



## **Class Descriptions 9<sup>TH</sup> – 12<sup>TH</sup>**

### **Acting 1, 2, 3 & 4** *(Performing Arts ONLY)*

These foundational courses are meant to introduce beginner to intermediate acting students to the various acting teachers and their methods. Students will work on character and script analysis as it pertains to character development, movement, vocal production, and believability.

### **AP Art History**

The AP Art History course helps students understand visual art works through the contextual filters of history, society, politics, religion, gender, and ethnicity. Students also learn to formally analyze works of art, and connect artworks through major themes such as sacred spaces, power/authority, religion, propaganda, identity, and narration. Contextual and visual analyses are an integral part of the class.

The class is the equivalent of 2 college art history courses and prepares students for the AP examination, which measures understanding and familiarity with art from prehistory through contemporary times, from both Western and non-Western cultures.

### **AP Music Theory**

This course will focus on the foundation of Music Theory. Elements of rhythm, pitch, articulation, meter, and notation will be discussed as well as, sight-singing and melodic/rhythmic dictation. Students will learn to read music and be proficient in recognizing intervals, and music notation as printed on the page.

Students will be able to read and write simple melodic patterns and cadences and be able to reproduce music using the voice and the keyboard. Students will be able to analyze, transcribe, and create music as part of the course content.

### **AP Studio Art 2D & 3D Design Portfolio** *(Performing Arts ONLY)*

Students work on college level portfolio independently, creating 29 pieces for submission to the College Board. Students may choose from 3-D Portfolio, Drawing, or 2-D Design.

### **Introduction to Art History 1**

Students take an inquiry-based approach to exploring, researching, and analyzing works of art across time and cultures. In developing art-specific vocabulary, students explore how the structural elements of art and organizational principles of design have been used to solve artistic challenges and create meaning. Students learn to identify the functions, forms, media, styles of art, cultural ideas, and themes related to time periods and geographical places. Career options related to art history and criticism are also explored. This course incorporates hands-on activities and consumption of art materials

### **Ballet 1, 2, 3 & 4** *(Performing Arts ONLY)*

Ballet courses develop physical proficiency in the performance of ballet vocabulary while promoting an understanding of the principles, practices, and vocabulary common to ballet. Ballet training enables the students to gain strength, balance, and dexterity with an emphasis on correct anatomical alignment. Barre exercises prepare the musculature to anticipate the execution of virtually all movements of the classical vocabulary. Knowledge acquired at the barre is tested in the center through adagio and allegro sections of the class. These courses emphasize a refinement of technical practices of ballet including the integration of

stylistic concepts of dynamics, quality of movement, line, musicality, and intent. Ballet concentrates on performance and artistry of the full ballet vocabulary. Each level of dance instruction builds on the foundation of knowledge and skills established at prior levels. Advanced students maintain and refine techniques and skills through consistent, structured work. Students apply the discipline, commitment, and problem-solving skills required in dance to other aspects of their lives.

### **Band 1**

Will offer basic music instruction in Wind and Percussion instruments which include: Piccolo, Flute, Oboe, Bassoon, Clarinet, Saxophone, French Horn, Trumpet, Trombone, Baritone, Tuba, and Percussion instruments. This is structured on a symphonic music curriculum. This course is not available for students who wish to play guitar, or other string instruments

### **Band 2-5**

This course is for students who successfully completed Band I as a pre-requisite. Students will continue to work on their instrument specific performance techniques through practice, class rehearsal, performance, and other performance opportunities. Participation in various seasonal ensembles such as Concert Band, Marching Band, and Pep-Bands are all part of the course. Students in this course must have completed Band I at either the High School or Middle School levels.

### **Broadcast Journalism (Journalism IV)**

The purpose of this course is for student to explore the changing world of journalism in the information age. From online news to blogs and how the world of technology is forcing journalism to evolve. Students will also create digital news stories for our school website to help promote our school activities and community involvement.

