

Career & Technical Education & Fine Arts Course Descriptions

COMPUTER SCIENCE

M/J Computer Applications in Business (#820022011 / #820021011): This course develops practical skills in keyboarding, Word, PowerPoint and Excel. Additionally, students explore creative expression and problem solving through Scratch coding. Instruction and learning activities are provided in a computer lab setting for hands-on experience with equipment, materials, and technology. **Paired Semester Courses**

M/J Computer Science Discoveries (#020000002): This computer lab-based course introduces students to computer science as a vehicle for problem solving, communication, entertainment, and personal expression. The course focuses on the visible aspects of computing and encourages students to see where computer science exists around them and how they can engage with it. They develop personal websites with HTML/CSS, design games and apps with JavaScript, and engage in physical computing with light/sound circuit boards. **Annual Course**

M/J Robotics (#900920001): Exploration into the field of computer science continues with this computer lab-based course. Through design and building of VEX IQ robots and coding with VexCode, students enhance their STEM skills and participate in extracurricular competitions throughout the year. Supplemental explorations in computer science and robotics prepare students to continue the track in high school. **Prerequisite:** M/J Computer Science Discoveries & Teacher Recommendation **Annual Course**

Foundations of Programming-Python, (#900721001): This course teaches basic Python 3 programming, with an emphasis on developing logical thinking and problem-solving skills. Students will start with Turtle graphics, and then move to console programming. With newly developed Python skills, students program CodeBots (no building involved) to move, make light patterns, and play music. Finally, Python will be used to develop basic AI chatbots. **Annual Course**

Advanced Placement Computer Science Principles, (#020033502): In this course, students learn to design and evaluate solutions and to apply computer science to solve problems through the development of algorithms and programs. They incorporate abstraction into programs and use data to discover new knowledge. They also explore cybersecurity and how computing innovations and computing systems, including the Internet, work, and their potential impacts on society. In the Create Performance Task (30% of the AP score), students design and code an app to solve a problem, enable innovation, explore personal interest, or express creativity. The remaining 70% is a multiple-choice exam. Prior coding experience is welcome, but not necessary. **Prerequisite:** Teacher Recommendation Required **Annual Course**

Advanced Placement Computer Science A, (#020032002): This course introduces students to computer science through programming. Fundamental topics in this course include the design of solutions to problems, the use of data structures to organize large sets of data, the development and implementation of algorithms to process data and discover new information, the analysis of potential solutions, and the ethical and social implications of computing systems.

The course emphasizes object-oriented programming and design using the Java programming language. The AP exam is comprised of 40 multiple-choice questions and 4 free-response questions. **Prerequisite:** Completion of AP Computer Science Principles. **Annual Course**

ENGINEERING TECHNOLOGY

Engineering I Honors, (#840111001): This course helps students understand the field of Engineering/Engineering Technology and prepares them for post-secondary Engineering college programs by developing a more in-depth proficiency in the associated mathematics, science, and technology knowledge and hard skills such as computer aid design and construction tools. The course also includes essential concepts of future technology and design, as well as concerns about the social and political implications of technological change. Major areas of studies include architecture, civil engineering and maritime. Satisfies a Practical Arts/Fine Arts requirement. **Annual Course**

Engineering II Honors, (#840112001): Second year students learn mechatronics engineering, which is study of the applications of mechanical, fluid, electrical and thermal concepts, computer applications and the technical skills of engineering technology. Instructions will be provided in a laboratory setting using hands-on experience related to all aspects of mechatronics engineering. Technological devices will provide students with design, construct, and problem-solving experiences. Activities will also include the work group organization, work breakdown of structures, legal and ethical constraints on the practice of engineering, safety, and leadership skills. **Prerequisite:** Engineering I, teacher recommendation required.

Annual course

Engineering III Honors, (#840113001): Third year students' study engineering entrepreneurship. Students work in teams to design, engineer, prototype, construct, test, redesign, test again, and then produce a finished "project" that is presented to a panel of industry leaders.

The advanced content and activities will also include the study of entrepreneurship, work group organization, work breakdown structures, personal and business finance, legal and ethical constraints on the practice of engineering, safety, and leadership skills. Satisfies a Practical Arts/Fine Arts requirement. **Prerequisite:** Engineering II, teacher recommendation required.

