

# Jose Marti MAST 6-12 Academy

## High School Electives Course Directory



### **Mathematics & Computers**

#### **Q70 AP Computer Science Principles - (Teacher approval required)**

Learn the principles that underlie the science of computing and develop the thinking skills that computer scientists use. You'll work on your own and as part of a team to creatively address real-world issues using the tools and processes of computation.

#### **Q71 AP Computer Science Applications - (Teacher approval required)**

Get familiar with the concepts and tools of computer science as you learn a subset of the Java programming language. You'll do hands-on work to design, write, and test computer programs that solve problems or accomplish tasks.

#### **W24: Object Oriented Programming/Level 3 (Honors)**

This course content includes but is not limited to the fundamentals of programming and software development both in python and Java ; procedural and object-oriented programming; creating regular and specialized applications using the Java programming language, including testing, monitoring, debugging, documenting, and maintaining Java computer applications.

#### **W20 Digital Information Technology**

This course is designed to provide a basic overview of current business and information systems and trends, and to introduce students to fundamental skills required for today's business and academic environments. Emphasis is placed on developing fundamental computer skills. The intention of this course is to prepare students to be successful both personally and professionally in an information-based society. Digital Information Technology includes the exploration and use of databases, the internet, spreadsheets, presentation applications, management of personal information and email, word processing and document manipulation, HTML, web page design, and the integration of these programs using software that meets industry standards.

#### **W21 Web Tech – (Teacher approval required)**

This course is designed to provide a basic overview of current business and information systems and trends, and to introduce students to fundamental skills required for today's business and academic environments. Emphasis is placed on developing fundamental computer skills. The intention of this course is to prepare students to be successful both personally and professionally in an information-based society. Web Tech includes the exploration and use of databases, the internet, spreadsheets, presentation applications, management of personal information and email, word processing and document manipulation, HTML, web page design, and the integration of these programs using software that meets industry standards.

#### **W22 Programming Essentials – (Teacher approval required)**

This course offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Information Technology career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of the Information Technology career cluster.

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### **W30 Intro to Engineering**

This course helps students understand the field of engineering/engineering technology and prepares them for postsecondary engineering programs by developing a more in-depth mastery of the associated mathematics, science, and technology knowledge and skills. The course also includes essential concepts of technology and design, as well as concerns about the social and political implications of technological change. The partnership with Engineering Tomorrow allows the class to have hands-on labs every week.

### **W31 Engineering 2 (Honors)**

This course provides students with opportunities to further their mastery of engineering-related math and science principles to design solutions to real world problems. The course also includes a more in-depth look into the relationship between technology and design. The partnership with Engineering Tomorrow allows the class to have hands-on labs every week.

### **W32 Engineering 3 (Honors)**

This course provides students with opportunities to further their mastery of engineering-related math and science principles to design solutions to real world problems. The course also includes a more in-depth look into the relationship between technology and design. The partnership with Engineering Tomorrow allows the class to have hands-on labs every week.

### **W33 Capstone Engineering**

The purpose of this course is to serve as a capstone course to provide Engineering and Technology Education students with the opportunity, to develop a project from "vision" to "reality". Working in teams to design, engineer, manufacture, construct, test, redesign, test again, and then produce a finished "project". This would involve using ALL of the knowledge previously learned, not only in technology education, but across the curriculum.

### **W41 Game Development – (Teacher approval required)**

The Game, Simulation and Animation Visual Design program lends itself to integration of the core academic subjects of language arts, math, science, visual arts, and social studies into project activities. It is through a balanced and integrated curriculum that students attain the attitudes, skills, and knowledge needed to compete successfully in today's work force. To achieve total curriculum integration, academic and career and technical education teachers should be scheduled with common planning times. In Gaming Development students use Unity curriculum to build games, animation, problem solve glitched coding using Unity. You also have the opportunity to compete in gaming Esports events.

### **Q60 AP Statistics – (after Algebra 2 - Teacher approval required)**

Learn about the major concepts and tools used for collecting, analyzing, and drawing conclusions from data. You'll explore statistics through discussion and activities, and you'll design surveys and experiments.