### **Business Management and Law (Entrepreneurship Program)**

In this intermediate business course, students learn the basics of business law. Business law encompasses all of the laws that dictate how to form and run a business. This includes all of the laws that govern how to start, buy, manage and close or sell any type of business. Business laws establish the rules that all businesses should follow. A savvy businessperson will be generally familiar with business laws and know when to seek the advice of a licensed attorney. Business law includes state and federal laws, as well as administrative regulations. Management of employees and human resource law will be emphasized.

### **Ceramics 1-2**

Introducing basic design principles of 3-D art, with emphasis on ceramics. Hands on studio art class in 3-D media.

### **Chorus**

Students in the program will receive training in vocal techniques for different styles of pop, jazz and classical music; as well as, stage presence, repertoire selection, ensemble interaction, microphone techniques, and basic acting skills. This class entails a strong live performance component.

### **Computing for College and Careers (Business System)**

This course is designed to provide a basic overview of current business functions and trends needed to prepare students for college and their careers. Emphasis is placed on helping students developing proficiency with information systems, computer applications, touch keyboarding, business math, and career exploration. Examples include word processing, spreadsheets, presentation applications, industry research, basic accounting and finance, and resume building.

### **Creative Writing**

The purpose of this course is to enable students to develop and use fundamental writing and language skills for creative expression in a variety of literary forms. Emphasis will be on development of a personal writing style. This will be achieved through the analysis of various genres of literature, writing process strategies and peer review techniques. Students will write poetry in a variety of styles, short stories and begin working on a novel.

### **Creative Photography 1-3**

The purpose of this course is to give students a basic understanding of photographic imagery. This course incorporates hands-on activities and consumption of art materials. Students explore the aesthetic foundations of art making using beginning photography techniques.

### **Digital Art Imaging 1**

Students explore the fundamental concepts, terminology, techniques, and applications of digital imaging to create original work. Students produce digital still images through the single or combined use of computers, digital cameras, scanners, photo editing software, drawing and painting software, graphic tablets, printers, new media, and emerging technologies. Through the critique process, students evaluate and respond to their own work and that of their peers to measure artistic growth. This course incorporates hands-on activities, the use of technology, and consumption of art materials.

### **Digital Art Imaging 2**

Students explore and develop concepts, terminology, techniques, and applications to design, create, print, and display original two-dimensional graphic and fine works of art. As they become more adept at using the tools and techniques available to them, students design digital still images through the single or combined use of computers, digital cameras, scanners, photo editing software, drawing and painting software, graphic tablets, printers, new media, and emerging technologies. Through the critique process, students evaluate and respond to their own designs and images and those of their peers to measure artistic growth with increasing sophistication. This course incorporates hands-on activities, the use of technology, and consumption of art materials.

### **Digital Art Imaging 3**

Students explore advanced topics through project-based work, becoming more self-directed in their acquisition and use of concepts, terminology, techniques, and applications to design, create, print, and display original two-dimensional graphic and fine works of art in print and web formats. As they become more adept at using the tools and techniques available to them, students design and produce digital still images through the single or combined use of computers, digital cameras, scanners, photo editing software, drawing and painting software, graphic tablets, printers, new media, and emerging technologies. Through the critique process, students evaluate and respond to their own designs and images and those of their peers to measure artistic growth with increasing sophistication and independence to promote risk-taking in the completion of conceptually based, self-directed work. This course incorporates hands-on activities, the use of technology, and consumption of art materials.

### **Drawing 1, 2 & 3 (*Performing Arts ONLY*)**

Students demonstrate proficiency in the conceptual development of content in drawing to create self-directed or collaborative 2-D artwork suitable for inclusion in a portfolio. Students produce works that show evidence of developing craftsmanship and quality in the composition. Through the critique process, students evaluate and respond to their own work and that of their peers. Through a focused investigation of traditional techniques, historical and cultural models, and individual expressive goals, students begin to develop a personal art style. This course incorporates hands-on activities and consumption of art materials

### **Film - TV Production 6** (*Performing Arts ONLY*)

The purpose of this course is for students to explore the major principles of film. Students will transition from a natural enjoyment of movies to a critical understanding of the form, content and film production of films. They will understand cinematographic properties of films that will incorporate hands on projects as well.

