to focus attention and increase awareness, and develop her own unique daily mindfulness practice.

Prerequisite: None

### DESIGN THINKING LAB

1-block course; Required for all 9th and new 10th graders.

In this transdisciplinary, inquiry-based course, students study real-world topics as they learn about and employ design thinking concepts. Students will gain knowledge of and employ the elements and principles of design, the design engineering process, 3D Printing, laser cutting, and technical drawing throughout their project work

Prerequisites: None

### INTRODUCTION TO HORSEMANSHIP

1-block course; Open to grades 9-12

This class is an introduction to horsemanship, designed for students who have had minimal or no previous experience with horses. Students will learn how to groom, lead, tack, mount/dismount, and will be introduced to the basic positions and controls used while riding a horse. Students will gain an understanding of how horses learn and be taught how to communicate with the horse effectively on the ground. In addition to the hands-on component of the class, students will discover how horses permeate most aspects of our culture and have the opportunity to research a topic of their choice. This course has a physical fitness requirement. Course is limited to 8 students per section.

# ENGLISH DEPARTMENT

## GRADUATION REQUIREMENTS: 12 CREDITS (3 CREDITS PER YEAR)

The four required years of English instruction constitute a cumulative program that immerses students in the diversity of literature in English and encourages them to make connections across the curriculum. All students study Shakespeare and benefit from field trips to the Shakespeare Theatre in Washington, D.C.

The English program helps students become thoughtful, lifelong readers, hones their analytical abilities, and trains them to write fluently and creatively. In all English courses, students learn how to develop logical arguments and use a rich and precise vocabulary. The English Department uses the study of literature to lead each student to a greater sense of self, community, and the world.

## English I

3-block course; Open to grade 9

During the first year of required English, students are introduced to fundamental texts from widely different cultures and time periods to shape and explore questions essential to the study of literature in English.

To build multidisciplinary literacy, English I also tasks students with learning how the arts and sociohistorical contexts inform their texts. Students learn the process of crafting expository writing, moving from invention strategies to revision. Throughout the year, vocabulary building and grammar work help lay a foundation for clear, effective writing.

Prerequisites: None

## Modules:

### INTRODUCTION TO LITERARY STUDIES

The focus of this course is on discovering critical approaches to literature, practicing the conventions of analytical writing, honing close reading and annotation skills, and exploring grammar concepts important to the production of high-quality written work. Students will read several complex texts and observe how the form and background of each work reveal strategies for their interpretation. Students can expect to read longer heroic journey narratives like Homer's *Odyssey*, and smaller works like Salman Rushdie's *Haroun* and the *Sea of Stories* to understand how each text conceives physical and spiritual journeys. Students will focus on building strong arguments and supporting them with rich textual support in a series of small analytical pieces that make use of a variety of critical lenses before crafting a full-length, critical essay on a topic of their choosing.

### NARRATIVE AND ARGUMENTATION

Students will read small-form prose (short stories, micro-



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memoir, etc.), poetry from a variety of authors and time periods, and Ray Bradbury's *Fahrenheit 451* as part of their exploration of how writers use their chosen forms in unique ways to communicate rich stories of self-discovery and social commentary. They will shape and challenge their interpretations of these varied texts through performance exercises, collaborative critical writing exercises, and the production of their own creative work.

Prerequisites: Introduction to Literary Studies

### PORTFOLIO

This is the culminating section of the English I course of study. Students will bring the skills and knowledge they gained (as well as several pieces of writing) from the previous two sections of English I to bear on the creation of a portfolio of critical and creative work that focuses on contrastive analysis, adaptation, and literary criticism. Texts for this section will include a play by William Shakespeare and exemplars from a variety of sources to guide student composition and revision.

Prerequisites: Introduction to Literary Studies and Narrative and Argumentation

## English II

### LITERATURE IN THE WORLD

3-block course; Open to grade 10

During the second year of required English, students explore our literary heritage in English from the Renaissance to the present post-colonial world. Students learn how to write analytical essays that connect form to meaning. Building knowledge of literary terms and increasing general vocabulary lay a foundation for the practice of clear, effective writing.

Prerequisites: English I

### Modules:

#### WRITING MECHANICS AND GLOBAL LITERATURE

Required

Students who test out of Writing Mechanics cultivate their prose style through lessons that go beyond grammatical correctness to address more advanced topics, including parallelism, sentence emphasis, sentence variety, and exact language. Reading Chimamanda Ngozi Adichie's *Purple Hibiscus* (summer text) and selected short stories will provide contemporary cultural topics for student writing. Students will also conduct biographical research on individual authors.

#### SHAKESPEARE THROUGH PERFORMANCE II

Required

Students will study one of Shakespeare's plays through reading and writing and through performances presented to the wider school community. Through analytical and imaginative pieces, they will examine Shakespeare's use of language and dramatic conventions. They will gain a fuller appreciation of Shakespeare's meaning through rehearsing and performing selected monologues and sonnets.



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### WRITING WITH STYLE ABOUT GLOBAL LITERATURE

Students who test out of Writing Mechanics cultivate their prose style in this workshop-style course where they read and respond to each other's writing, in addition to receiving feedback from their teacher. Reading Chimamanda Ngozi Adichie's *Purple Hibiscus* (summer text) and selected short stories will provide contemporary cultural topics for student writing. These students conduct biographical research on individual authors.

Can substitute for Writing Mechanics and Global Literature—required

### LITERARY MASTERPIECES: JANE EYRE

Students will study Charlotte Brontë's novel *Jane Eyre*. Close reading of the text, vocabulary building, and learning about the social history of Britain will enhance students' understanding of this work. Students will demonstrate their understanding primarily through analytical essays.

Prerequisite: Writing Mechanics and Global Literature

### LITERARY MASTERPIECES: SATIRE IN CHAUCER AND AUSTEN

Students will study the social satire of Chaucer's *Canterbury Tales* and Austen's *Pride and Prejudice*. Close reading of the texts, vocabulary building, and researching social history will enhance students' understanding of these two works and the function of satire. Students will demonstrate their understanding primarily through analytical essays.

Prerequisite: Writing Mechanics and Global Literature. Not offered in 26-27.

### LITERARY MASTERPIECES: POETRY

Students will read works by John Keats and Elizabeth Barrett Browning, two prominent 19th-century English poets. Students will learn strategies for discovering meaning in the selected poems through close attention to literary devices and through the viewing of two feature films, *Bright Star* (2009) and *The Barretts of Wimpole Street* (1934), that dramatize these two poets' famous life stories. Students will demonstrate their understanding through expressive recitation and analytical essays.

Prerequisite: Writing Mechanics and Global Literature Not offered in 26-27.



## English III

### AMERICAN LITERATURE

3-block course; Open to grade 11, though seniors may take 1 block as an English IV choice.

English III offers a thematic approach to American Literature, introducing students to a variety of texts from major literary movements and historical periods. In both their writing and in-class discussions, students practice close textual analysis that develops increased skill in the interpretation of literary techniques and rhetorical strategies. Students conduct research on American authors and poets to synthesize literary criticism and other sources with their own original arguments. Some students may choose to take the AP English Language and Composition exam in May of their junior year.

Prerequisites: English I & English II

### THE RHETORIC OF EQUALITY

(Required): Students will read and analyze Frederick Douglass' *Narrative of the Life of Frederick Douglass* (summer text), a novel from writers such as Toni Morrison, Ralph Ellison and Percival Everett and essays and speeches representing a range of voices in the struggle for civil rights in the United States. Along with close study of language and narrative techniques in the text themselves, students will learn their historical contexts by exploring related media. Students will learn how to defend an argument and use rhetorical devices and how to integrate literary criticism and other sources into their writing as part of a larger research paper.

Prerequisite: Any two of the modules below

### Modules:

#### FEMINIST PERSPECTIVES

This course will focus on fiction that depicts the changing role of women spanning the seventeenth to the mid-twentieth century. It will explore the obstacles, both internal and external, women faced in defining their own lives. Students will read Nathaniel Hawthorne's *The Scarlet Letter*, Toni Morrison's *Sula*, Julia Cho's play *99 Histories*. Since the American Gothic tradition is a common element among these texts, students will explore how it arose to navigate and challenge social limitations. Student writing will focus on literary analysis presenting an original

interpretive argument.

#### AMERICAN MODERNISM

In this course students will examine how Modernist writers questioned or outright denied assurances provided by religion, politics, social norms, and traditional forms of art. The course will also examine how these writers processed World Wars I and II and how Modern art intersects with literature.. Texts include poetry of the Harlem Renaissance, F. Scott Fitzgerald's *The Great Gatsby*, stories from Hemingway's *In Our Time*, and Kate Chopin's *The Awakening*. Student writing will focus on literary analysis presenting an original interpretive argument.

#### THE LITERARY MEMOIR

In this course, students will interrogate the American experience through the lenses of memoir and personal essay. Texts include Maxine Hong Kingston's *The Woman Warrior* along with contributions from writers like Leslie Marmon Silko, Joan Didion, Jhumpa Lahiri, Jamaica Kincaid, and James Baldwin. Students will learn to write analytically and creatively about identity formation from a multicultural perspective. In addition to analytical writing, students will develop a creative nonfiction essay that parlays into their college application essay process.

## English IV

3-block course; Open to grade 12

During the fourth year of required English, all students take three modules drawn from a broad range of offerings, including AP English Literature and Composition. Building upon the close, scholarly relationships with their peers and teachers during prior study, students flex and advance their skills in critical thinking and analytical and creative writing. Prerequisites: English I, English II, and English III. Based on enrollment, we will offer some combination of the following classes in the 2026–2027 academic year.

Students may take one English III module to satisfy this requirement—excluding The Rhetoric of Equality

### Modules:

#### DYSTOPIAS

Writers create dystopias—imaginary worlds where everything seems to have gone terribly wrong—as cautionary tales. They dream about the ways in which human nature or social institutions might prove tragically weak, and we readers are expected to grasp the lesson. In this course, we will study selected dystopias in literature and film, along with articles that provide essential context. We will begin with the 2008 animated film *WALL-E*. Although the film imagines an environmentally devastated Earth and is full of satire, it is ultimately inspiring. Using the analytical vocabulary that we will develop through studying this film, we will move on to Margaret Atwood's novel *The Handmaid's Tale*, a work that invites critical reflection on political and social realities.

#### THE MEDIEVAL VISION

In this module we will look closely at how medieval life has been constructed in various literary modes: romance, epic, travelogue, and historiography. We will consider the social and historical contexts of life in the Middle Ages and examine how medievalism continues to influence artistic production. Our means of investigation will be diverse: close reading, lively discussion, study of history and art, and creative and analytical writing. This course will challenge the student to develop an even richer, more precise vocabulary, and to stretch and synthesize the student's knowledge of history, religion, art, and philosophy. Texts may include, but are not limited to: *Beowulf*, *The Book of Margery Kempe*, *The Travels of Ibn Battutah*, the *Scivias* of Hildegard von Bingen, and *Sir Gawain and the Green Knight*.

#### THE LITERATURE OF ACTIVISM

This elective focuses on the writing and construction of “activist literature”, particularly speeches (rally, commencement, TED-style, etc.), op-ed pieces for newspapers, literary journalism articles, and platformed digital campaigns. Students will have the opportunity to use their writing to influence public opinion, raise awareness about pressing issues, and inspire meaningful change in and beyond the Madeira community. Students will engage in in-depth inquiries into multiple perspectives on their chosen topics as they learn how to access and analyze data from reputable sources, interview subjects, critically evaluate information, and synthesize it into compelling narratives.

#### READING WUTHERING HEIGHTS

Charlotte Brontë famously wrote in her preface to the 1850 edition of Emily Brontë's novel, *Wuthering Heights* was hewn in a wild workshop, with simple tools, out of homely materials.” What happens, however, when a novel as haunting as *Wuthering Heights* leaps off the page and into visual form? This course will explore Brontë's novel and poetry through the lens of nineteenth-century visual culture. Students will begin by examining Victorian art and photography to contextualize Brontë's representations of class, gender, identity, and the natural world. They will produce photographed tableaux interpreting key passages from the novel, grounding their visual compositions in rigorous close reading. Additional assignments include artistic renderings developed through research in nineteenth-century portraiture, landscape painting, and material culture, paired with textual analysis of both the novel and Brontë's poems. The course culminates in a short adaptation of a selected chapter from *Wuthering Heights*, supported by the study of major film versions to guide choices in staging, setting, and sound. These creative projects will complement analytical essays and lively class discussions, deepening students' critical understanding of Brontë's novel while encouraging reflection on the relationship between text, image, and the contemporary visual experience.

### SHORT FICTION AS SUBVERSIVE LITERATURE

What is it about short fiction that lends it to being equally palatable, cliché, palatable, marketable, shocking, and confounding? Myriad writers, whether occasionally dabbling in the genre or working primarily in it, have launched their careers or cemented their legacies with short stories. The stories themselves often define or defy convention, and sometimes they do both: impressing critics and selling copies while also subverting reader expectations and form. Exploring a range of short story icons and iconoclasts including Edgar Allen Poe, Flannery O'Connor, Raymond Carver, Sandra Cisneros, and Ottessa Moshfegh, students will use various critical lenses to explore short fiction as it establishes and challenges the standards of plot device and narrative arc. In the process, students will interrogate what it is about short fiction that makes it such an apt vehicle for challenging literary convention and publishing standards while also demonstrating a panache for mass appeal. The course will include two creative projects: a midterm exercise in writing flash fiction, and a final creative project in which students will produce a short story of their own.