Annual course

Advanced Technology Applications Honors, (#860190001): The purpose of this course is to provide students with the opportunity to develop a project from "vision to reality". Working in teams in a simulated work environment where school staff as their customers. The student, teacher, and team members must participate in an advanced application project conference which is essential to design learning experiences that are appropriate for each individual learning needs and career interests. Satisfies a Practical Arts/Fine Arts requirement.

Prerequisites: Engineering I, II, III, teacher recommendation required. **Annual Course**

FINE ARTS

M/J Art in World Cultures, (#010007001): Students explore art from around the world through project-based activities. Based on directed investigation, students reinterpret selected forms to promote understanding of themes, purposes, symbolism, and traditional

formal characteristics.

Students compare various cultural responses in art to universal themes, gaining respect for diverse perspectives and the rich heritage shared by cultures from around the world. Supporting geographic, cultural and societal studies, and historical context help students refine their understandings of time and place in global cultures. Students consider the value of preserving these works in today's museums and other public buildings, private collections, and in digital format for sharing and study via the Internet. This course incorporates hands-on activities and consumption of art materials.

Semester Course

M/J Exploring 2D Art, (#010100502): Students investigate a wide range of media and techniques, from both an historical and contemporary perspective, as they engage in the art-making processes of creating two-dimensional works, which may include drawing, painting, printmaking, and/or collage. Student artists reflect on their own artwork and that of others through critical analysis to achieve artistic goals related to craftsmanship, technique, and application of 21st century skills.

Opportunities are provided for creative decision-making in the context of the structural elements of art and the organizational principles of design. This course incorporates hands-on activities and consumption of art materials. **Semester Course**

M/J Intro to Art History, (#0100060011): Students take an inquiry-based approach to exploring, researching, and analyzing works of art across time and cultures. Through the study of art exemplars and project-based activities, students learn to identify the functions, forms, media, styles of art, cultural ideas, and themes related to a variety of time periods and geographical places and will express their own interpretations in a variety of ways. The course lays a foundation for the art criticism process, examining and comparing how artists have solved visual problems and made meaning across time, place, and culture. Career options related to art history and criticism are also explored. This course incorporates hands-on activities and consumption of art materials. **Annual Course**

M/J 2D Studio Art 1, (#0101010011): Students explore media and techniques used to create a variety of 2-D artworks through developing skills in drawing, painting, printmaking, and collage. Students practice, sketch, and manipulate the structural elements of art. Investigation of artworks from Western and non-Western cultures provide 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. **Annual Course**

M/J 2D Studio Art 2, (#010102501): Students explore media and techniques used to create a variety of 2-D artworks through developing skills in drawing, painting, printmaking, and collage. Students practice, sketch, and manipulate the structural elements of art. Investigation of artworks from Western and non-Western cultures provide 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. **Annual Course**

Drawing / Art Appreciation 1 (#010434001): Students experiment with the media and techniques used to create a variety of two-dimensional (2-D) artworks through the development of skills in drawing. Students practice, sketch, and manipulate the structural elements of art to improve mark making and/or the organizational principles of design in a composition from observation, research, and/or imagination. Through the critique process, students evaluate and respond to their own work and that of their peers. This

course incorporates hands-on activities and consumption of art materials. **Annual Course**

Drawing / Art Appreciation 2, (#010435001): Students develop and refine technical skills and create 2-D compositions with a variety of media in drawing. They sketch, manipulate, and refine the structural elements of art to improve mark-making and/or the organizational principles of design in a composition from observation, research, and/or imagination. Through the critique process, students evaluate and respond to their own work and that of their peers.

This course incorporates hands-on activities and consumption of art materials. **Annual Course**

Drawing 3 Honors (#0104360): 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. *Teacher Recommendation Required* **Annual Course**

AP 2-D Art & Design (#010935001): Graphics Design, Photography, Illustration, and Digital Art. In an AP Art and Design course, students develop the skills that artists and designers use, and create a portfolio of work that is assessed to produce their AP score. Students will investigate materials, processes, and ideas; make art and design; and present art and design.

Each portfolio includes: *Sustained Investigation*: 15 works. Some may be supplemental sketches or details of a closely connected theme. Also included is a 1200-character written inquiry statement, as well as a short statement about each work's process, materials, and size. *Selected Works*: 5 actual works selected from the sustained investigation that represent your top five works, along with a short statement for each on the idea, materials, size, and the process.