### **Foundations of Web Design**

This course is designed to provide overview of the Internet, Intranet, and Web Design. The content includes Internet/Intranet tools, Web site planning, promotion; HTML commands; advanced page design, and multimedia applications. After successful completion of this course, students will have met Occupational Completion Point - Data Code B, HTML Coder - (Industry Title).

### **Guitar**

The purpose of the course is to provide students with basic fundamental performance skills as it relates to the Guitar. No prior experiences are needed to participate in this course. This course does not offer instruction in wind, orchestral, and keyboard instruments.

### **Journalism 1**

An introduction to Journalism course. This course focuses on Associated Press Writing Style, and the basics of yearbook/newspaper/TV production. Required for students to progress to yearbook or newspaper in subsequent years.

### **Journalism IV Honors** (*Performing Arts ONLY*)

This course offers an in depth overview of journalism. Students will gain a deeper understanding of news elements in the area of Broadcast news. Students will also have hands on approach in storytelling. They will be brainstorming, producing and editing school related stories for the daily news show.

### **Keyboard**

The purpose of the preliminary course is to provide students with introductory experiences on the keyboard through performance of classical, traditional, and popular repertoire. The advanced course is designed with the serious pianist in mind. Students will be trained on theory, sight-reading, score reading, music history, and piano performance techniques at an intermediate through advanced level. Students will be able to perform much more difficult pieces from memory, technical studies, and scales, progressions, and duets. This class entails a strong live performance component.

### **Literature and the Arts 1**

A serious course of film and film history, this course focuses on techniques and analysis of American film chronologically by genre from Nosferatu to The Tourist.

### **Marketing Education Directed Study (Entrepreneurship Program)**

This course is designed to give students expanded knowledge of marketing applications for personal use and business applications. Marketing refers to the social and managerial processes by which products, services and value are exchanged in order to fulfill individuals' or groups' needs and wants. These processes include, but are not limited to, advertising, promotion, distribution, and sales.

### **Music Theory**

The purpose of this course is to provide students with an in depth study of the music language. Students will learn basic principles of music notation, vocabulary, form and analysis, compositional techniques, and aural skill development. This is a non-performance based course that is open to all students of the general population. No prior music experiences and/or skills are required for successful completion of the course.

### **Newspaper (Journalism 2-5)**

A production class, students design and create the school newspaper applying skills mastered in the introductory journalism class. Design, Associated Press Writing Style, photography, teamwork, leadership and time management are integral to the course. Extra time after school and at home, ad and book sales required. Introduction to Journalism and adviser approval required.

### **Orchestra 1**

The purpose of this course is to provide students with basic performance skills as it relates to string orchestra. Students will learn performance practice techniques on either Violin, Viola, Cello, or String Bass. Course content will cover basic notation, instrument specific performance technique, basic ensemble skills, and performance practice as an ensemble. This course does not provide instruction in Wind, Keyboards, or Guitars.

### **Orchestra 2-4**

The purpose of this course is to further the student's understanding of the Orchestra repertoire. Students will work on advancing their performance techniques through rehearsals, performances, and/or competitions. This course is not a beginner's course, and needs director prior approval for participation. All students must complete Orchestra I prior to consideration for the upper level ensembles.

### **Principles of Entrepreneurship (Entrepreneurship Program)**

In this introductory business course, students learn the basics of planning and launching their own successful business. Whether they want to start their own money-making business or create a non-profit to help others, this course helps students develop the core skills they need to be successful. They learn how to come up with new business ideas, attract investors, market their business, and manage expenses.