### POETRY WRITING WORKSHOP

This course is structured as a workshop and focuses on poetry created by the class. Students will write a variety of poems—from formal sonnets and villanelles to pantoums and free verse poems—and participate in regular discussion of each other's work. Based on feedback from the class and teacher, and their own expanding expertise, they will then revise their work and compile it in a final portfolio. Students will also read and analyze a diverse selection of poems to broaden their knowledge and understanding of the vast array of poetic voices that exist throughout the world and across time. As a culmination of the course, students will have the opportunity to share their poetry with the Madeira community.

### AP ENGLISH LITERATURE AND COMPOSITION

2-block course; Open to grade 12

This course offers students an introductory college-level curriculum and prepares them to take the AP English Literature exam in May. Students develop their skills in critical thinking, analytical writing, and close reading through daily discussion, diverse writing assignments, and AP exam practice. Texts will be drawn from a range of genres, including poetry, fiction and drama, and will represent major artistic statements of the periods ranging from the Renaissance to the Twentieth Century. For the third block of senior English, AP students will be enrolled in an English IV elective.

Prerequisite: Department approval

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## International Student English

### YEAR ONE (ISE 1)

3-block course; Open to grades 9 and 10

This class is required for all first-year students in the International Student English Program. The course helps students acclimate to The Madeira School and to academic standards and practices in the United States.

Students develop their familiarity with the tools available to them for their studies in English: dictionaries (bound and online), library reference and research databases, grammar resources, and course-management, word-processing, and presentation software. Throughout the course, students build their vocabulary and increase their oral communication skills through public speaking practice, interviews, group presentations, and frequent discussion of readings.

The course also offers intensive instruction in writing, with a special focus on learning the process of composing the expository essay. Students practice prewriting, thesis construction, paragraph development, drafting, and revision. Additionally, students are taught to apply U.S. conventions of language and grammar outside the expository essay, in email, letters, resumes, creative writing, and presentations.

Prerequisite: None

Corequisite: ISE1 I: Introduction to Madeira Scholarship must be completed prior to taking English I courses.

#### Modules:

ISE1 I: Working with Literature  
ISE1 II: The Modes of Writing  
ISE1 III: Working with Research

### YEAR TWO (ISE 2)

3-block course; Open to grades 10 and 11

This class is required for all second-year ISE students. Year Two allows students more time and instructor attention to develop grade-appropriate English reading and writing skills across the Madeira curriculum. The course emphasizes the development of composition skills through writing exercises that hone the use of correct grammar and punctuation. Additionally, students explore ways to craft more substantive thesis statements and build cohesive arguments as they use examples from their texts, employ correct citations, and frame conclusions that are more discovery than mere summary. They work closely with the instructor in drafting, editing, and rewriting assignments. Throughout the course, students further improve their reading comprehension by practicing annotation techniques and identifying significant passages in their texts for discussion. In the second block, rigorous attention is paid to the development of public speaking skills. Each module has a different content focus, though reading, writing, speaking and listening skills are developed and honed in each module.

#### Modules:

ISE2 I: Madeira's School Values  
ISE2 II: Public Speaking  
ISE2 III: Literary Analysis: A Masterwork in English



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# HISTORY DEPARTMENT

## GRADUATION REQUIREMENTS: 10 CREDITS (MUST INCLUDE 9TH, 10TH, 11TH GRADE HISTORY COURSES)

The Madeira History Department is committed to supporting the mission of the School in the materials we employ, the scholarly and interpersonal skills we help students practice, and the learning we support.

History classes will provide students with an understanding of the world through analysis of the past and discussions of the present. Students are asked to consider the interconnectedness between their lives, the lives of their communities, and the historical events we study. By exploring these connections, a student will develop both a strong sense of self and one's role in the world.

The History Department seeks to develop the essential skills of research, writing, oral presentation, collaborative project management, and critical thinking that will prepare each Madeira graduate to continue studies successfully at the college level. More importantly, the history curriculum prepares students to be compassionate, interested, and effective citizens in the world beyond Madeira and in our global community.

### COMPARATIVE GLOBAL STUDIES I

3-block course; Required for 9th graders

The Comparative Global Studies I course invites students to consider what it means to be a member of our global community. Students will explore their place in the world through a skills-intensive and multi-disciplinary regional studies curriculum. Course work will draw from the histories of Africa, Asia, Latin America, and the Middle East and will focus on how humans come together to form communities and the interactions among them. Students will be introduced to research, analytical writing, and source evaluation. This course is committed to global citizenship and excellence in the humanities, which asks students to think critically and independently and form a deeper awareness of self and others in the world.

Prerequisites: None

### COMPARATIVE GLOBAL STUDIES II

3-block course; Required for 10th graders

Comparative Global Studies II continues the regional study of Africa, Asia, Latin America, and the Middle East through the lens of global politics, revolution, and human rights. Students will explore the historical patterns and political foundations that shape our world today in order to become confident, informed, and active participants in the 21st-century. Students will refine a repertoire of academic skills including critical reading, analytical writing, and source evaluation. The course concludes with a comparative research seminar, for which students will write an analytical paper based on their independent study and research.

Prerequisites: Comparative Global Studies I.

New 10th graders: an equivalent 9th grade history course.

## U.S. History

4-block course; Required for 11th graders

Since a large part of understanding who we are and what we aspire to be requires an awareness of what has come before us, this course will provide the material to help Madeira students, both American and international, identify their place in the narrative of United States history. Students will continue to develop the skills established during their history coursework from 9th and 10th grade, including critical analysis of primary and secondary sources; oral expression in the form of classroom discussion, debates, and role playing in historical simulations; analysis and expression through in-class historical identifications and essays and short answer questions; and in-depth historical research techniques.

11th grade U.S. History is fully integrated with the Junior Co-curriculum program. The first module will provide students with a working knowledge of how the U.S. government functions and what role Capitol Hill plays. At the beginning of the year, students select a public policy issue in which they have an interest. Throughout their modules of history and during their Co-curriculum internship, students research the issue and create a legislative proposal to address a related problem.

Prerequisite: Comparative Global Studies II.  
New 11th graders: an equivalent 10th grade history course.

### Modules:

#### **US HISTORY: AMERICAN REVOLUTION AND U.S. CONSTITUTION**

Students will examine the causes of American independence and the formation of a new nation through the creation and adoption of the U.S. Constitution. In addition, students will learn the workings of the current U.S. government, with particular emphasis on the role of Congress. Students will also practice the writing and historical skills they learned in Comparative Global Studies II.

#### **US HISTORY: AMERICAN EMPIRE**

Students will examine how the United States went from a small, isolationist nation to a major world power by looking at diplomacy and wars. The course will cover dispossession of Indigenous lands, continental and overseas expansion, U.S. involvement in World Wars I + II, and the Cold War.

Prerequisites: American Revolution and the Constitution

#### **U.S. HISTORY: RACE IN AMERICA**

Students will look at the development of the American slave system and its impact on American society. Students also will examine the causes of the Civil War and its impact. Finally, students will evaluate the continuing efforts of people of color seeking equality in the United States.

Prerequisites: American Revolution and the Constitution

#### **US HISTORY: CLASS, LABOR, AND POLITICAL ECONOMY**

Students trace the economic developments in the United States, including the First and Second Industrial Revolutions, the Great Depression, and the Affluent Society. The capstone project will focus on a current question of U.S. economic policy.

Prerequisites: American Revolution and the Constitution

#### **12TH-GRADE HISTORY**

Students who have completed U.S. History may enroll in one or more 12th grade history courses. Based on enrollment, we will offer some combination of the following classes in the 2026-2027 academic year. Students can elect to take a Senior History course (one block option), a Senior History course and a Research Seminar (two block option), or a History Capstone (two-block Capstone Seminar + Capstone Research Seminar).

History Capstone Seminars: (two-block course + Capstone Research Seminar) 3-block course; Open to 12th graders.

## History Capstone Seminars

2-block course + Capstone Research Seminar

3-block course; Open to 12th graders.

### CAPSTONE SEMINAR: CHOCOLATE CITY—DC HISTORY

Ever wondered why DC is the city we know and love? In this class we will explore Washington, D.C. beyond the monuments and politics to learn about the people and movements that shaped the city. From the Indigenous communities who first called this land home to the fight for DC statehood today, we'll dive deep into the city's struggles and triumphs. Together we will unpack how race, culture, and power have defined DC's neighborhoods, experience its vibrant history firsthand on field trips to the city, and unravel how life in DC affects those who live in the shadow of the federal government. We will finish with student-led classes where you become the expert, tackling modern issues like gentrification, housing, political activism, and more. This is a microhistory- your opportunity to see how one city reflects and contradicts your current understanding of American history, through the lenses of identity and sociology. As a **Capstone Seminar**, students can expect discussion, potential field trips, and college-level workloads.

Prerequisites: U.S. History

### CAPSTONE SEMINAR: GLOBAL JUSTICE IN A WORLD OF DIFFERENCE

Explores the question "What do we owe to others in a world of difference?" Beginning with philosophies of justice from around the world, starting with pre-modern philosophers such as Aristotle, Mencius, and African ethicists. Moving to a study of 20th century philosophers such as John Rawls, Brooke Ackerty, and Audre Lorde. Ending the first Mod with an exploration of intersectional feminist philosophy from South Asia, East Asia, Central America, and Africa. Building on philosophies of justice and intersectional feminisms, we explore a case study where we apply theories of justice to a student-selected "hardest case of injustice." Central to our journey will be discussions of the following core concepts: philosophical concepts of duty, transnational feminisms, cultural identity, racism, global structures of power, and resistance. Students develop the skills to become confident, informed, and active participants in the 21st century and will read from a variety of college-level sources (in addition to art, poetry, and music). As a **Capstone seminar**, students can expect discussion and college-level workloads with emphasis on habits of "head, hand, and heart."

Prerequisites: U.S. History



### CAPSTONE SEMINAR: MIDDLE EAST IN MODERN MEMORY

The Middle East in Modern Memory begins from a point of disagreement, namely localized intersectoral conflicts that arise due to global pressures. We will begin by outlining the major sociological points of conflict in west Asia in contemporary times and trace their points of disconnection and disruption to understand the region's beauty and complexity. Our work together will include in-depth exploration of the Israeli/Palestinian conflict, the Armenian Conflict with both Turkey and Azerbaijan, the Kurdish issue over statehood, and the Iranian conflict with the west. In each case students will seek to understand the complexities of the topic as well as how the tensions affect ordinary people and their identities. The Middle East in Modern Memory will provide a college-level introduction to the Modern Middle East while at the same time allowing students to explore the nature and evolution of personal, religious, gender, and cultural identity. Students can expect to read a variety of sources, watch films, and write expository essays. As a **Capstone seminar**, discussion and college-level workloads as well as exposure to thought leaders, peers from the region, and policy practitioners will be central to the course.

Prerequisites: U.S. History

CONTINUES...

## Senior History Courses

1-2 block course; Open to 12th graders. Students can elect to take any 1-mod History course as a standalone Senior History Course or with the History Research Seminar.

### SENIOR HISTORY: CAPITALISM AND ITS CRITICS

Capitalism shapes our world and worldview so completely that it has become as omnipresent as air. This course explores the evolution of capitalism as an economic system and provides a chance to study historical critiques of capitalism from the "right" and the "left."

As Robert Heilbroner (the author of the book we will read) stated: "If socialism failed, it was for political, more than economic, reasons; and if capitalism is to succeed it will be because it finds the political will and means to tame its economic forces." Additionally, we will explore some of the major works of economic philosophy. The course culminates with each student completing a small research project exploring a current issue related to the application of capitalism.

Prerequisites: U.S. History

### SENIOR HISTORY: GENOCIDE AND MORAL DUTY

Genocide and Moral Duty explores student-selected historical & ongoing case studies while analyzing the moral responsibilities of individuals, nations, and international institutions. Through primary sources, philosophical texts, and contemporary debates, the course challenges students to consider the limits of justice, memory, and intervention. We will also devote significant time to recent efforts to anticipate and prevent mass atrocities globally. Ultimately, students will develop a deeper understanding of how history informs our ethical obligations in the face of crimes against humanity.

Prerequisites: U.S. History

### SENIOR HISTORY: GENDER, SEX, AND ACTIVISM

When questions of equality, safety, belonging, and opportunity arise, shared identities can act as either unifying or dividing factors. This course will examine the ways in which gender and sex brought groups together and highlighted their differences during the 20th Century. With a particular focus on women's and LGBTQ activist groups examined through primary sources, this course will explore

activism organizations including NOW, the Lavender Menace, Gay Liberation Front, ACT UP, and the more than 100-year-old dispute between pro and anti-Equal Rights Amendment groups. Why is the ERA still unratified? Was the Michigan Womyns Music Festival a place of affirmation or exclusion? How did the AIDS crisis bring gay, addiction, and chronic illness communities together?

Prerequisites: U.S. History

### SENIOR HISTORY: MADEIRA'S AMERICA: A CRITICAL EXAMINATION OF MADEIRA'S HISTORY

Madeira's America: A Critical Examination of Madeira's History provides a unique opportunity to introduce a specific, localized aspect of history that speaks directly to our entire student body. The course focuses on the history of the Madeira community and provides a new lens through which American history can be dissected by analyzing how the school has been influenced by the US and, conversely, how the school and the members of its community, have influenced the country.