Teacher Recommendation Required **Annual Course**

AP 2-D Drawing, (# 010430001): Drawing, Painting, Mixed Media, Printmaking. This portfolio is designated for work that focuses on the use of mark-making, line, surface, space, light and shade, and composition. Students should consider marks that can be used to make drawings, the arrangement of marks, the materials and processes used to make marks, and relationships of marks and ideas. *Teacher Recommendation Required* **Annual Course**

HOSPITALITY & FOOD OPERATIONS

Culinary Arts I, (#880051002): This course covers the history of the food service industry and careers in that industry. Also covered are state mandated guidelines for food service and how to attain food handler training certification; safety in the workplace; employability skills; leadership/teamwork skills; care and use of commercial culinary equipment; basic food science; basic nutrition; and following recipes in food preparation labs. **Annual Course**

Culinary Arts II, (#880052001): In this course students will learn and perform front-of-the-house and back-of-the-house duties. Students will prepare quality food products and

present them creatively; demonstrate safe, sanitary work procedures; understand food science principles related to cooking and baking; and utilize nutrition concepts when planning meals/menus.

Students will continue their hands-on training by preparing and serving meals for MAST Academy's Fish Tales Café. Satisfies a Practical Arts/Fine Arts requirement.

Prerequisite: Culinary Arts I. **Annual Course**

Culinary Arts III Honors, (#880053002): In this course the student will research career opportunities in professional cooking/baking; follow guidelines on food selection, purchasing, and storage; and use communication skills. Students will prepare and present a variety of advanced food products; create centerpieces; and research laws specific to the hospitality industry (including handling of alcohol). Also covered are management skills; how to develop a business plan; and utilization of technology in the workplace. Students will be knowledgeable about food safety manager training/certification training programs that are acceptable in Florida. Students will continue their hands-on training by preparing and serving meals for MAST Academy's Fish Tales Café. Satisfies a Practical Arts/Fine Arts requirement. **Prerequisite:** Culinary Arts II. **Annual Course**

Culinary Arts IV Honors, (#880054003): In this course the student will research career opportunities in professional cooking/baking; follow guidelines on food selection, purchasing, and storage; and use communication skills. Students will prepare and present a variety of advanced food products; create centerpieces; and research laws specific to the hospitality industry (including handling of alcohol). Also covered are management skills; how to develop a business plan; and utilization of technology in the workplace. Students will be knowledgeable about food safety manager training/certification training programs that are acceptable in Florida. Students will continue their hands-on training by preparing and serving meals for MAST Academy's Fish Tales Café.

Prerequisite: Culinary Arts III. **Annual Course**

MUSIC & PERFORMING ARTS

M/J Steel Pan Band, (#130208002): Students in this entry-level class focus on the development of musical and technical skills on a specific instrument or voice through etudes, scales, and selected music literature. Through problem-solving, critical thinking, and reflection, students develop the physical and cognitive skills to be more disciplined performers. 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. **Annual Course**

M/J Steel Pan Band 2, (#130209001): Students in this novice-level class continue to develop musical and technical skills on a specific instrument or voice through developmentally appropriate solo literature, etudes, scales, and exercises. Through problem-solving, critical thinking, and reflection, students develop the physical and cognitive skills necessary to be more disciplined performers. 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. **Prerequisite:** M/J Steel Pan Band. **Annual Course**

M/J Steel Pan Band 3, (#130210001): Students in this intermediate-level class develop their musical and technical skills further on a specific instrument or voice, and expand

their technical and performance skills, enhanced by historical and cultural background knowledge of the music. Students explore more demanding solo literature, etudes, and technical exercises with increasing independence. 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.

Prerequisite: M/J Steel Pan Band 2. **Annual Course**

Music Ensemble 1, (#130540001): Students develop basic musicianship and ensemble performance skills through the study of basic, high-quality music in diverse styles. Student musicians focus on building foundational music techniques, music literacy, listening skills, and aesthetic awareness. 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. This course, if used for an instrumental ensemble, may also require students to obtain a musical instrument (e.g., borrow, rent, purchase) from an outside source. **Prerequisite:** Previous vocal or instrumental ensemble experience or private instruction at the intermediate level. **Annual Course**