### **SAT/ACT Verbal Preparatory Study/Critical Thinking**

The purpose of this course is to develop advanced reading skills for students who plan to continue their formal education after high school

### **Speech/Debate**

The purpose of this course is to provide instruction in the fundamentals of formal and informal oral communication.

### **Sports & Entertainment Production (TV Production 5)**

This course is designed for students with an interest in the sports and entertainment production industry. This course stresses the utilization of fundamental television production concepts and will include an orientation to the sports and entertainment industry as well the live coverage of school sporting events.

### **Theatre/Theatre History 1**

In this course students will examine stage techniques and terminology. There will be bookwork as well as stage performance opportunities with acting games, improvisations and scripted scenes and monologues. This will be combined with studies of theatre from its origins on Greek and Roman stages through the Italian and English Renaissances ending with the neoclassical theatre of the French.

## **Theatre/Theatre History 2**

Prerequisite: Theatre/Theatre History 1 – This class will continue the study of stage acting techniques as well as the theatre behind the scenes. Students will examine the technical side of the business from set construction to costumes and lights. The history of the theatre will begin with the English restoration and move all the way into the modern stages of today.

## **TV Anchors (TV Production 4)**

This course is designed so high school students can use what they have learned in TV production and apply it to the daily Firebird TV newscast. It includes developing the technical and content aspects of a newscast, getting a rundown completed, getting scripts approved, a competent technical staff in place and a daily show respecting and honoring the Student Television Network's code of ethics.

## **Web Design IV**

This course provides advanced concepts in HTML, design, and internet tools. Introduction to style precedence and style inheritance with the use of Cascading Styles to design page layouts. After successful completion of this course and Web Design 2, students will have met Occupational Completion Point - Data Code C, Web Designer- (Industry Title).

## **World Dance/Dance Techniques 1-2**

The purpose of this course is to provide students with opportunities to explore and develop techniques in ethnic dance and enhance creativity. Students actively explore formal and folk dance from a variety of cultures and sub-cultures around the world over time. Students may use timelines to guide their study of art history, dance history, and technology, or they may investigate dance customs globally and in real time using technology and the community's cultural resources. Inquiry may include, but is not limited to, political and social influences, traditional and non-traditional attire, and the use of associated objects in various cultural dances. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom.

## **Yearbook (Journalism 1-5)**

A production class, students design and create the school yearbook applying skills mastered in the introductory journalism class. Design, Associated Press Writing Style, photography, teamwork, leadership and time management are integral to the course. Extra time after school and at home, ad and book sales required. Introduction to Journalism and adviser approval required.

## **Class Descriptions 6<sup>TH</sup> – 8<sup>TH</sup>**

### **M/J Art 2D Studio Art 1**

Students are given in-depth opportunities to plan two-dimensional learning experiences according to teacher and personal interpretations of their aesthetic needs and strengths. Emphasis continues to be placed on creative reading, writing, listening, and investigative skills that lead to quality processes and products. Skills will be developed in the critiquing of art work based on aesthetic criteria.

### **M/J 2D Studio Art 2**

Students refine techniques used to create a variety of two-dimensional (2-D) artworks through developing skills in drawing, painting, printmaking, and collage. Students manipulate the structural elements of art to promote creative risk-taking in 2-D artwork. Investigation of artworks from Western and non-Western cultures provides a means for students to expand their understanding and appreciation of the role of art in global culture. Student artists use an art criticism process to evaluate, explain, and measure artistic growth in personal or group works. This course incorporates hands-on activities and consumption of art materials.

### **M/J Art 2D Art 3**

Students make creative use of a set of combined relationships with innovative treatment of space to produce utilitarian forms or aesthetic structures. Student artists may work in, but are not confined to, content in green or environmental design, sculpture, ceramics, or installation art, creating maquettes, casting, and carving. Students explore abstraction and the relationship of scale (i.e., hand-held, human, or monumental) and disproportionate or exaggerated scale, as well as tension, grouping, proximity, and containment. Craftsmanship and quality are reflected in the surface and structural qualities of the completed art forms. Students in the 3-D art studio focus on use of safety procedures for process, media, and techniques. Student artists use an art criticism process to evaluate, explain, and measure artistic growth in personal or group works. This course incorporates hands-on activities and consumption of art materials.