The course starts by examining Lucy Madeira's values and the founding of the school in the context of the economic, social, and political climates of the time. Further topics include the examination of the history and diversification of the curriculum to understand how the school's educational priorities have shifted over time, evaluation of the school's historical commitment to diversity and inclusion by analyzing institutional progress and systematic changes, and understanding the school's relationship with the local and federal government. Finally, the course looks at how the school faces the consequences and reaps the benefits of Madeira's history today.

Prerequisites: U.S. History

### SENIOR HISTORY: SOCIAL MOVEMENTS THROUGH ART

Throughout history, art has played a significant role in bringing attention to the problems in society. From the paintings, plays, and music of the past to political cartoons, movies, and popular music of today, artists have been holding a lens up to authority and challenging power in creative and disruptive ways. This discussion-based course explores the myriad ways artistic expression led to social and political change in the Post-World War II era. Topics include Youth Counterculture and Inter **CONTINUES...** Movements, the Civil Rights and Human Rights Move-

ment, Indigenous Rights and Cultural Revival, Decolonization and National Liberation Movements, and Feminism and Gender Rights. Students complete a research project focusing on a specific artist in one of the movements.

Prerequisites: U.S. History

### SENIOR HISTORY: BIG IDEAS IN PHILOSOPHY

Topics in Philosophy introduces philosophy as a disciplined way of thinking about the world and one's place within it, grounded in a genuinely global and pluralistic conversation. Students explore enduring questions about reality, knowledge, ethics, identity, freedom, justice, and meaning through philosophical traditions from Europe, South and East Asia, the Islamic world, Africa, Indigenous societies, and feminist thinkers who challenge inherited assumptions about power, voice, and experience. Rather than treating philosophy as a single canon, the course emphasizes how ideas travel, clash, and evolve across cultures, and how perspectives shaped by gender, culture, and social position deepen our understanding of what it means to live well. The course culminates in an active and evolving examination of artificial intelligence and the future, asking how emerging technologies intersect with questions of bias, equity, agency, and human dignity. Students leave the course prepared to think carefully, judge responsibly, and engage a complex global world with intellectual seriousness and moral clarity. Philosophy in this course is practical, demanding, and contemporary.

Prerequisites: U.S. History

### SENIOR HISTORY: WOMEN, SPORTS, AND AMERICAN POPULAR CULTURE

Simone Biles. Caitlin Clark. Aja Wilson. Kate Ledecky. Megan Rapinoe. Breanna Stewart. Over the past few years, these women have become household names. However, that wasn't always the case. In 2024, both the National Women's Soccer League (NWSL) and Women's National Basketball Association (WNBA) had record breaking seasons regarding attendance, sponsorships, viewership, and impact. In fact, if American women were their own country, they would have ranked third in the medal count of the 2024 Paris Olympics. This jump in statistics did not occur in a vacuum. This class will explore the historical, current, and future path of women's sports and how it has impacted our culture, from the Liberty's "Ellie the Elephant" dancing in Barclay's Center, to fashion-tunnel walks, and discussions on trans athletes in sports.

Prerequisites: U.S. History

## Research Seminar

1-block course; Open to Seniors

Optional research course to follow Senior History course. Prerequisite: Senior History.

## Capstone Research Seminar

1-block course; Open to Seniors

Required research course to follow Capstone Seminar course. Prerequisite: Capstone Seminar course.

### GLOBAL YOUTH LEADERSHIP BOARD

Open to grades 11-12, by application. On Mondays, from 6:30-8:30 Mods 1-7.

This evening workshop invites students to learn, reflect, and create as they explore what it means to be responsible to future generations as members of a governing board. Students will engage with theories of development, intersectional and decentered feminist leadership models, and the concept of "just responsibility." They will also learn how to design and sustain an NGO that reflects ethical, community-centered values. Through thoughtful reflection, students will examine decentered approaches to working with communities in the global south, specifically northern Haiti, and consider how to use their educational privilege to foster mindful, equitable partnerships. They will participate in discussions on current events, development, travel, tourism, cultural geography, and global fragility, all while working toward the creation of a singular, sustainable NGO.

This E Block is limited in size to 20 students, may require students to complete certain requirements while on Co-Curriculum, and will require students to work collaboratively (with emphasis on decentered leadership over positional authority). Prerequisites: Comparative Global Studies II + successful application & interview.

NOTE: Students on Varsity teams (Field Hockey, Volleyball, Tennis (fall and spring), Basketball, and Lacrosse) should not sign up for Chamber Orchestra or Madeira Chorus during that season, or Stagecraft, or any E block Activity (Global Youth Leadership or Robotics) as the time requirements overlap.

# MATHEMATICS DEPARTMENT

## Course Progression 2026-2027

When students enter Madeira they take a placement test to determine their initial math class.

**COMPUTER SCIENCE**

**COURSES:**

- Computer Science I
- Computer Science II
- Computer Science III
- Computer Science Seminar
- Engineering for Robotics
- Programming for Robotics
- Machine Learning
- Web Development

**APPLIED MATH ELECTIVES:**

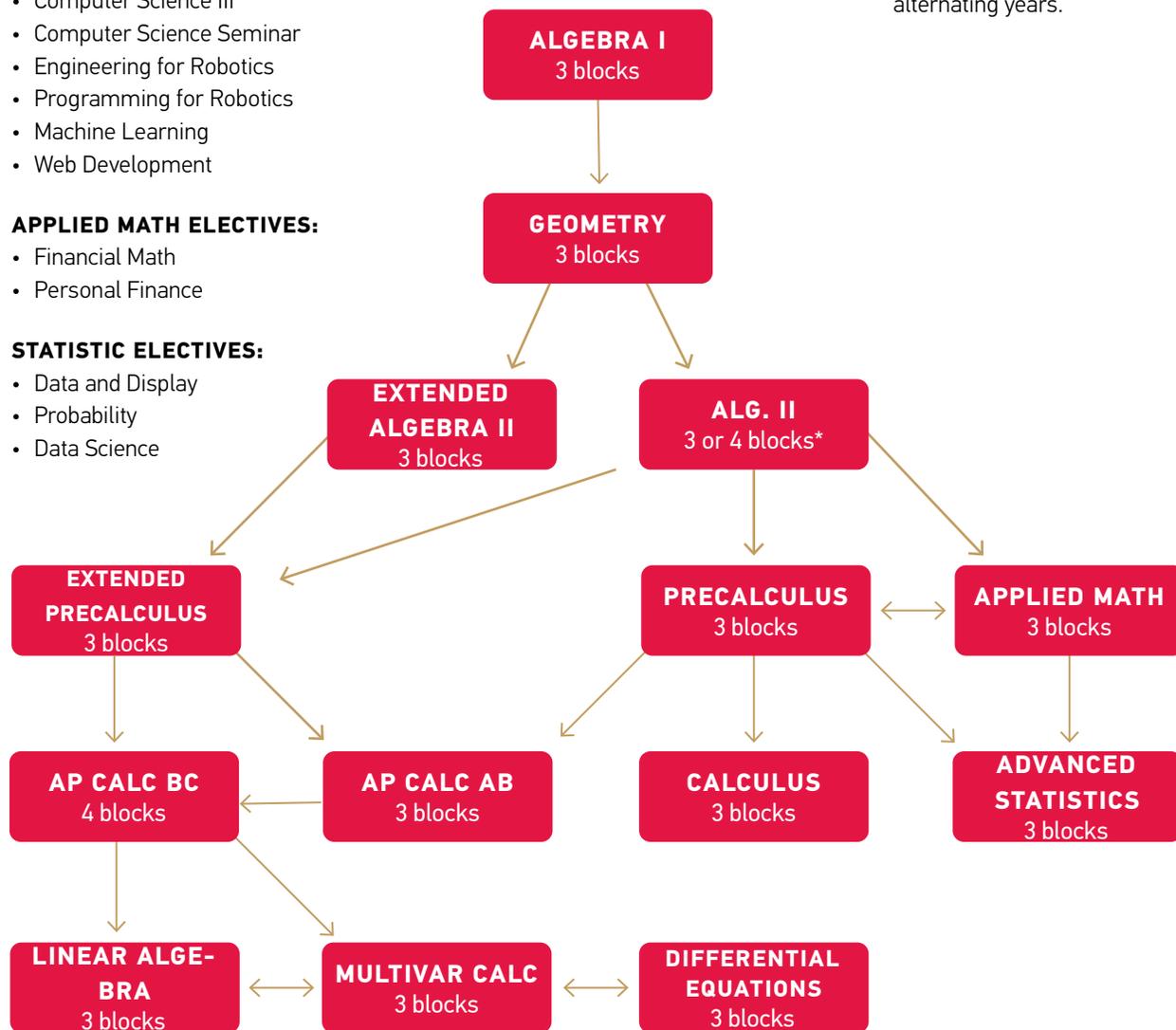
- Financial Math
- Personal Finance

**STATISTIC ELECTIVES:**

- Data and Display
- Probability
- Data Science

**NOTES:**

- Differential Equations, Multivariable Calculus, and Linear Algebra are offered in alternating years.



**GRADUATION REQUIREMENTS: 12 CREDITS (INCLUDING ONE OF CODING)**

The goal of the Math Department is to build mathematical thinking skills, to challenge each student to reach her full potential in mathematics, and to foster an ongoing interest in mathematical principles.

Students can choose from a variety of paths as they complete their twelve required blocks of math over a four-year period. Teachers and deans advise returning students on appropriate course selection; new students take math placement tests.

Math Placement: New students take placement tests to determine enrollment in the appropriate math course. The Chair of the Math Department and the Academic Dean make all course placements.

**ALGEBRA I**

3-block course; Open to grades 9–12

Students apply the basic concepts of arithmetic to the language of algebra and work with the structure and properties of the real number system. They learn to solve first- and second-degree equations, linear systems, and inequalities; they learn techniques of graphing and factoring; they work with polynomials, exponents, and radicals; and they set up and solve word problems. This course or its equivalent is a prerequisite for all subsequent courses in the department.

Prerequisites: None

**GEOMETRY**

3-block course; Open to grades 9–12

Students learn to identify angle relationships, scale, proportion, triangle congruence, and similarity, how perpendicular and parallel relationships unify and extend earlier concepts, and how to apply new knowledge to applications in circles, polygons, and right triangles. Students learn how to compute the area of plane figures and apply trigonometric skills to problem-solving in their work with a variety of 2-D shapes. Students will apply principles of algebra with continued practice and reinforcement while also demonstrating increasing flexibility with coordinate geometry, building a strong foundation for success in higher mathematics.

Prerequisites: Returning students—Algebra I;  
New students—by placement test

**ALGEBRA II**

3-4 block course; Open to grades 9–12

This course extends the algebraic principles learned in Algebra I, including an exploration of different number systems such as radical and complex numbers. Students will study the algebraic and graphical properties of a wide variety of functions including quadratic, polynomial functions, radical, rational, trigonometric, exponential and logarithmic. Additionally, foundational geometry concepts will be extended in order to address right-triangle relationships, the unit circle, equations with and graphs of all six trigonometric functions, sinusoidal motions, inverse trigonometric functions, identities, double-angle formulas, and half-angle formulas.

Prerequisites: Returning Students – B+ or higher in Geometry leads to 3 Mods of Algebra II. New Students - by placement test.

**EXTENDED ALGEBRA II**

3-block course; Open to grades 9–12

The course assumes a strong mastery of the material in Algebra I and an ability to manage material at a faster pace than is offered in Algebra II. The course will broaden a student's understanding of foundation topics while applying these topics to more complex problems. New topics such as polynomial, logarithmic, and rational numbers will be studied. In addition, students will learn skills in abstract reasoning and quantitative thinking with non-traditional problems as well as exploring the full capabilities of the graphing calculator. Finally, foundational geometry concepts will be extended in order to address right-triangle

relationships, the unit circle, equations with and graphs of all six trigonometric functions, sinusoidal motions, inverse trigonometric functions, identities, double-angle formulas, and half-angle formulas.

Prerequisites: Returning Students - Geometry A or higher and department approval. New Students - by placement test and the Academic Dean and Math Department Chair's approval.

## PRECALCULUS

3-block course; Open to grades 9–12

This course focuses on extending topics from Algebra II, including quadratic, polynomial, radical, rational, exponential and logarithmic functions. New units, such as conic sections, sequences and series, limits, and the definition of the derivative will be introduced. This course is designed for students who will proceed to the concepts in Calculus.

Prerequisites: Returning Students - Algebra II, New Students - by placement test and the Academic Dean and Math Department Chair's approval.

## EXTENDED PRECALCULUS

3-block course; Open to grades 9–12

This course provides an introduction to higher mathematics and helps to develop the skills and study habits necessary for a rigorous math program. This course will continue to expand on topics from Advanced Algebra II, including rational, trigonometric exponential and logarithmic functions. New units, such as conic sections, sequences and series, limits, vectors, parametric and polar equations and derivatives will be introduced. This course is designed to prepare students for AP Calculus.

Prerequisites: Returning Students - Extended Algebra II with an A- and department approval. Algebra II students with an A or above, and department approval. New Students - by placement test and the Academic Dean and Math Department Chair's approval.

## CALCULUS

3-block course; Open to grades 9–12

This course provides an introduction to first-year college calculus. Topics will include a review of functions, limits, continuity, rates of change, the derivative, and integration.

Emphasis is on understanding of concepts and mechanical manipulation.

Prerequisites: Returning Students - Trigonometry, Precalculus with a B- or higher, or Extended Precalculus. New Students - by placement test and the Academic Dean and Math Department Chair's approval.