## **Physical Education**

**T91/T92 Personal Fitness/Lifestyle Design - Required for High School Graduation\*\*\***

**T93/T94 Team Sports 1 / Team Sports 2**

**T93/T94 Individual / Dual Sports 1 & 2**

In our Physical Education class, we strive to incorporate many challenging mobility skills to make sure students are well rounded when performing specific sports. This ensures that all students of different levels can benefit to improve their overall strength training.

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### Life Science and Natural Science

#### **C11 Anatomy & Physiology Honors** *(after Biology)*

Anatomy/Physiology is a study of the structure and function of the human body. Laboratory experiences and text-based activities provide student learning in the following topics: the major body systems; how the body systems work together to provide homeostasis; body functions in the healthy and diseased states; blood typing; muscle action; cranial nerve functioning; and bioethics.

#### **C22 Environmental Science Honors**

The science of agriculture concerned with growing plants that are used by people for food, for medicinal purposes, and for aesthetic gratification. Students will work on integrating within a reawakened ecosystem. Our focus is seeing and utilizing the interconnectedness of nature to help build soil health, maximize biodiversity, and regeneratively grow the most nutrient-dense food possible.

#### **C13 Forensic Science Honors** *(after Chemistry)*

Students will get a small taste of different jobs in the forensics field, as we cover different types of forensics analysis and explore the true meaning of what it is like to be a forensics scientist. This class can get a little graphic and covers blood and autopsies, so it may not be for everyone.

#### **C19 Forensic Science 2 Honors**

Students will continue their forensics education with a focus on DNA, Toxicology, and court training. The focus of this class will be on the process of taking a case through court and the steps you would take as an expert witness.

#### **C14 Marine Science Honors** *(after Biology)*

Through hands on activities, students see the connection between the Earth, the atmosphere, and the ocean and how they affect marine life. Students learn about how Anthropogenic activity affects nature. Students also learn how to maintain our marine and freshwater aquariums and work as a team to test the water quality and perform water changes.

#### **C15 Botany Honors**

Students will learn about native plants, researching important species in pine rockland, wetland, hammock, and coastal ecosystems. Students will also participate in hands-on activities germinating, propagating, and cultivating native plants, some with seeds harvested from our arboretum. Students will also participate in maintaining the native arboretum, shade house complex, and school native pine rockland landscaping. Lastly, students will learn to work in sterile conditions to germinate native orchid seeds and propagate native orchids.

#### **C16 Astronomy Honors** *(after Physics 1)*

Use your science and math knowledge to learn about your home planet and outer space! Study how to build and launch rockets and stay in touch with daily pics from NASA and weekly updates from the International Space Station. You also will learn opportunities for paid internships. Topics include: Our solar system, constellations, planet and star formation, supernovae, compact objects (white dwarfs, neutron stars, and black holes), pulsars, star clusters, interstellar medium (gas, dust, magnetic fields, cosmic rays), galaxies, gravitational lensing, and cosmology. No prior knowledge of astronomy is necessary.

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## High School Electives Course Directory

### **C17 Zoology Honors** *(after Biology)*

Students will learn about different animal groups with a focus on land animals. Students will be in charge of two major projects: the chicken coop, and the community garden. Students will be in close proximity to our chicken flock and be in charge of different forms of chicken care.

### **C18 Biotechnology** – *(Teacher approval required)*

A fun, hands-on class where we will be learning about the scientific method, and engineering design. You will each develop your own research questions based on your area of interests and formulate procedures to determine outcomes. You will also be competing in the SECME Regional competitions that is held in late January. We will then tailor projects based on your interests and future needs.

### **Q32 AP Environmental Science** - *(after Physics 1- Teacher approval required)*

Explore and investigate the interrelationships of the natural world and analyze environmental problems, both natural and human made. You'll take part in laboratory investigations and field work.