### **M/J 3D Studio Art 1**

Students begin an exploration of the structural elements of art used when creating 3-D forms. Additive and subtractive processes are used to manipulate and construct sculptural or ceramic forms in media that may include, but are not limited to clay, wood, plaster, found objects, and paper maché, with consideration of the workability, durability, cost, and toxicity of the media used. Student artists examine the effects of attention to detail, size, position, overlapping, visual pattern, and texture, and these considerations will be reflected in the surface and structural qualities of completed art forms. Students in the 3-D art studio focus on use of safety procedures for process, media, and techniques. Student artists use an art criticism process to evaluate, explain, and measure artistic growth in personal or group works. This course incorporates hands-on activities and consumption of art materials.

### **M/J Band 1**

Will offer basic music instruction in Wind and Percussion instruments which include: Piccolo, Flute, Oboe, Bassoon, Clarinet, Saxophone, French Horn, Trumpet, Trombone, Baritone, Tuba, and Percussion instruments. This is structured on a symphonic music curriculum. This course is not available for students who wish to play guitar, or other string instruments

### **M/J Band 2-3**

This course is for students who have successfully completed M/J Band I. Students will continue to reinforce their skill developments as it relates to their instruments. Students will partake in class rehearsal, instrument sectionals, class performances, and other community events as it relates to the curriculum of the class. Students must have the director's prior approval prior to placement into the ensemble.

### **M/J Broadcast and Communication**

This course is designed to prepare students to explore careers in the field of television. Students will learn the history of Broadcast Journalism and will gain the essential skills to write for broadcast news. Students will also learn the technical aspects of the Broadcasting industry.

### **M/J Chorus**

The purpose of the course is to provide a general overview of choral singing through the study of music theory, ear-training, sight-singing, music history, and the performance of traditional, classical, and modern choral repertoire.

Students will develop vocal techniques and skills as a vocalist and as part of an ensemble. Choral students will also explore musical creativity and an appreciation of music from around the world and through time.

### **M/J Computer Applications**

The purpose of this course is to acquaint students with career opportunities in the field of computers, as well as hands-on, practical experience using software applications. The student will be able to use business decision making and problem solving methods, identify uses of the computer, and become familiar with occupations dealing with hardware and software.

### **M/J Creative Photography**

Students explore the aesthetic foundations of art using beginning photography techniques. This course may include, but is not limited to, color and/or black and white photography via digital media and/or traditional photography. Processes and techniques for image capture and printing may include, but are not limited to, handcrafted pinhole cameras, hand tinting photographs, mixed media, photo collage, cross-processing, emerging technologies and new media. Content covers the basic mechanics of a camera, including lens and shutter operation, compositional foundations, printing an image for display, and evaluating a successful print. Craftsmanship and quality are reflected in the surface of the print, care of the materials, attention to compositional conventions, and expression of personal ideas and feelings. Student photographers use an art criticism process to evaluate, explain, and measure artistic growth in personal or group works.

### **M/J Critical Thinking, Problem Solving & Learning Strategies 7<sup>th</sup> Grade (Semester Course) / M/J Career Discovery 8<sup>th</sup> Grade (Semester Course)**

The purpose of this course is to guide students in making a career decision. Strategies used focus on educational achievement, personal/social development, career, and community awareness which support students' success.

Students will get the opportunity to identify their interests, skills, and work values to begin exploring potential college majors and careers. In addition to learning fundamental computer applications using spreadsheets, presentation applications, and the integration of these programs, students will also be learning important transferable employability skills such as leadership, communication skills, ethics, teamwork, and responsibility. This course will enable students to obtain the basic skills and foundations required for today's business environments.