## AP CALCULUS AB

3-block course; Open to grades 10–12

This course continues the path to higher mathematics and helps to develop the skills and study habits necessary for a rigorous math program. Students explore differential and integral calculus and their applications while learning to approach problems from a variety of perspectives—graphical, analytical, numerical, and verbal. Technology is used to explore the behaviors of functions and to make connections with analytic procedures. Students are prepared to sit for the Advanced Placement Calculus AB exam in the spring.

Prerequisites: Returning Students - Trigonometry, Extended Precalculus with a B or higher, Precalculus with an A or higher, or Calculus, and department approval. New Students - by placement test and the Academic Dean and Math Department Chair's approval.

## AP CALCULUS BC

3 or 4-block course; Open to grades 9–12

In this rigorous course, students review the topics covered in Calculus AB, extend the procedures learned to include more sophisticated integration methods, and explore vectors, parametric and polar functions, and techniques in solving differential equations. Students analyze the behavior of sequences and series beyond arithmetic and geometric ones, with particular attention to divergence, convergence, intervals of convergence, and various test methods. Technology is used, particularly the programmable capabilities of the calculator, to simulate real-life applications of the concepts and to enhance understanding. Students are prepared to sit for the Advanced Placement Calculus BC exam in the spring. Students who complete AP Calculus AB prior to taking this course may elect not to take the first block of BC.

Prerequisites: Returning Students - Trigonometry, Extended Precalculus with an A or higher, AP Calculus AB with a B or higher, and department approval. New Students

- by placement test and the Academic Dean and Math Department Chair's approval.

### MULTIVARIABLE CALCULUS

3-block course; Open to grades 9–12

This course provides an introduction to multivariable and vector calculus. The course covers vectors and analytic geometry in three dimensions, partial differentiation, multiple integration, and ends with vector calculus topics that build up to Green's, Stokes', and the Divergence Theorem. Students develop new problem-solving and critical reasoning skills to prepare them for further study in mathematics, the physical sciences, or engineering. Topics include surfaces in three-dimensional space, algebraic and geometric properties of vectors and vector functions in two and three dimensions, dot products and cross products, derivatives and integrals of vector functions, partial derivatives of functions of several variables, directional derivatives and gradients of scalar functions, multiple variable maximum and minimum value problems, double and triple integrals, line integrals, Green's theorem, and Stoke's theorem. This course will be offered on a rotating basis with Linear Algebra and Differential Equations and will be next offered in '27-'28

Prerequisites: AP Calculus BC

### LINEAR ALGEBRA

3-block course; Open to grades 9–12

This course provides a study of computational and proof techniques of matrix algebra and an introduction to vector spaces. It pushes students to ask questions and communicate mathematical thinking. Topics covered include matrix algebra, systems of linear equations, eigenvalues and eigenvectors, least squares, vector spaces, inner products, and introduction to numerical techniques, and applications of linear algebra. Students also explore linear transformations, matrix representations of a linear transformation, characteristics and minimal polynomials, and diagonalization of a matrix. This course will be offered on a rotating basis with Multivariable Calculus and Differential Equations and will be offered in '28-'29.

Prerequisites: AP Calculus BC

### DIFFERENTIAL EQUATIONS

3-block course; Open to grades 9–12

This course introduces first order differential equations and

systems, second and higher order linear equations, solutions by series and Laplace transform, and applications. Students develop new problem-solving and critical reasoning skills preparing them for further study in mathematics, the physical sciences, or engineering. The course covers initial value problems, solution curves, separable and exact equations, linear and nonlinear models of first order ODEs, non/homogeneous linear equations with constant coefficients, the reduction of order, undetermined coefficients, variation of parameters, Cauchy-Euler equations, Green's Functions, Spring/Mass systems, Series circuit analogues, Laplace Transforms, The Transforms of Derivatives, Operational Properties, The Dirac Delta Function, Systems of Linear Differential Equations, Inverse Transforms, Power Series, and Solutions about Ordinary and Singular Points. This course will be offered on a rotating basis with Linear Algebra and Multivariable Calculus and will be offered in '26-'27.

Prerequisites: AP Calculus BC

### COMPUTER SCIENCE I

1-block course; Open to grades 9–12

A first look at computer programming in Python. This course will take a project-based approach to developing essential programming skills. Students will write programs using variables, user interaction, basic data structures, conditional and logical control structures, functions, and other topics in modern Python programming. With this strong foundation, "Advanced Programming" courses are open to interested students following completion.

Prerequisite: Algebra I

### COMPUTER SCIENCE II

1-block course; Open to grades 9–12

Building upon the topics from Computer Science I, Computer Science II takes a project-based approach to developing more advanced programming skills. In addition to the topics covered in Computer Science I, students will work with complex data structures, write programs that read from and write to external files, define classes for use in object-oriented programming, and explore other topics in modern Python programming.

Prerequisite: Computer Science 1 or Placement test. Meets

the Design Thinking and Coding credit.

### COMPUTER SCIENCE III

1-block course; Open to grades 9–12

Building upon the topics from Computer Science I and II, Computer Science III students will learn how to design, implement, evaluate, and iterate on complex problems with Python. Topics covered include advanced data structures and algorithms, different programming paradigms, software development best practices, project management methodologies, and design thinking as they develop real world programming skills. Through hands-on projects and group work, students will apply their knowledge to create fully executable computer programs solving real-world problems.

Prerequisite: Computer Science 2 or Placement test. Meets the Design Thinking and Coding credit.

### COMPUTER SCIENCE SEMINAR

1-block course; Open to grades 9–12

This culminating, student-directed and project-based computer science course combines all skills learned in Computer Science I, II, and III. Students will use programming skills and the design thinking process to identify real-world problems and create innovative solutions. By the end of this course students will have practical experience in developing real-world applications throughout all phases of the design cycle, from ideation to presentation and iteration.

Prerequisite: Computer Science 3.

Meets the Design Thinking and Coding credit.

### APPLIED ARTIFICIAL INTELLIGENCE

1-block course; Open to grades 10-12

Applied Artificial Intelligence is a hands-on, project-based, Computer Science course that introduces students to the design and development of modern AI systems. Building on prior experience in Python programming and design thinking, students explore how intelligent tools are created, evaluated, and responsibly deployed. Through a series of iterative projects, students work with machine learning concepts, natural language processing, computer vision, and generative AI, using industry-relevant platforms within the Microsoft ecosystem.

Students apply human-centered design methods to identify

real problems, prototype AI-driven solutions, and analyze the technical and ethical considerations of their work.

Emphasis is placed on creativity, experimentation, collaboration, and the ability to communicate both the capabilities and limitations of AI systems. By the end of the course, students will have produced a portfolio of functional AI prototypes and a reflective understanding of AI's role in contemporary society.

Prerequisites: Computer Science I and Design Thinking Lab

### ENGINEERING FOR ROBOTICS

1-block course; Open to grades 9-12

This inquiry-based course will explore the Science, Technology, Engineering and pure Mathematics that undergirds the field of Robotics. Throughout this hands-on course, students will learn and experiment with electrical wiring, mechanical design and, programming to design and prototype working robots. Students will learn through videos, in-class demonstrations, and hands-on practice. Students will use the principles they learn in this course to solve and prototype solutions to real-world problems.

Prerequisites: None \*Special Note: This course satisfies the Design Thinking credit, but does NOT satisfy the Coding credit.

### PROGRAMMING FOR ROBOTICS

1-block course; Open to grades 9-12

Robotics immerses students in the incredible innovation around the world in robotics and artificial intelligence. Students will learn the fundamentals of computer programming through the lens of robotics to solve real-world problems. This project-based course uses a combination of videos, in-class demonstrations and hands-on trial and error. Students will learn and implement computational thinking, the engineering design process and effective problem solving by programming robots using VEX simulation software in Python.

Prerequisites: None \*Special Note: This course satisfies the Coding and Design Thinking credit.

### MACHINE LEARNING

1-block course; Open to grades 11-12

This one mod course is designed to introduce students to the fundamental concepts of machine learning, building off their foundation of Python knowledge. They will learn how to work with Big Data, make informed decisions, and make predictive, generative models. Students will gain

hands-on experience with Python libraries such as NumPy, Pandas, Matplotlib, Scikit-learn, and Tensorflow. Through applied projects, they will develop a strong foundation in data processing, feature engineering, model selection, and algorithmic evaluation techniques. Students will also discuss the impacts of machine learning in a social and cultural context.

Prerequisites: CS 2 co-requisites: AP Calc AB or BC

### WEB DEVELOPMENT

1-block course; Open to grades 9-12

This one mod, portfolio-based course is designed to introduce students to the principles of web development within the context of Python, HTML, and CSS. Over the mod, students will learn how to make dynamic and responsive websites, culminating in a final portfolio website that they will use to showcase examples of the web development skills they've learned. By the end of the mod, a successful student in this class will understand basic web design principles; know how to use HTML and CSS to create well-structured and visually appealing webpages; explore techniques for responsive design and improved accessibility in websites; and understand how to use APIs and development frameworks to automate elements of the development and deployment process.

Prerequisites: Computer Science 1.

### STATISTICS

1-3 block course; Open to grades 9-12

Some say that we live in the age of data. These statistics electives allow students to explore different ways to understand and communicate about the data all around us. Students will be able to explore some of their own interests through the study of statistics.

### STATISTICS: DATA AND DISPLAY

Students examine data on two fronts: how to analyze data using scatterplots and regression calculations, and how to display data to show relationships between variables. These displays will include dot plots, bar charts, stem and leaf diagrams, box plots and histograms. Students further learn when to use each of these displays optimally. This hands-on, project-based course will expose students to real uses of statistics and the role data plays in our fact-hungry culture. In addition to learning how to

use tables and display data, students will learn and apply standardization and the normal curve.

Prerequisites: Algebra II

### STATISTICS: PROBABILITY

This course centers on the rules and applications of probability. Students will explore many facets of probability from games of chance to simulation to applications in fields as diverse as the internet and medicine. In addition to learning probability rules, permutations and combinations, students will use Venn diagrams, two-way tables and tree diagrams. Students will learn about conditional probabilities and independence. This hands-on, project-based course will expose students to the real uses of probability.

Prerequisites: Algebra II

### DATA SCIENCE

This course is designed to introduce students to the growing discipline of Data Science. This class will extend the topics learned in Data Science and use digital tools to collect, present, and analyze data. This course uses a project-based approach using real-world data with a focus on practical applications and analysis. There will be a focus on finding and communicating meaning in data and thinking critically about arguments based on data.

Prerequisite: Statistics: Data & Display or Computer Science I

### ADVANCED STATISTICS

*3-block course; Open to grades 9-12*

This course introduces students to the major concepts about and tools for collecting and analyzing data. Particular focus on how statistics can be used to gain insight into relevant, real-world issues and be a tool to help solve problems in society.

The course begins with a thorough examination of descriptive statistics including graphical and numeric methods for describing data, and observational study vs. experimental design. The next topics include probability, random variables and probability distributions. The course then moves into inferential statistics, covering sampling distributions, confidence intervals and hypothesis testing for single samples and two populations or treatments. Finally, homogeneity, linear regression and inferences about correlation are examined.

Prerequisites: Extended Algebra II, or Precalculus, or department approval.

### APPLIED MATHEMATICS

1-3 block course; Open to grades 9-12

Mathematics is all around us, but where is it exactly? Students will explore the mathematics of different parts of our world. Students taking these courses will learn not only the process of how to “do” mathematics but will focus on the context of the problem and see the connection between the abstract world of mathematics and our own concrete world. Students may take each course as an elective or as three blocks to create the equivalent of a full-year math class.

### APPLIED MATHEMATICS: PERSONAL FINANCE

In this course students will look at the mathematics of personal finance including budgeting, mortgages and taxation. In learning the mathematics of personal finance students will explore mathematical concepts such as exponential functions, sequences and series, and statistics. NOTE: This class was previously called “Financial Mathematics” in the '21-'22 Academic Year.

Prerequisite: Algebra II

### APPLIED MATHEMATICS: FINANCIAL MATHEMATICS

Investing In this course students will look at the mathematics of personal finance including savings accounts, stocks, bonds, and other financial savings instruments. In learning the mathematics of personal finance students will explore mathematical concepts such as exponential functions, sequences and series, and statistics.

Prerequisite: Algebra II

### ROBOTICS

E-Block Activity 1-block course: Open to grades 9-12

Robo Escargot is Madeira's VEX V5 competitive team. Students who join the team will build both engineering and programming skills before primarily specializing in either the build or auton division. The build division specializes in designing, iterating, and building the physical robot body, while the auton division specializes in programming the robot to run self-directed on competition courses. In addition to weekly meetings, the team competes regularly in regional tournaments and competitions. Day and time: Tuesday 6:00-7:00 pm. Additional hours required for week-end build days and competition weeks.

Prerequisites: none. Meets the Design Thinking Requirement and Coding Credit. E block activities do not meet the D block activity requirements.

NOTE: Students on Varsity teams (Field Hockey, Volleyball, Tennis (fall and spring), Basketball, and Lacrosse) should not sign up for Chamber Orchestra or Madeira Chorus during that season, or Stagecraft, or any E block Activity (Global Youth Leadership or Robotics) as the time requirements overlap.



CONTINUES...

# SCIENCE DEPARTMENT

## GRADUATION REQUIREMENTS: 9 CREDITS OF LAB SCIENCES (BIOLOGY, PHYSICS, CHEMISTRY)

The Science Department believes that the study of science is vital to the development of intellectual curiosity and analytical thinking. Students learn to see science as a process as well as a body of knowledge about the natural world.