Music Ensemble 2, (#130541001): Students continue building musicianship and performance skills through the study of high-quality music in diverse styles. Student musicians learn to self-assess and collaborate as they rehearse, perform, and study relevant musical styles and time periods. 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. This course, if used for an instrumental ensemble, may also require students to obtain a musical instrument (e.g., borrow, rent, purchase) from an outside source. **Prerequisite:** Previous vocal or instrumental ensemble experience or private instruction at the advanced level. *Teacher Recommendation Required.* **Annual Course**

Music Ensemble 3, (#130542001): Students strengthen vocal or instrumental ensemble performance skills, music literacy, and analytical skills through the study of high-quality music in diverse styles. Student musicians learn to self-assess and collaborate as they rehearse, perform, and study relevant history and cultures. 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. This course, if used for an instrumental ensemble, may also require students to obtain a musical instrument (e.g., borrow, rent, purchase) from an outside source.

Prerequisite: Previous vocal or instrumental ensemble experience or private instruction at the advanced level. *Teacher Recommendation Required.* **Annual Course**

Music Ensemble 4 Honors, (#130543001): Students refine their critical listening, music literacy, and ensemble skills through the study, rehearsal, and performance of high-quality, advanced literature. Students use reflection and problem-solving skills with increasing independence to improve their performance and musical expressivity. 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. This course, if used for an instrumental ensemble, may also require students to obtain a musical instrument (e.g., borrow, rent, purchase) from an outside source. **Prerequisite:**

Extensive vocal or instrumental ensemble experience or private instruction at the advanced level. *Teacher Recommendation Required.* **Annual Course**

Musical Theatre 1, (#040070001): Students' course work focuses on, but is not limited to, acting, vocal performance, dance, non-dance movement, and staging, which transfer readily to performances in musicals and other venues. Students survey the evolution of music in theatre from ancient Greece to modern Broadway through a humanities approach and representative literature. Music theatre students explore the unique staging and technical demands of musicals in contrast to non-musical plays. 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.

Annual Course

Musical Theatre 2, (#040071001): Students learn from the styles and techniques used by well-known singer-actor-dancers and choreographers to build a performance portfolio for auditions and/or interviews. Students examine the contributions of major writers, composers, lyricists, and choreographers of musical theatre and learn to analyze the structures, stories, and settings of musical theatre exemplars to understand how those components serve the story and concept.

Students extend their dance and movement techniques required to sing and dance at the same time. 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. **Prerequisite:** Musical Theatre I. **Annual Course**

Musical Theatre 3, (#040072001): Students refine their audition techniques and performance/audition portfolio and consider the contributions of musical theatre in the community and beyond. Students select a number of pieces to showcase their abilities and become conversant about individuals who, currently and in the past, are considered major contributors to the field. Students refine their dance and movement techniques required to sing and dance for long periods of time in rehearsals and performance. 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.

Prerequisite: Musical Theatre II. **Annual Course**

Musical Theatre 4, Honors, (#130347001): Students refine their critical listening, music literacy, and ensemble skills through the study, rehearsal, and performance of high-quality, advanced literature. Students use reflection and problem-solving skills with increasing independence to improve their performance and musical expressivity. 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. **Prerequisite:** Musical Theatre III. **Annual Course**

Steel Pan Band 1, (#130550001): Students in this entry-level class focus on the development of musical and technical skills on a specific instrument or voice through etudes, scales, and selected music literature. Through problem-solving, critical thinking, and reflection, students develop the physical and cognitive skills to be more disciplined performers. 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. **Annual Course**

Steel Pan Band 2, (#130551001): Students in this novice-level class continue to develop musical and technical skills on a specific instrument or voice through developmentally appropriate solo literature, etudes, scales, and exercises. Through problem-solving, critical thinking, and reflection, students develop the physical and cognitive skills necessary to be more disciplined performers. 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. **Prerequisite:** Steel Pan Band I. **Annual Course**

Steel Pan Band 3, (#130552001): Students in this intermediate-level class develop their musical and technical skills further on a specific instrument or voice, and expand their technical and performance skills, enhanced by historical and cultural background knowledge of the music.

Students explore more demanding solo literature, etudes, and technical exercises with increasing independence. 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.

Prerequisite: Steel Pan Band II. **Annual Course**

Steel Pan Band 4 Honors, (#130553001): Students in this advanced class refine their musicianship and performance skills on a specified instrument or voice. Students prepare for postsecondary and community music experiences and develop artistry independently through a variety of advanced solos, etudes, and excerpts. 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. **Prerequisite:** Steel Pan Band III. *Teacher Recommendation Required* **Annual Course**