### **M/J Computer Applications**

The purpose of this course is to assist students in making informed decisions about their future academic and career goals and to provide information regarding careers in business and computer technology. The content of the course includes, but is not limited to, instruction in keyboarding, word processing, spreadsheets, hardware/software, internet, digital design, web design, career planning, current business trends, and soft skills needed for business environments. These competencies provide the skills necessary to ensure increased productivity and efficient utilization of business technology in today's ever-changing business world.

### **M/J Dance**

Students advance their technical and creative skills relative to choreographic structure, performance, dance science, and somatic movement practices; and attend to alignment, collaborative problem solving, dance conditioning, and safe studio practices. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom.

### **M/J Digital Art Imaging**

Students explore the fundamental concepts, terminology, techniques, and applications of digital imaging to create original work. Students produce digital still and/or animated images through the single or combined



use of computers, digital cameras, digital video cameras, scanners, photo editing software, drawing and painting software, graphic tablets, printers, new media, and emerging technologies. Through the critique process, students evaluate and respond to their own work and that of their peers to measure artistic growth. This course incorporates hands-on activities, the use of technology, and consumption of art materials.

### **M/J Exploration of Production Technology**

The purpose of this course is to enable students to develop basic knowledge of the functions, capabilities, applications, and social implications of the Internet as well as knowledge and skills in computer applications. Students will learn about the Internet and World Wide Web, input and output devices, principles, concepts, and processes of desktop computer applications, ethical uses of computers, touch keyboarding, and telecommunications concepts.

### **M/J Introduction to Technology 6<sup>th</sup> Grade (combined with PE)**

The purpose of this course is to introduce the student to technology/robotics, and familiarize them with every portion of the course to build up concepts for further enhancement. It is also designed to enable students to obtain 21<sup>st</sup> century skills such as teamwork, collaboration, innovation, critical thinking, and problem-solving. Emphasis is placed on social and ethical implications of computer usage; developing proficiency with touch typing; fundamental concepts on computer applications programs, and the integration of these programs.

### **M/J Journalism**

The purpose of this course is to provide instruction in media production as it relates to journalism.

### **M/J Keyboard**

The purpose of the course is to provide a general overview of piano instruction through the study of music theory, ear-training, sight-singing, music history, and the performance of traditional, classical and modern piano repertoire.

Students will develop fundamental piano techniques, learn how to read music, apply basic music theory, and explore the role of keyboard music in history and culture. Beginning pianists will explore musical creativity and analytical listening and problem-solving skills.

### **M/J Law Studies/Forensics (Research)**

Forensics is a one-semester investigative science and technology course. Using Scientific Inquiry Skills, students will learn how to observe, collect, analyze and evaluate evidence found at crime scenes. The purpose of this course is to expose students to a variety of Forensic fields and careers.

Law Studies is meant to provide a general introduction to the legal environment that affects individuals and businesses. In addition to providing a general introduction to the American Legal System, this course focuses on legal topics particularly relevant to everyday life such as criminal law and torts. Also, this course covers an introduction to trial procedure.

### **M/J Orchestra1-2**

The purpose of this course is to provide students with basic performance skills as it relates to string orchestra. Students will learn performance practice techniques on either Violin, Viola, Cello, or String Bass. Course content will cover basic notation, instrument specific performance technique, basic ensemble skills, and performance practice as an ensemble. This course does not provide instruction in Wind, Keyboards, or Guitars.

### **M/J Orchestra 3**

The purpose of this course is to further the student's understanding of the Orchestra repertoire. Students will work on advancing their performance techniques through rehearsals, performances, and/or competitions. This course is not a beginners course, and needs director prior approval for participation. All students must complete Orchestra I prior to consideration for the upper level ensembles.

### **M/J Speech**

The purpose of this course is to provide instruction and practice in verbal and nonverbal systems of communication.