It is the philosophy of the Science Department that students benefit from exposure to each of the three sciences: biology, chemistry, and physics, which is reflected in the graduation requirement. These required courses must be taken on the Madeira campus. Summer courses may be used for enrichment and do not fulfill graduation requirements.

### BIOLOGY

3-block course; Open to grades 9 and 10

Biology at Madeira is a foundational course that introduces science skills that students will develop and use throughout high school. Both written and alternative assessments challenge students to critically apply content to real-world topics and examples. Laboratory exercises center around experimental design, graphing and data analysis, and the interpretation of results through the lens of meaning to the scientific community and the average citizen. Students participate fully in the process of experimentation with the goal of maximizing their development of hands-on laboratory skills and communicating their work through scientific writing. Students will study the process of science, ecology, biochemistry, cells, reproduction, genetics, protein synthesis, and evolution in this course. Prerequisites: None

### CHEMISTRY

3-block course; Open to grades 10, 11, and 12

This course is intended to familiarize students with the fundamental concepts of chemistry as a physical science and includes chemical investigation through experimentation. This course requires the student to work with abstract concepts and requires considerable mathematical problem-solving skill. Topics covered in this course include organization of the periodic table, development of atomic theory and atomic structure, chemical bonding, writing and naming chemical compounds, classifying, balancing, and predicting products for chemical reactions, calculations with chemical quantities, intermolecular forces, the behavior of solids, liquids, gases, and solutions, chemical kinetics, chemical equilibrium, acid-base chemistry, and electrochemistry.

Prerequisites: Biology and A- or Higher in Geometry or Applied Physics. Corequisites: Algebra II, or recommendation from the teacher.

### APPLIED CHEMISTRY

3-block course; Open to grades 11 and 12

Applied Chemistry includes one mod of Chemistry I plus two mods that expand on the foundation of chemistry concepts by connecting to real-world applications. The scientific, economic, and societal aspects of each topic will be investigated. Students will have the opportunity to explore their own areas of interest through research and presentations.



CONTINUES...

**Modules:****CHEMISTRY I: INTRODUCTION TO CHEMISTRY (REQUIRED FIRST BLOCK)**

Topics will include atomic structure, elements, the periodic table and trends, bonding, molecular structures, kinetic theory, phases of matter, equilibrium, and writing and balancing reactions.

**APPLIED CHEMISTRY: GLOBAL CHALLENGES**

This course focuses on the chemistry of major global challenges of the past, present, and future. Topics covered may include, introductory organic chemistry, pesticides, infectious diseases, food and nutrition, dyes, pharmaceuticals, and more. May also be taken as a 1 block elective during Senior year.

**APPLIED CHEMISTRY: MODERN MATERIALS**

This course focuses on the chemistry related to the development of significant modern materials and how they impacted world events. Topics covered may include introductory organic chemistry, dyes, textiles, pharmaceuticals, polymers, explosives, and more. May also be taken as a 1 block elective during Senior year.

**PHYSICS**

3-block course; Open to grades 11 and 12

The focus of Physics is to examine, explain, and analyze physical phenomena that occur in the world around us. New concepts are developed primarily through class discussion and laboratory work, and solving problems related to this material refines the understanding of these concepts. Students are expected to take responsibility for their own learning, both by working independently as well as with other students.

Prerequisites: Biology, Chemistry with a B- or higher. Corequisites: Extended Precalculus (or higher). If in Precalculus, permission required from Academic Dean and chair of the science department.

**APPLIED PHYSICS**

3-block course; Open to grades 10, 11, and 12

This project-based course is an introduction to the fundamental ideas of physics including applications to everyday experiences using concepts, mathematical calculations, and frequent hands-on applications. In their study of the physical universe, students will delve into many branches of physics, including matter and its motion, the nature of light, sound phenomena, electricity and magnetism. Mathematical calculations are used to enhance and describe ideas that are initially presented at a conceptual level. This course may be used to meet the Physics requirement for AP Biology but may not be used to meet the Physics requirement for AP Chemistry or AP Physics C.

Prerequisites: Biology. Corequisites: Geometry.

**Modules:****APPLIED PHYSICS 1: FORCES AND MOTION**

Topics include vectors, linear motion, projectiles, and Newton's Laws of Motion.

**APPLIED PHYSICS 2: ENERGY**

Topics may include the study of uniform circular motion, universal gravitation, electricity and magnetism, conservation of energy and conservation of momentum.

**APPLIED PHYSICS 3: SIMPLE HARMONIC MOTION AND WAVES**

Topics may include simple harmonic motion, springs and spring forces, mechanical waves, sound, standing waves, and geometric optics.

**MADE at  
MADEIRA**



CONTINUES...

### AP BIOLOGY

3-block course; Open to grades 11 and 12

AP Biology is a college-level, comprehensive study of biology for students with a background in basic biology and chemistry and a strong interest in biology. This course covers topics introduced in a standard Biology course with greater complexity and at a faster pace. Topics include biochemistry, cell structure and function, cellular energetics, cell cycle, genetics, evolution, and ecology. Skills practiced include textbook reading at the college level, collaboration, research, data analysis, statistical methods, and experimental design. Learning activities during class include lectures, class discussions, laboratory demonstrations, and laboratory investigations. There will be independent and group work and students are expected to take responsibility for their own learning. AP Biology students are prepared to take the AP Biology exam in May.

Prerequisites: B- (or higher in Biology) Applied Chemistry or Chemistry, Corequisite: Physics

### AP CHEMISTRY

3-block course; Open to grades 11 and 12

AP Chemistry is a college-level, comprehensive study of chemistry for students with advanced mathematical skills, a background in basic biology, chemistry, and physics, and a strong interest in chemistry. This course covers topics introduced in Chemistry with greater depth and sophistication and focuses on the more complex topics of thermodynamics, chemical kinetics, chemical equilibria, electrochemistry, and the behavior of matter at the molecular level. Lectures, class discussions, mathematical problem solving, demonstrations, and laboratory investigations are the primary methods of developing these and other topics. This course is taught like a college course and requires the students to take responsibility for their own learning. The course work includes abstract material, involves complex problem solving, and demands explanations of phenomena rather than simple statements of theories, trends, or observations. AP Chemistry students are prepared to take the AP Chemistry exam in May.

Prerequisites: Biology, A- (or higher) in Chemistry, B+ (or higher) in Physics. Corequisite: Physics

### AP PHYSICS C: MECHANICS

3-block course; Open to grades 11 and 12

Designed to prepare students for the AP Physics C exam, this is a calculus-based course in Mechanics. We will explore the concepts of kinematics, dynamics, energy, rotational motion, momentum and other applications of calculus to the physical world. New concepts will be developed through class, lab work, and experimental design. Students will work independently and in groups but are responsible for their own learning. AP Physics C students will be prepared to take the AP Physics C: Mechanics exam in May.

Prerequisites: Biology, Chemistry and Physics  
Corequisites: AP Calculus BC or AB.

## Environmental Science

1-block course; Open to grades 9–12

Environmental Science is an interdisciplinary field that examines how humans use resources and its impacts on the natural world. These courses incorporate concepts of biology, ecology, chemistry, physics, politics, sociology, economics, and ethics and utilize Madeira's amazing natural resources and extensive campus as an open-air laboratory.

### ENVIRONMENTAL SCIENCE: FIELD ECOLOGY

Students will learn about an important part of the environmental science process in this hands-on field class that utilizes Madeira's amazing forests as a case study. Students will regularly be outdoors (multiple times a week) in the field in order to complete a biodiversity and health assessment of Madeira's forest and adjacent waterways in this lab-based course. Students will learn the applicable field methods to study the tree, vertebrate, and macroinvertebrate communities to better understand the air and water quality as well as biodiversity of Madeira's forests. Students should be comfortable being outdoors in a variety of safe weather conditions, hiking on uneven terrain in the forest, and walking in stream water with the appropriate safety equipment provided. \*This course happens on a rotating basis with the other field course, Citizen Science.\*

Prerequisite: None

### ENVIRONMENTAL SCIENCE: CITIZEN SCIENCE

Students will learn the background, methodology, and laboratory and field skills needed to participate in ongoing citizen science projects with the result of contributing data to the scientific community in this lab-based course. Students should expect to be outside in the field multiple times per week. Students should be comfortable being outdoors in a variety of safe weather conditions, hiking on uneven terrain in the forest, and walking in stream water with the appropriate safety equipment provided. \*This course happens on a rotating basis with the other field course, Field Ecology.\*

Prerequisite: None

### ENVIRONMENTAL SCIENCE: CONTEMPORARY ISSUES

In this course, students will study the origins of the study of environmental science, and will touch on the history, science, and policy issues related to current environmental

issues. General topics could include human population growth, earth's resources, biodiversity, invasive species, pollution, overharvesting, land use and agriculture, and green technologies.

Prerequisite: None

## Forensic Science

1–2 block course; Open to grades 9–12

This course is designed to give students the opportunity to learn how scientific principles are applied to fields such as law enforcement and anthropology. From fingerprints to DNA, bite marks to shoe prints, and blood spatter to trace evidence, forensic science requires the knowledge of biology, geology, botany, chemistry, and physics. Using a multidisciplinary and hands-on approach, students will learn the fundamentals of forensic science and develop logical problem-solving skills through both case studies and laboratory experiments.

Prerequisites: None

### Modules:

#### FORENSICS: BIOLOGICAL EVIDENCE

Topics may include hair and DNA analysis, blood spatter patterns, bones and bite marks, and toxicology.

#### FORENSICS: PHYSICAL EVIDENCE

Topics may include crime scene analysis, police line-ups, types of evidence, microscopy, patterns & impressions of evidence, trace evidence, and handwriting analysis.

#### PROGRAMMING FOR ROBOTICS

1-block course; Open to grades 9–12

Robotics immerses students in the incredible innovation around the world in robotics and artificial intelligence. Students will learn the fundamentals of computer programming through the lens of robotics to solve real-world problems. This project-based course uses a combination of videos, in-class demonstrations and hands-on trial and error. Students will learn and implement computational thinking, the engineering design process and effective problem solving by programming robots using VEX simulation software in Python.

Prerequisites: None \*Special Note: This course satisfies the Coding and Design Thinking requirement.



### **KINESIOLOGY: FUNCTIONAL HUMAN MOVEMENT**

1-block course; Open to grades 10-12

This course will introduce students to the fundamentals of human movement. Students will be able to identify major skeletal structures along with related articulations (joints) and landmarks of that system. Students will also gain an understanding of the muscular system related to movement and be able to comprehend concepts such as origin/insertion, agonist/antagonist, and concentric/eccentric movements.

Prerequisites: Biology.

### **PSYCHOLOGY OF SPORT**

1-block course; Open to grades 10-12 in Mods 1-2; Open to grades 9-12 in Mods 6-7

This course is designed to engage students in critical thinking as it applies to the study of human behavior in sport. Students will explore factors related to success and skill development in human performance, basic principles of confidence, motivation, and goal setting, as well as the prominent theories related to happiness and positive mood and how they relate to human performance and exercise. This course will also reference and apply the theoretical and empirical research pertaining to the psychological structure of performance.

Prerequisites: Must be competing/practicing on a Junior Varsity or Varsity athletic team at Madeira.

### **MARINE ECOLOGY**

1-block course; Open to grades 10-12

Students examine what makes the marine habitat unique, and how living things meet the challenge of this wet, salty environment through specialized adaptations. They will touch on taxonomy of life in the oceans and will explore the varying ecological habitats it holds. A corresponding field trip to the Chincoteague Bay Field Station may occur around the time of this course- Marine Ecology students are encouraged to register. \*This course happens on a rotating basis with the other marine science course, Marine Environmental Issues.\* Prerequisite: Biology

Prerequisite: Biology

### **MARINE ENVIRONMENTAL ISSUES**

1-block course; Open to grades 9-12

Students investigate the current environmental issues that plague the marine habitat and its biodiversity in this project-based course. Students will also learn how humans benefit daily from ecosystem services provided by the marine habitat and how the oceans are uniquely poised to provide possibilities for tackling many of the world's largest environmental issues. A corresponding field trip to the Chincoteague Bay Field Station may occur around the time of this course- Marine Environmental Issues students are encouraged to register. \*This course happens on a rotating basis with the other marine science course, Marine Ecology.\*

### **BIOORGANIC CHEMISTRY**

1-block course; Open to grades 11-12

In this laboratory-based course, students will learn foundational organic chemistry including bond-line drawings, functional groups, and reaction mechanisms. Building on this knowledge, students will explore the structural, chemical, and functional properties of the major types of biomolecules, such as carbohydrates, proteins, nucleic acids, and lipids. As time allows, students may examine the mechanisms of major cellular processes, how drugs affect the body, and environmental implications of common organic molecules.

Prerequisite: Biology and Chemistry

### NATIONAL OCEAN SCIENCES BOWL

E-Block; Open to grades 9-12; Wednesday Evenings from 6:30 – 7:30 pm. Mods 1-7

This activity allows students to engage with marine science topics in a student-driven format where they can learn about marine science topics including marine biology, geology, ecology, chemistry, physical oceanography, conservation, current events, and policy. Students participate in marine science hands-on activities, labs, projects/papers, and developing lessons. If they choose, students can also study to sit the placement test for Madeira's National Ocean Sciences Bowl Competition Team which competes at the regional Chesapeake Bay Bowl competition. Students do not need to have any prior experience or coursework, only a curiosity for the ocean, a passion for engaging in their learning, and the courage to think outside the box.