## **Social Sciences**

### **D30/D31 Psychology Honors**

The purpose of this course is to introduce students to the systematic and scientific study of the behavior and mental processes of human beings and other animals. Students are exposed to the psychological facts, principles and phenomena associated with each of the major subfields within psychology.

### **D33 Law Studies Honors**

In this course, students will examine aspects of the foundations of the U.S. legal system as well as different types of law including civil, criminal, immigration family, and consumer law. The course also helps students learn life skills such as how to buy a car, lease an apartment, and more!

### **D33 Political Science**

Seeks understanding of the contemporary spectrum of political beliefs from liberal democracy to the ideological ideas of the far right. Examines the effects of ethical, historical, political and psychological perspectives on these belief systems. Students will come to understand the workings of other countries' political and economic systems, the relations among countries in the international arena, and key concepts in both political philosophy and social science methodology.

### **Q60 AP Capstone Seminar**

AP Seminar is a yearlong course in which students investigate real-world issues from multiple perspectives. Students learn to synthesize information from different sources, develop their own perspectives in research-based written essays, and design and deliver oral and visual presentations, both individually and as part of a team. During the course, students complete a team project and an individual paper and presentation, as well as take a written end-of-course exam.

### **Q61 AP Capstone Research**

AP Research lets students deeply explore an academic topic, problem, or issue of interest to them. Students design, plan, and conduct a yearlong research-based investigation to address a research question, documenting their process with a portfolio. The course ends with a 4,000- to 5,000-word academic paper and a presentation with an oral defense which contribute to the overall AP Research course. There is no end-of-course exam.

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### **Q45 AP Psychology – (Teacher approval required)**

Prepare to understand how your biological and physiological aspects shape who you are. Learn how cognition/thinking plays a role in how you act. Analyze the power that those around you have or don't have on shaping your behavior. In a nutshell, learn about YOU!

### **Q46 AP Art History – (Teacher approval required)**

ABSOLUTELY NO ARTISTIC ABILITIES REQUIRED! Prepare to immerse yourselves in the diverse and colorfully rich history of various cultures, focusing on societal expectations, changes and norms expressed through art. Learn a visual language that will "WOW" your peers and your parents, and most importantly learn to look through the visual lens of the past to understand the world around you today.

### **Q47 AP European History – (Teacher approval required)**

Study the cultural, economic, political, and social developments that have shaped Europe from c. 1450 to the present. You'll analyze texts, visual sources, and other historical evidence and write essays expressing historical arguments.

### **Q48 AP Human Geography – (Teacher approval required)**

Explore how humans have understood, used, and changed the surface of Earth. You'll use the tools and thinking processes of geographers to examine patterns of human population, migration, and land use.

### **Q49 AP Comparative Government & Politics – (Teacher approval required)**

A college-level, nonpartisan introduction to key political concepts, ideas, institutions, policies, interactions, roles, and behaviors that characterize the constitutional system and political culture of the United States. Students will study U.S. foundational documents, Supreme Court decisions, and other texts and visuals to gain an understanding of the relationships and interactions among political institutions, processes, and behaviors. They will also engage in disciplinary practices that require them to read and interpret data, make comparisons and applications, and develop evidence-based arguments. In addition, they will complete a political science research or applied civics project.



## **Foreign Language**

**F41 Spanish 1 (for non-speakers)**

**F42 Spanish 2 (for non-speakers)**

**F43 Spanish 3 Honors (for non-speakers)**

**F44 Spanish 4 Honors (for non-speakers)**

Spanish for non-native speakers is designed to motivate students to learn a second language, focus on intercultural communicative skills and functions, and build an intercultural communicative proficiency. Students will develop skills in listening, speaking, reading, and writing in Spanish.

**F51 Spanish Speakers 1**

**F52 Spanish Speakers 2**

**F53 Spanish Speakers 3 Honors**

Spanish for Spanish speakers is designed to develop, maintain, and enhance proficiency in their heritage language by reinforcing and expanding skills in listening, speaking, reading, and writing, as well as Spanish grammar skills acquisition.