### **M/J Theatre**

Students learn the basics of building a character through such activities as pantomime, improvisation, and effective speaking using articulation, projection, and breathing. Students also learn the importance of technical theatre and explore the use of such elements as costumes, props, and scenery. Students practice writing for the theatre and explore various theatre roles and functions. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom.

### **M/J Video Game Design ALICE (*Doral Academy of Technology Students ONLY*)**

Digital fluency for the 21st century student extends beyond basic computer uses of email, word processing and web surfing and into the realm of using tools for collaboration, creative purposes, and critical thinking. Students who participate in the imaginative world of video games and interactive web sources find creating video games creative, engaging, and fun. This course utilizes Alice, an innovative 3D programming environment that makes it easy to create an animation for telling a story, playing an interactive game, or sharing a video on the web. Alice allows students to learn fundamental programming concepts in the context of creating animated movies and simple video games. In Alice, 3-D objects (e.g., people, animals, and vehicles) populate a virtual world and students create a program to animate the objects. When students learn to code in Alice, they gain experience with all the programming constructs typically taught in an introductory programming course.

### **M/J Video Game Design Scratch – 0.5 credit (*Doral Academy of Technology Students ONLY*)**

Digital fluency for the 21st century student extends beyond basic computer uses of email, word processing and web surfing and into the realm of using tools for collaboration, creative purposes, and critical thinking. Students who participate in the imaginative world of video games and interactive web sources find creating video games creative, engaging, and fun. This course utilizes Scratch, a free graphical, drag and drop style programming language for people of all ages. Developed by the Massachusetts Institute of Technology (MIT), Scratch introduces students to the concepts of computer programming. The ability to code computer programs is an important part of literacy in today's society. When students learn to code in Scratch, they learn important strategies in solving problems, designing projects, and communicating ideas.

# **DORAL ACADEMY OF TECHNOLOGY**

## **(6<sup>TH</sup>- 8<sup>TH</sup> GRADE ONLY)**

### **Intro to Science and Technology – 6<sup>th</sup> Grade**

The curriculum is built to identify science, technology, engineering and mathematics (STEM) activities to improve student performance and outcomes in the form of competitions with a special emphasis on **engineering design concepts**.

Upon completion of the course the student will be able to:

- Recognize the need for, and demonstrate the ability to, engage in life-long learning
- Understand how the activities relate to the math and science being taught in the classroom
- Describe various methods used to manage and schedule projects
- Participate in and/or conduct design reviews
- Collect, analyze and interpret data
- Function on multi-disciplinary teams
- Allowing students to make connections between his/her learning and a world of opportunities

### **Robotics – 7<sup>th</sup> Grade**

The curriculum is built around the fundamental understanding of the systems that make up robots and the development of workplace competencies. The cornerstone of the class involves solving engineering design problems.

Upon completion of the course the student will be able to:

- Identify, formulate solutions for, and solve engineering technology problems using engineering design processes
- Apply knowledge of mathematics, science and technology to solve robotic engineering technology problems
- Function on multi-disciplinary teams
- Communicate effectively using various forms of communication
- Recognize the need for, and demonstrate the ability to, engage in life-long learning
- Describe various methods used to manage and schedule projects
- Participate in and/or conduct design reviews
- Collect, analyze and interpret data

### **Future City – 8<sup>th</sup> Grade**

This flexible, cross-curricular educational program gives students an opportunity to do the things that engineers do—identify problems; brainstorm ideas; design solutions; test, retest and build; and share their results. This process is called the engineering design process. With this at its center, Future City is an engaging way to build students' 21st century skills.

Upon completion of the course the student will be able to:

- Apply math and science concepts to real-world issues
- Develop writing, public speaking, problem solving, and time management skills
- Research and propose solutions to engineering challenges
- Discover different types of engineering and explore careers options
- Learn how their communities work and become better citizens
- Develop strong teamwork skills