NOTE: Students on Varsity teams (Field Hockey, Volleyball, Tennis (fall and spring), Basketball, and Lacrosse) should not sign up for Chamber Orchestra or Madeira Chorus during that season, or Stagecraft, or any E block Activity (Global Youth Leadership or Robotics) as the time requirements overlap.

### EQUINE SCIENCE

1-block course; Open to grades 10-12

This class is designed for students seeking a deeper understanding of equine anatomy, physiology, first aid, nutrition, and biomechanics. It is suitable for students looking to expand their general knowledge of horses as well as those considering future pre-veterinary studies. Students will engage in both classroom learning and hands-on activities with horses. No previous equine experience is required for this class. Course is limited to 12 students.

Prerequisite: Biology

### EQUINE BEHAVIOR AND TRAINING

1 block course; Open to grades 10-12

This class explores the biological and psychological foundations of the horse to better understand how they perceive and interact with the world. Students will begin by examining equine evolution and sensory systems—including vision, hearing, and proprioception—before diving into natural behaviors such as flight instincts and social hierarchies. A significant focus is placed on the science of equine training, utilizing learning theories such as operant conditioning, habit-

uation, and reinforcement strategies. By the end of the term, students will have developed a science-based framework for understanding equine behavior and applying effective training principles. Course is limited to 12 students.

Prerequisite: D-Block Riding Activity or Intro to Horsemanship or Equine Science

# WORLD LANGUAGES DEPARTMENT

## GRADUATION REQUIREMENTS: 9 CREDITS

The World Languages faculty aims to develop the essential qualities of a global citizen: an inquiring mind, a broad-minded attitude toward other cultures, and an interest in the world. We strive to align student learning to the ACTFL (American Council on the Teaching of Foreign Languages) Proficiency and World Readiness standards. Nine blocks of world languages are required, and the Department strongly encourages students to take a language all four years and supports students who want to study more than one world language. The Academic Dean and Chair of the Language Department manage the course placement process to ensure students enroll in the right course to support their growth as a language learner.

**LANGUAGE PLACEMENT: New students take placement tests to determine enrollment in the appropriate language course. The Chair of the Language Department and the Academic Dean make all course placements.**

## French

### FRENCH I

3-block course; Open to grades 9–12

The course is designed for students who have not studied French or have acquired very limited basic knowledge of French. It focuses on the acquisition of basic grammatical structures and vocabulary in culturally authentic contexts through speaking, reading, writing, and listening comprehension. The students will explore the cultures and traditions in the French-speaking world. After the completion of the course, students will be able to describe people and things, talk about past times, weekend activities and sports, express possession, narrate in the present and make plans. This course is conducted mostly in French with limited usage of English.

Prerequisite: No previous acquisition of French or by placement process

### FRENCH II

3-block course; Open to grades 9–12

Students build vocabulary and grammar skills from Level I. Most verb tenses and moods are covered such as passé composé, imperfect, present conditional, and future simple.

At the end, students will be able to describe health and medical conditions, talk about jobs and daily life, express their beliefs and opinions about technology, narrate past experiences, and consider future plans.

Prerequisite: Returning students—French I. New students—by placement test

### FRENCH III

3-block course; Open to grades 9–12

This course further develops students' communication and literacy skills. Students enhance their language proficiency improving their cultural competency and develop their analytical writing using a variety of authentic texts (articles, interviews, literary texts and video). Students are immersed in the target language through conversations about current events and discussions in which they offer opinions and exchange ideas. Through an interdisciplinary approach, students learn about the life, people and history of Franco-phone countries, while building cultural awareness.

Prerequisite: Returning students—French II; New students—by placement test

### ADVANCED TOPICS IN FRENCH: THEATRE AND CINEMA

3-block course; Open to grades 9-12

This course consists of two parts. The first part (2 modules) introduces students to the history of western theatre and classic French plays. Selected classic and contemporary texts will be used in the class to help students gain a basic understanding of the historical evolution of French and Francophone theatre. Students will create a glossary of both technical and literary terms to utilize when analyzing the works of great playwrights. The second part of the course (1 module) focuses on the conversations between French cinema and American cinema. Students will gain knowledge of the origin of the cinematographic art, the impact of Hollywood film noir on France's film productions, and the French New Wave Movement.

Prerequisites: Returning students—French III;  
New students—by placement test

### AP FRENCH LANGUAGE & CULTURE

3-block course; Open to grades 11 and 12

This course follows the guidelines of the College Board AP French Language and Culture course and provides opportunities for students to build their proficiency in the modes of communication from the Intermediate to the Advanced range according to ACTFL standards. The three modes of communication (Interpretive, Interpersonal, and Presentational) defined in the Standards for Foreign Language Learning in the 21st Century are foundational to the AP French Language and Culture course.

The AP French Language and Culture course takes an interdisciplinary approach to language proficiency. The course engages students in an exploration of culture, socio-economy, and politics, in both contemporary and historical contexts. When communicating, students in the AP French Language and Culture course demonstrate an understanding of the cultures, make comparisons between the native language and the target language and between cultures, and use the target language in real-life settings. Students study the six Curricular Themes: Families and

Communities, Personal and Public Identities, Contemporary Life, Beauty and Aesthetics, Global Challenges and Science and Technology. Students are prepared to sit for the AP French Language and Culture exam in May.

Prerequisites: Returning students—French III with an A or Advanced Topics with an A, and department approval;

New students—by placement test and departmental approval



## Latin

### LATIN I

3-block course; Open to grades 9–12

Latin I introduces students to the fundamentals of Latin grammar and vocabulary through the reading-based approach of the Cambridge Latin Course. Students learn to translate Latin through stories that follow a Roman family from Pompeii to Roman Britain and Alexandria while illustrating important aspects of Roman history, culture and daily life. Students explore the language and culture of the Roman Empire through projects and examine the relationship between Latin and English including English words derived from Latin and Latin phrases and abbreviations that we use to this day.

Prerequisite: None

### LATIN II

3-block course; Open to grades 9–12

Latin II continues to develop students' ability to read texts in the context of the culture and society of ancient Rome with the goal of reading extended, authentic Latin texts. Readings and projects expand students' knowledge of Roman culture and history with a focus on the Roman military, Roman philosophy and the ins and outs of life in Rome.

Prerequisite: Returning students—Latin I;  
New students—by placement test

### LATIN III

3-block course; Open to grades 9–12

Latin III reinforces the previous work students have done and introduces them to the translation and interpretation of authentic Latin texts. Students become familiar with a variety of styles and genres as they read and analyze representative samples of the most famous Latin authors and study the works in their cultural context. Readings include excerpts from Pliny's Letters, the epigrams of Martial, the poems of Horace and Catullus, Ovid's *Metamorphoses*, Vergil's *Aeneid*, and Tacitus's Annals.

Prerequisite: Returning students—Latin II;  
New students—by placement test

### ADVANCED TOPICS IN LATIN: WOMEN IN ANCIENT ROME

3-block course; Open to grades 9–12

This class examines ancient Roman portrayals of women, both fictional and historical, and how history and literature reflect and shape society. We will focus on Vergil's portrayal of Dido in books 1 and 4 of the Aeneid, Catullus's portrayal of his love interest, Lesbia, and Cicero's oratorical denunciation of Clodia (who may be the same person!), and finally the most important historical and literary sources for Cleopatra, the last Ptolemaic ruler of Egypt, lover of Julius Caesar and Marc Antony, and enemy of Octavian, would become the first emperor of Rome. This interdisciplinary approach will introduce students to a wide range of Latin texts, both prose and poetry. We will discuss ancient misogyny, the lack of female voices in ancient Rome, and how the upper-class Roman male perspectives infuse almost everything we read.

Prerequisite: Returning students—Latin III or AP Latin  
New students—by placement test and departmental approval

### AP LATIN

3-block course; Open to grades 11–12

Students read selections of Vergil's Aeneid and selected letters of Pliny the Younger, along with supplementary readings in Latin literature and history. They develop their ability to comprehend, translate, and analyze authentic Latin texts, to place them in the context of Augustan Rome and the Roman Empire and Latin literature more broadly, to interpret these works in terms of epic poetry and the epistolary genre, and to develop persuasive arguments about key, recurring themes in the texts. Projects and presentations allow students to delve more deeply into the works and understand them from different perspectives. This course is designed to prepare students to demonstrate their understanding and skills successfully on the AP Latin exam.

Prerequisites: Advanced Topics in Latin students with an A-; Seniors with an A in Latin III and departmental approval

**ETYMOLOGY: CLASSICAL MYTHOLOGY**

1-block course; Open to grades 9–12

Both the language we speak and the stories we tell reflect the influence of ancient Greece and Rome. This course explores the roots of Greek and Latin in English as well as the roots of ancient myth in modern narratives. Students engage with the most famous versions of the myths in antiquity and explore how adapted versions of the myths reflect the interests and concerns of the societies that adapt them. We discuss excerpts of poems, novels, and films and focus on mythical depictions in ancient and modern paintings, which students learn to decipher for their mythological content. Topics include Greek and Roman gods, constellations, the Greek alphabet, story structure and genre, the history of the English language, and important concepts in historical linguistics.

Prerequisite: None

**ANCIENT MEDICINE AND MEDICAL TERMINOLOGY**

1-block course; Open to grades 9–12

The origins of western medicine intersect with the history of scientific thought and the culture and society of ancient Greece, Egypt, and Rome; the language of modern medicine reflects its roots in the Greek and Roman worlds. Through an examination of the development of Hippocratic medicine from its religious roots, Alexandrian anatomical developments, Roman Medicine, and the contributions of Galen, students learn about medicine as it was practiced in the ancient world. They trace subsequent developments to investigate the factors that encouraged progress and those that stood in its way.

Students simultaneously develop a working knowledge of basic medical terminology.

Prerequisite: None

**Spanish****SPANISH I**

3-block course; Open to grades 9–12

This course introduces students to some basic communicative functions in speaking, reading, writing, and listening. Students learn vocabulary and structures of the Spanish language in culturally authentic contexts while exploring traditions and cultures in the Spanish-speaking world. At the end of this course, students will be able to describe people and things, to talk about hobbies, weekend activities and sports, to express possession, to narrate in the present and to make plans.

Prerequisite: No previous acquisition of Spanish or by placement process

**SPANISH II**

3-block course; Open to grades 9–12

This course reinforces and expands the student's knowledge of the basic communicative functions, vocabulary and structures learned in Spanish I. Students continue to develop their linguistic skills (listening, reading, speaking and writing) using authentic materials and discuss cultural aspects of Spanish-speaking countries. Students will learn and apply the preterit and imperfect tenses, formal and informal commands, and the future tense. At the end of this course, students will be able to narrate past experiences, give instructions in a variety of contexts, and talk about the future.

Prerequisite: Returning students—Spanish I  
New students—by placement test

**SPANISH III**

3-block course; Open to grades 9–12

This course further develops the communication and literacy skills introduced in the first two years of our Spanish program. Through a variety of authentic texts (articles, interviews, literary texts and video) students enhance their language proficiency while improving their cultural competency. Through an interdisciplinary approach, students explore the life, people and traditions of Spanish-speaking countries to strengthen their awareness of Latin American communities. Students will learn the subjunctive mood and review present and past indicative tenses in order to communicate recommendations, opinions, and narrate present, past, and future action.

Prerequisite: Returning students—Spanish II; New students—by placement test and departmental approval.

**ADVANCED TOPICS IN SPANISH: LITERATURE AND ARTS**

3-block course; Open to grades 9–12

This advanced course takes a fresh approach to the Spanish language. Through the study of Spanish and Latin American literature and the arts, students will learn about identities, practices and perspectives in the Spanish speaking world history, music and art. The course will incorporate literary texts of notable Spanish and Latin American authors, along with a study of music, key works of art and architectural sites. Developing critical thinking and written textual analysis at an advanced level will underscore the course content. Students are expected to speak solely in the target language.

Prerequisite: Returning students—Spanish III; New students—by placement test and departmental approval

**AP SPANISH LANGUAGE AND CULTURE**

3-block course; Open to grades 11 and 12

This course follows the guidelines of the College Board AP Spanish Language and Culture course and provides opportunities for students to build their proficiency in the modes of communication from the Intermediate to the Advanced range according to ACTFL standards. The three modes of communication (Interpretive, Interpersonal, and Presentational) defined in the Standards for Foreign Language Learning in the 21st Century are foundational to the AP Spanish Language and Culture course. The AP Spanish Language and Culture course is conducted exclusively in Spanish. When communicating, students in the AP Spanish Language and Culture course demonstrate an understanding of the target cultures, incorporate interdisciplinary topics, make comparisons between their communities and Spanish-speaking communities, and use Spanish in real-life contexts. Students study the six Curricular Themes: Families and Communities, Personal and Public Identities, Contemporary Life, Beauty and Aesthetics, Global Challenges and Science and Technology. Students are prepared to sit for the AP Spanish Language and Culture exam in May.

Prerequisites: Advanced Topics in Spanish, Spanish III with an A and department approval. New students - by placement test and departmental approval. This course prepares students to take the AP Spanish Language & Culture exam in May.



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### ADVANCED SPANISH ELECTIVE EXPLORING “EL MESTIZAJE” THROUGH HISTORY, GASTRONOMY

1-block course

In this one-module course, students will explore the “mestizaje” in Latin American communities, with a focus on the gastronomy of Spanish speaking countries, exploring the historical and geographical influences of colonization and twentieth century social movements and activism. Essential questions will guide our exploration: How has the mestizaje of the colonial era through independence defined and created 21st century Hispanic American communities? How does a community define and evolve its values and identify through food, history, and culture, particularly Afro-Latino and indigenous communities in the Americas?