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## High School Electives Course Directory

### **Q50 AP Spanish Language & Culture – (Teacher approval required)**

AP Spanish Language and Culture which is equivalent to an intermediate level college course in Spanish will provide a wider knowledge of the culture of Spanish speaking countries. Integrated skills and tasks are used to develop competence and confidence in reading, writing, listening, and speaking in Spanish.

It is a valuable resource to prepare students for the Advanced Placement Spanish Language and Culture exam.

### **Q51 AP Spanish Literature – (after Q50 - Teacher approval required)**

AP Spanish Literature and Culture which is another level college course is designed to develop critical reading and analytical writing as they explore literature pieces of Hispanic writers. Students will acquire the skills of listening and understanding oral communication on cultural topics, reading, and understanding critical commentary, and drawing connections between literature and other cultural manifestations.



## **The Arts**

### **A40 World Literature**

In our World Literature course, students cultivate their understanding of literature through reading and analyzing texts as they explore concepts such as character, setting, structure, perspective, figurative language, and literary analysis in the context of literary works from around the world.

### **A41 Yearbook 1**

### **A41 Yearbook 2**

### **A41 Yearbook 3**

Yearbook journalism class is both a course and year-long publication project of the JMMA school yearbook. Students learn and create the overarching theme that is present throughout the entire book.

### **P40/P41 Career Research – (12<sup>th</sup> Grade only- Teacher approval Required-Milian)**

This course is designed with seniors in mind. The core focus is to alleviate the time crunch that seniors face throughout the college application process by enabling them to complete applications, search and apply for scholarships, and scratch off those tedious never-ending tasks from the financial aid office to-do list. Besides that, students will receive instruction about issues related to post-secondary planning and beyond.

### **S13/S14 Art 1, Two-Dimensional / Ceramics 1**

### **S15 Art 2, Two-Dimensional**

### **S16 Art 3, Two-Dimensional Honors**

High School offers many engaging Visual Arts courses as electives for students in 9-12 grades. High school students receive instruction and studio-based art project experiences based on a rigorous curriculum aligned with the Florida state standards.

### **Q80 AP Drawing – (Teacher approval required)**

Develop your skills in drawing as you experiment with different materials and processes. You'll create artwork that reflects your own ideas and skills and what you've learned.

### **Q80 AP Studio Art – (Teacher approval required)**

Develop your 2-D skills through materials and processes such as graphic design, photography, collage, printmaking, fashion illustration, collage, and others. You'll create artwork that reflects your own ideas and skills and what you've learned.

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### **S32 Theater 1**

### **S33 Theater 2**

In Theater, students will learn by doing through various performances, class projects, and presentations. This course requires students get on stage and speak publicly, a great way to lessen speaker anxiety. Students will also learn film and theatre appreciation.

### **P20 TV Production 1**

### **P21 TV Production 4 Honors**

### **P22 TV Production 5 Honors**

Students explore the world of visual and mass media production. TV Production students create the daily morning announcements program for the school, interview students and staff, and cover school events to provide the community with a glimpse of all the great things that happen at Jose Marti MAST. Whether you prefer to work on the production side and operate the equipment or are eager to get in front of a camera or microphone, there is a place for you in TV Production.



### **X01 FLVS Class**

Students may take an FLVS class during the school day or opt to work on an FLVS course on their own time. There are a wide variety of courses available for you to take on FLVS. Visit [www.flvs.net](http://www.flvs.net) to find high school courses and their descriptions. Students who choose to take an FLVS class during the school day will be on a strict timeline for completion. You may not drop or change classes once you begin so, please choose carefully.



### **M01 Dual Enrollment**

Students make take College classes at Miami Dade College through our Dual Enrollment program. Some classes are available to be taken during the school day with transportation provided to and from the College. For a larger selection of classes, students may also opt to take courses in the evenings (must provide your own transportation). Students must have a 3.0 minimum unweighted GPA and a passing score on the Accuplacer NG exam to be eligible for Dual Enrollment. Dual Enrollment students must earn a C or higher on all college classes in order to continue with the program. See our website for Dual Enrollment procedures if you are interested in taking a Dual Enrollment course.