The course will be taught entirely in Spanish

Prerequisites: Completion of AP Spanish Language and Culture; or completion of Advanced Topics in Spanish

## Arabic

### INTRODUCTION TO ARABIC

1-Block course; Open to grades 10, 11, 12

Introduction to Arabic is a five-week World Language elective that introduces students to both the Arabic language and the diverse cultures of the Arab world. The course is designed for students who are interested in languages, history, and global studies.

Students will begin by learning the Arabic alphabet and how to read and write basic vocabulary for daily use. They will also practice simple conversational tasks and pronunciation. The course focuses on Modern Standard Arabic, the form of the language used in books, formal writing, and the news across the Arab world. Students will also learn that everyday spoken Arabic differs by region, and they will explore how and why these varieties exist.

In addition to language acquisition, students will learn about the Arab world as a region, including North Africa, the Levant (Eastern Mediterranean), and the Gulf states. Topics will include cultural traditions, geography, and an introductory look at political systems and relations between countries. Cultural content is taught in English.

The course uses Alif Baa, an introductory Arabic textbook used at many English-speaking universities, along with short videos and digital materials from major international

news and education sources.

By the end of the course, students will be able to:

- Recognize, pronounce, and write the Arabic alphabet
- Read and pronounce basic words and phrases for daily use in Arabic-speaking contexts.
- Understand the difference between Modern Standard Arabic and spoken Arabic
- Identify major regions of the Arab world and describe their key cultural and social features.

Prerequisites:

This course is open to students who have completed one year of language study at Madeira. The course is intended for students who are prepared for a fast-paced and rewarding academic experience.

## D BLOCKS

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### D BLOCK REQUIREMENT STARTING IN '26-'27

- 9th and 10th grade—3 seasons yearly, at least two of which must be team experiences.
- 11th and 12th grade—if Co-Curriculum internship is during the school year, no D block requirement during the season in which the internship falls (with an occasional exception for students who want to continue riding and dance – see Ms. Mahoney for details).

Of the remaining 2 seasons required, at least 1 must be movement related. If Co-Curriculum internship is not during the academic year, 3 seasons yearly, at least two of which must be team experiences. Movement D blocks include a D block where the student is physically participating in an endurance based non-stationary activity.

- E Block classes do not meet the D Block activities graduation requirement.

### D BLOCK PHILOSOPHY

At The Madeira School, we believe that D block, which is the experiential wing of the academic curriculum, allows students:

- to develop a passion outside the academic realm
- to explore or deeply dive
- to be part of something larger than themselves
- to hone, practice and apply leadership skills
- to create their own path
- to build healthy habits to last a lifetime

\*Note other D blocks listed in the Athletics section

## Fall Season

### DANCE

Fall, Winter, & Spring seasons; Open to grades 9–12

Genres studied: Modern, hip hop, ballet, lyrical, jazz, and contemporary. 2 masterclasses offered each season in an even broader range of genre. During the first week evaluation classes will take place to assess which level the dancer will participate in. Prerequisites: No prior dance experience required. \*Madeira Dance Company (formally Select) requires an audition which takes place at the end of the Spring Season of the previous year for all returning students. For 11th and 12th graders, if you are a Madeira Dancer, you must attend D block during the season you are on Co-Curriculum (though not the mod in which you have your internship, unless your hours allow). All Madeira Dance Company members must be enrolled in at least 2 seasons of dance.

### NATURE HIKES

Fall and Spring season; Open to grades 9-12

This activity takes advantage of our idyllic setting on the edge of the Potomac River. Students will explore a variety of trails on campus through the forest and down by Black Pond. There will be periodic trips to nearby parks including Scotts Run and Riverbend Park. Students will increase their knowledge about the natural species on our campus and beyond.

### STUDENT PUBLICATIONS

Fall, Winter, & Spring seasons; Open to grades 9-12

Student Publications offers authentic experience in traditional and emerging media. We aim to advance core communication skills, student leadership, and awareness of the important role journalism and creative writing play in a community. Students may enroll in fall, winter, and/or spring seasons, during which time they will coordinate with

Publications faculty to choose one of the following tracks:

### THE SPECTATOR - MADEIRA'S SCHOOL NEWSPAPER

Students will learn core principles of journalism including accuracy, accountability, fairness verification, and independence. Along the way, students will acquire practical skills in interviewing, reporting, and composing a variety of story types (such as news, feature, and editorial). Students can also expect to practice photography and arranging layouts using publishing programs like InDesign. Throughout each season, Spectator students will also explore case studies to build awareness of journalistic ethics. This is a hands-on educational experience where students learn to work as a newsroom team.

Prerequisites: None

### GATE - MADEIRA'S STUDENT JOURNAL OF LITERATURE AND THE ARTS

Students will acquire practical skills in design and layout (using programs like InDesign) and in learning the editorial process. They will also exercise their creativity in organizing Gate contributions according to theme, genre, concept, and/or style—in addition to serving as contributors themselves, should they wish. Gate staff will gain technical know-how and learn about the philosophical and ethical issues of publishing like censorship, anonymity, and managing the relationship between authors and editors. Students will also be responsible for marketing and outreach, and for identifying innovative ways of showcasing the publication such as podcasting, performance, and online publishing.

Prerequisites: None

### PLAY

Fall season Open to grades 9, 10, 11, and 12

The fall play offers students of various skill levels and experience the opportunity to participate in a fully-staged play as an actor or part of the stage management team.

Prerequisite: Auditions are held during student orientation for actors. Students interested in stage management and assistant directing must seek prior approval from the Arts Department.

### YEARBOOK

Fall & Winter seasons; Open to grades 9–12

Yearbook exposes students to the variety of skills necessary for producing quality school publications. Participants are introduced to a variety of visual arts, including digital photography, the use of photo editors, and principles of layout design. In addition, students learn the basics of copywriting and journalism, including conducting interviews, and writing news stories, reviews and features. This is a hands-on educational experience, where students learn by doing. Students are given the responsibility of producing their own pages in the yearbook.

Prerequisite: None

## Winter Season

### DANCE

Genres studied: Modern, hip hop, ballet, lyrical, jazz, and contemporary. 2 masterclasses offered each season in an even broader range of genre. During the first week evaluation classes will take place to assess which level the dancer will participate in.

Prerequisites: No prior dance experience required. Madeira Dance Company (formally Select) requires an audition which takes place at the end of the Spring Season of the previous year for all returning students. For 11th and 12th graders, if you are a Madeira Dancer, you must attend D block during the season you are on Co-Curriculum. All Madeira Dance Company members must be enrolled in at least 2 seasons of dance.

### SCIENCE OLYMPIAD

Winter Season Open to grades 9-12

Science Olympiad is a rigorous, team-based course designed to develop students' problem-solving, critical thinking, and collaborative skills through hands-on scientific inquiry and engineering design. Students prepare for regional competitions by mastering content across biology, chemistry, physics, earth science, and engineering while applying concepts in labs, builds, data analysis, and timed events. The course emphasizes scientific reasoning, experimental design, technical communication, and strategic teamwork, with students learning how to research independently, manage time under pressure, and iterate on designs based on evidence.

The course will aim to compete in the Regional Science Olympiad Competitions. Prerequisite: None.

### MODEL UNITED NATIONS

Winter season Open to grades 9, 10, 11, and 12

During their participation, Madeira students learn the basics of United Nations parliamentary procedure, how to write position and background papers, and how to advance committee agendas during active conference sessions. Madeira students may elect—as part of the Model UN experience—to participate in a high-school conference for Model United Nations. We will participate in AMERIMUNC at American University in 2026-27.

Prerequisite: None

Special note: For students who elect to participate in outside conferences, there are additional fees not covered by Madeira.

### MUSICAL

Winter season; Open to grades 9–12

The winter musical is for students of all levels of skill and experience in musical theatre and stage managing. Students work as a collaborative ensemble with theatre professionals to rehearse and perform a musical theatre production.

Prerequisite: Audition required for actors.

Students interested in stage management and assistant directing must seek prior approval from the Arts Department.

### YEARBOOK

Fall & Winter seasons; Open to grades 9–12

Yearbook exposes students to the variety of skills necessary for producing quality school publications. Participants are introduced to a variety of visual arts, including digital photography, the use of photo editors, and principles of layout design. In addition, students learn the basics of copywriting and journalism, including conducting interviews, and writing news stories, reviews and features. This is a hands-on educational experience, where students learn by doing. Students are given the responsibility of producing their own pages in the yearbook.

Prerequisite: None

## Spring Season

### DANCE

Fall, Winter, & Spring seasons; Open to grades 9–12

Genres studied: Modern, hip hop, ballet, lyrical, jazz, and contemporary. 2 masterclasses offered each season in an even broader range of genre. During the first week evaluation classes will take place to assess which level the dancer will participate in.

Prerequisites: No prior dance experience required. Madeira Dance Company (formally Select) requires an audition which takes place at the end of the Spring Season of the previous year for all returning students. For 11th and 12th graders, if you are a Madeira Dancer, you must attend D block during the season you are on Co-Curriculum. All Madeira Dance Company members must be enrolled in at least 2 seasons of dance.

### NATURE HIKES

Fall and Spring season; Open to grades 9–12

This activity takes advantage of our idyllic setting on the edge of the Potomac River. Students will explore a variety of trails on campus through the forest and down by Black Pond. There will be periodic trips to nearby parks including Scotts Run and Riverbend Park. Students will increase their knowledge about the natural species on our campus and beyond.

## Student Publications

### STUDENT PUBLICATIONS

*Fall, Winter, & Spring seasons; Open to grades 9-12*

Students learn and apply techniques of layout, design and desktop publishing. This is a hands-on educational experience, where students learn by doing.

Student Publications offers authentic experience in traditional and emerging media. We aim to advance core communication skills, student leadership, and awareness of the important role journalism and creative writing play in a community. Students may enroll in fall, winter, and/or spring seasons, during which time they will coordinate with Publications faculty to choose one of the following tracks:

### THE SPECTATOR - MADEIRA'S SCHOOL NEWSPAPER

Students will learn core principles of journalism including accuracy, accountability, fairness, and independence. Along the way, students will acquire practical skills in interviewing, reporting, and composing a variety of story types (such as news, feature, and editorial). Students can also expect to practice photography and arranging layouts using publishing programs like InDesign. Throughout each season, Spectator students will also explore case studies to build awareness of journalistic ethics. This is a hands-on educational experience where students learn to work as a newsroom team. Prerequisite: None.

### GATE - MADEIRA'S STUDENT JOURNAL OF LITERATURE AND THE ARTS

Students will acquire practical skills in design and layout (using programs like InDesign) and in learning the editorial process. They will also exercise their creativity in organizing Gate contributions according to theme, genre, concept, and/or style—in addition to serving as contributors themselves, should they wish. Gate staff will gain technical know-how and learn about the philosophical and ethical issues of publishing like censorship, anonymity, and managing the relationship between authors and editors. Students will also be responsible for marketing and outreach, and for identifying innovative ways of showcasing the publication such as podcasting, performance, and online publishing.

Prerequisite: None

### THEATER SHOWCASE

Spring seasons; Open to grades 9-12

Theatre Showcase is open to all levels of experience. This D block is a unique opportunity for students to participate

in a performance-based class without the pressure of auditions. The Theater Showcase gives students the chance to explore a variety of theatrical styles and develop their performance skills and technique. Topics covered include improvisation, physical theatre, scene study, stage combat and audition technique.

Prerequisite: None.

### OPEN ART STUDIO

Spring Season: Open to grades 9-12

Open Art Studio is an experience that allows students to explore a variety of media including drawing, painting, ceramics, sculpture, digital drawing, and more. Students will learn new techniques through workshops in different mediums and complete multiple larger projects. This D block is ideal for the student looking to further their visual art practice or just explore new techniques.

Prerequisite: None.

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## ATHLETICS DEPARTMENT

Physical fitness, whether achieved through team sports or fitness classes, is part of the total educational experience at Madeira. Madeira's athletic and fitness program has something for everyone: competitive interscholastic varsity teams, developmental interscholastic junior varsity teams, and instructional fitness classes.

### ATHLETIC STUDENT ASSISTANT

Fall, Winter, & Spring seasons;  
Open to grades 10–12

Athletic Team Student Assistant (SA) report to the designated sport specific practice location Monday–Friday for the duration of practice (potentially Saturday for ISL Play Days and Invitationals). SA will assist their team/coaching staff with the following tasks: taking attendance, game and event support, updating social media and filming competitions.

SA must complete all scheduled team workouts each week.

Maximum of 3 students for Varsity

Maximum of 2 students for JV

### ATHLETIC TEAM SPORTS INFORMATION ASSISTANT

To receive D-block credit the Athletic Team Sports Information Assistants (SIA) reports to the SAthletic Director or Associate Athletic Director Monday–Friday for the duration of practice (potentially Saturday for ISL Play Days and Invitationals). SIA will assist the athletic department with the following tasks: creating social media content, creating pre and post-game graphics, running in-game livestream, updating social media and filming competitions, and posting game results. SIA must complete at least 2–3 Breakaway workouts each week.

Maximum of 3–4 students per season

### ATHLETIC TRAINING STUDENT ASSISTANT

The Athletic Training Student Assistant (ATSA) works with the Madeira Athletic Trainer daily with an expectation to observe and participate in duties connected with injury management. ATSA will learn basic anatomy and common mechanisms of injury. At the completion of each season, students are expected to demonstrate specific competencies based on areas of focus. This position is for students with an expressed interest in a sports medicine related field.

Maximum of 1 student per season



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## Fitness-Related Activities

Fall, Winter, & Spring seasons; Open to grades 9–12

### ADVANCED WEIGHT TRAINING (TEAM CREDIT)

Advanced Weight Training builds upon foundational strength principles to help students reach their peak athletic potential. This course embodies our athletic philosophy: developing strong women who succeed in life. Strength builds confidence — both in the gym and beyond.

Students will participate in a structured, coach-led program using barbells, dumbbells, kettlebells, and medicine balls. Training sessions emphasize advanced lifting techniques, individualized goal setting, and safe, progressive overload. Students will learn to apply principles of strength, mobility, and recovery while developing the mental toughness and consistency that drive long-term success.

Because this course emphasizes teamwork and accountability, it is considered a team activity. Each class functions as a training group that encourages, challenges, and celebrates one another.

The semester will conclude with a Performance Challenge, where students demonstrate measurable strength and conditioning progress through individual and team events. This challenge serves as both a benchmark of growth and a celebration of the confidence that comes from disciplined, consistent effort.

Roster Minimum: 4, Roster Maximum: 12

### INTRO TO FITNESS & STRENGTH TRAINING

Intro to Fitness & Strength Training introduces students to the fundamentals of physical fitness through circuit, weight, and cardio training. This is a self-led training course designed to help students build confidence and independence in the fitness environment. Each participant will perform a daily warm-up routine, 30 minute aerobic and/or strength training routine, and a cool-down/stretching routine.

Through consistent participation, students will experience the many physical and emotional benefits of exercise. Aerobic training of 30 minutes or more daily improves psychosocial and cognitive function in adolescents.

### PILATES

Mat-based Pilates class focuses on strength, stability, pos-

ture, proper breath control, and flexibility.

Each class will work to balance all muscle groups' strength and flexibility, with an emphasis on challenging the core muscles with each movement. Classes will be taught using slow, controlled movements.

Roster Minimum: 6, Roster Maximum: 14

### YOGA

A mat-based exercise class that uses a system of physical postures, breathing techniques, and meditation derived from Yoga to promote physical and emotional well-being.

Roster Minimum: 6, Roster Maximum: 14

## Interscholastic Team Sports

Fall, Winter, & Spring seasons; Open to grades 9–12

Madeira competes locally within the Independent School League (ISL) and regionally against other Independent and Public Schools. Students are expected to attend all games and practices, including weekend events to receive credit. Practice times are typically Monday, Tuesday, Wednesday, Thursday, and Friday from 3:00–4:30 pm for junior varsity teams and 4:00–6:00 pm for varsity teams, but are subject to change. Tryouts are open to the entire student body for each sport.

### FALL SEASON

- Cross Country
- Riding
- Varsity and JV Field hockey
- Varsity and JV soccer
- Varsity and JV volleyball
- Varsity and JV tennis

### WINTER SEASON

- Riding
- Varsity and JV basketball
- Varsity Rock Climbing
- Varsity Swimming and Diving

### SPRING SEASON

- Riding
- Varsity and JV Lacrosse

- Varsity Softball
- Varsity Tennis
- Varsity Track and Field

### RIDING

Fall, Winter, & Spring seasons;  
Open to grades 9–12  
Meets Teams requirement

Based on the American Forward Riding System, the program goal is to develop confidence, riding skill, and knowledge of horse care. Supportive instruction is offered to students of all experience levels including those new to the sport. A robust calendar of competitions (including IEA, USEF and schooling shows), clinics and other activities are offered year-round.

- Students are scheduled for two lessons per week between the hours of 3:00 and 6:00.
- Students are required to provide their own helmet, boots and riding pants.
- There is an extra fee charged for the program.
- Students may enroll in riding during their Co-Curriculum placement but must attend riding lessons during their placement and meet all other attendance requirements.
- Typically, the school's horses have the capacity to safely carry up to 185 pounds.
- Boarding for student's horse is available. Applications are due May 1st. Please contact [imccartney@madeira.org](mailto:imccartney@madeira.org) for more information.
- For 11th and 12th graders, if you are a rider and horse owner, you must attend D block during the season you are on Co-Curriculum.

Riding has a maximum capacity of 35 riders per season

### SELF-DEFENSE/KARATE

Winter season; Open to grades 9–12

While learning the skills necessary for self-protection, students will experience the benefits of increased physical fitness, better mental focus, enhanced self-confidence, and a more placid state of mind. They learn karate techniques utilizing the upper and lower body and learn to strike vital areas with elbows, knees, hands, and feet. Students will also learn how to fall and how to throw others in self-defense situations. The traditions of bowing, wearing the karate uniform (gi), and using special terminology will be practiced in the school (dojo) to create an atmosphere that

promotes safety and respect for oneself, for one's classmates, and for the teacher (sensei).

## Skill-Development Activities

Fall, Winter, & Spring seasons  
(various depending on activity);  
Open to grades 9–12

### SWIMMING FOR CONDITIONING

Fall season, open to grades 9–12

Is geared towards students that are advanced level swimmers or have completed one year on the varsity swim team. This course will cover the four main competitive strokes, turns, and will contain a rigorous workout. This activity requires a student to be able to be in the pool each day (Mon–Fri) of the season.

Roster Minimum: 6, Roster Maximum: 20

### MAD AQUATICS

Spring season, open to grades 9–12

This course is geared toward Varsity level swimmers. This course will be similar in training to our varsity season. This activity requires a student to be able to be in the pool each day (Mon–Fri) of the season and participate in 2–3 weekend competitions in the spring.

Roster Minimum: 4, Roster Maximum: 12

### TENNIS 101

Spring Season (various depending on activity); Open to grades 9–12

This course introduces and develops the basic skill required to play tennis including the serve, forehand, backhand, volley, overhead and other specialty shots. Students will learn proper tennis etiquette, tennis specific warmup exercises, tennis match scoring, match warm up routines, and basic game strategies designed for recreational tennis match play. Players are required to supply their own racquets and shoes appropriate for tennis courts.

Roster Minimum: 4, Roster Maximum: 12

## ADVANCED TENNIS

Spring Season (various depending on activity); Open to grades 9-12

This course develops higher level tennis skills and techniques and assumes players already possess the basic skill sets required for recreational tennis match play. After a review of basic skills, instruction will transition to the mental and physical attributes required to execute winning offensive and defensive strategies for both singles and doubles play. Drills and practice match play for singles will explore baseline, aggressive baseline, serve and volley, and all-court styles of play. Drills and practice match play for doubles will explore traditional one up/one back, the "I" formation, poaching, and both back styles of play. Players are required to supply their own racquets and shoes appropriate for tennis courts.

Prerequisite: Students must have a basic knowledge of the game and perform the basic strokes required for match play.

Roster Minimum: 4, Roster Maximum: 12



# Mod Schedule

# Learning Retention

This modular schedule—and everything at Madeira—is designed around how girls learn best. Students take three classes at a time, which gives them more time for deep, ambitious learning and a better opportunity to retain what they’ve learned. With fewer, longer classes, breaks between periods, and time to explore interests and passions, Madeira’s modular schedule allows girls to flourish both in and out of the classroom. It’s a serious program for girls who are serious about learning—and love having fun in class. All students work with their academic advisors each year to create a personalized schedule.

## 9TH GRADE SAMPLE SCHEDULE

MOD 1	MOD 2	MOD 3	MOD 4	MOD 5	MOD 6	MOD 7
English I	Biology	Student Life I	Biology	English I	English I	Student Life I
Biology	French I	Global Studies I	French I	Studio Art Painting	Biology	French I
Geometry	Studio Art Drawing	Design Thinking Lab	Geometry	Global Studies I	Geometry	Studio Art Ceramics
Volleyball			Musical			Riding

## 10TH GRADE SAMPLE SCHEDULE

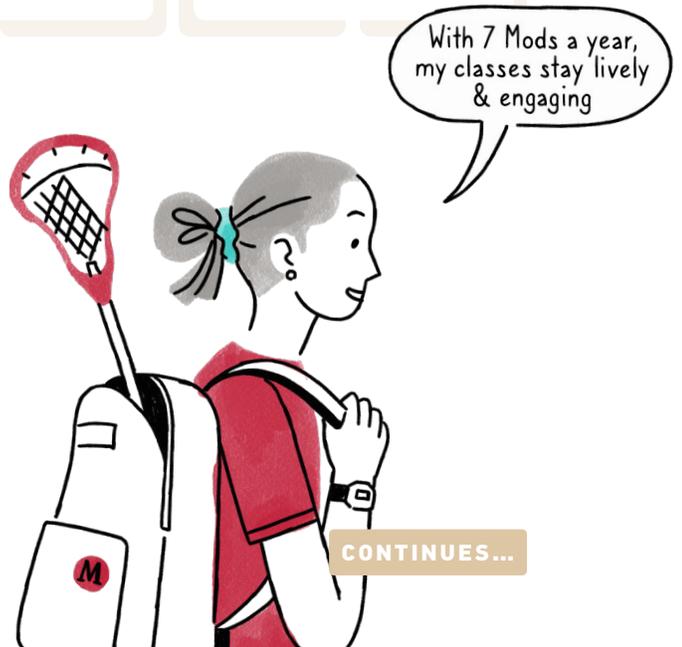
MOD 1	MOD 2	MOD 3	MOD 4	MOD 5	MOD 6	MOD 7
English II		Applied Physics	Applied Physics	English II	Global Studies II	English II
Applied Physics	Co-Curriculum 5-Week Internship	Spanish II	Global Studies II	Algebra II	Forensic Science	Spanish II
Algebra II		Algebra II	Photography	Spanish II	Mindfulness & The Brain	Global Studies II
Field Hockey			Robotics Team			Riding

# 11TH GRADE SAMPLE SCHEDULE

MOD 1	MOD 2	MOD 3	MOD 4	MOD 5	MOD 6	MOD 7
English III	English III	Physics	Physics	Acting	Co-Curriculum 5-Week Internship	English I
Physics	U.S. History	U.S. History	AP Calculus	Latin III		Latin III
AP Calculus	Latin III	AP Calculus	Forensics	U.S. History		U.S. History
eSports			Swimming			Pilates

# 12TH GRADE SAMPLE SCHEDULE

MOD 1	MOD 2	MOD 3	MOD 4	MOD 5	MOD 6	MOD 7
AP Chemistry	Advanced Topics in French	Capstone Research Seminar	Co-Curriculum 5-Week Internship	AP Chemistry	Global Justice	English IV
Global Justice	English IV	AP Chemistry		Advanced Topics in French	AP Chemistry	Advanced Topics in French
AP Calculus	AP Calculus	English IV		AP Calculus	AP Calculus	Studio Art
Dance				Model U.N.		Softball

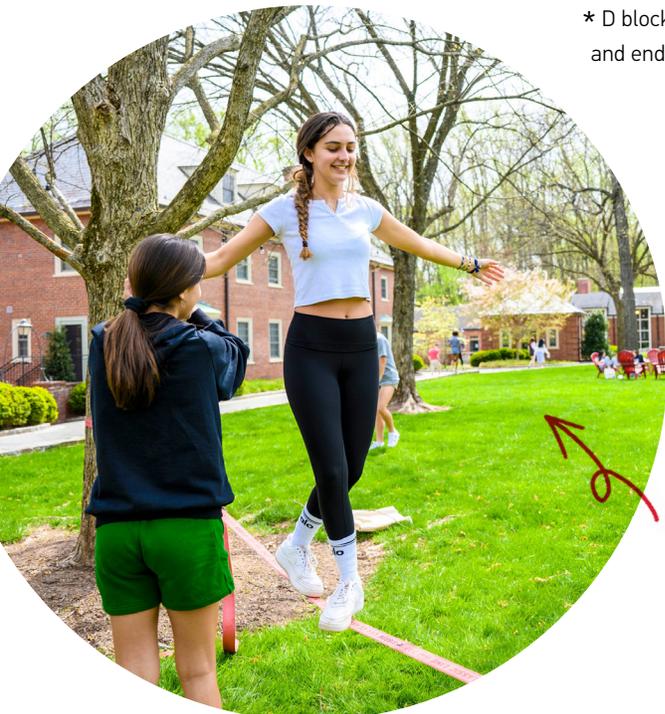


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# MADEIRA DAILY SCHEDULE 2026-27

TIME	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
8:30 – 9:50 am	A Block	A Block	A Block	A Block	A Block
10:00 – 10:35 am	Advising	Community Meeting Time (CMT)	Conference Time	Class Meeting	Advising
10:45 am – 12:05 pm	B Block	B Block	B Block	B Block	B Block
12:05 – 1:15 pm	Lunch/Mid-Day Opportunities				
1:15 – 2:35 pm	C Block	C Block	C Block	C Block	C Block
~2:50 pm start*	D Block	D Block	D Block	D Block	D Block
Evening Classes	Chorus: Mondays & Thursdays Chamber Orchestra: Tuesdays and Thursdays Stagecraft: Wednesdays				

\* D block start and end times vary by activity. D block starts no earlier than 2:50 pm and ends no later than 6 pm.



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## MOD DATES

### 7 MODULES IN A SCHOOL YEAR

- Mod 1: August 26 – October 2
- Mod 2: October 5 – November 6
- Mod 3: November 9 – December 18
- Mod 4: January 4 – February 5
- Mod 5: February 8 – March 12
- Mod 6: March 30 – April 30
- Mod 7: May 3– June 4
- Commencement: June 5



**The Madeira School**  
8328 Georgetown Pike  
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**[madeira.org](http://madeira.org)**

**May 5 2026**