Glendale Unified School District

<u>Middle School</u>

Date
(Meeting date will be typed in after Board Approval.)

Department: Career Technical Education

Course Title: Computers and Multimedia Essentials *(replacing Computer Applications)*

Course Code: 5183GV, 5183GV6, 5183GV7, 5183GV8 (Semester Course)

Grade Level(s):   6-8

School Course offered at: Rosemont Middle School, Wilson Middle School, Roosevelt Middle

                                     School

Course Credits:

Recommended Prerequisite: none

Recommended Textbook: none

Course Overview: Computers and Multimedia Essentials will provide an introduction to computer basics and give students the opportunity to create a variety of multimedia projects using the latest software and up-to-date equipment. This class will cover introductory skills in a variety of the CTE pathways. These pathway skills will include computer-based careers and trends, terminology, best practices, real-world applications, collaboration, problem solving, and leadership skills. This course promotes skills that can be applied across the curriculum and offers preparation relevant to 21st century skills.

Course Content:

Unit I: Introduction to class and CTE   **(2 weeks)**
Xello, Nepris, Adobe Spark

STANDARDS:
CTE Anchor Standards: 1.0, 2.0, 3.0, 4.0, 11.0
Common Core Standards: LS 9-10, 11-12.6; SLS 11-12.2; WS 11-12.6

    A. Description: Students will be introduced to the class and classroom procedures. They will also be introduced to what CTE stands for and what pathways are part of the program.

    B. Summary: Student Production: Students will be introduced to classroom procedures and expectations. They will use Xello (or any other college/career readiness programs) to explore career options that match their personality. They will then use Nepris (videos from professionals) and other internet sources to explore those careers. With the information researched from these sources, students will create a project (Adobe Spark) that will summarize their findings about a specific career that interests them.

Student Learning Outcome: Students will become familiar with the norms of the classroom and the equipment available to them. Students will become familiar with what CTE is and the pathways available to them in GUSD as well as . They will be able to use the internet effectively in order to look for accurate and useful information about the different pathways. They will make accounts on Xello in order to see what pathway might fit them according to their interests and use Nepris to research a specific career.

Unit II: Business and Finance Pathway   **(4 weeks)**
Microsoft/Google

STANDARDS:
Information Communication Technologies Career Ready Anchor Standards: 2.4, 2.5, 10.3, 10.9
Information Support & Services Pathway Standards: A1.0, A3.1, A3.2, A4.1, A4.2, A7.0, A8.0
Business and Finance Pathway Standards: B1.0, B3.0
Common Core Standards: WS 11-12.4, A-REI, F-IF, S-ID

    A. Description: Business and Finance Pathway will introduce students to skills and applications used in Information Communication Technology Software as well as the Business and Finance Sector.
    B. Summary: Students will start by learning how to type properly using a typing application. Students will learn how to use a QWERTY keyboard and all 10 fingers in typing. Students will practice typing throughout the semester through practice but also as they create projects in other units. Students will use a word processing application to learn how to format professional business documents such as letters and resumes. Students will also learn how to create a spreadsheet. They will learn how this application differs from word processing. They will also learn how to create a budget sheet.

Student Learning Outcome: Students will learn how to type properly. They will learn how to type efficiently not only for completing assignments in this and other courses but also to get a typing certification with at least 40 WPM. Students will use a word processing application in a professional manner. They will learn how to use alignments, font, size, style, and bullets/numbering to create their documents as well as how to do printing management. Students will learn how to use a spreadsheet application by being able to change column/row size, alignment, color, shading, border thickness and style, charts, and formulas to create their spreadsheet as well as printer management. Students will learn how to create and use budgets to guide financial decision making as well as research skills for job selection. Students will identify various forms of saving and spending that they will gain from income and lose from expenses. They will use critical thinking skills on what items are necessities and what are luxurious and how that differs from state to state and low income to high income (dealing with socio-economic status).

Unit III: Information and Communication Technology Pathway   **(4 weeks)**
Ozobots

STANDARDS:
Computer Science Teachers Association Standards: 1A-C-02, 1B-CS-02, 1A-AP-12, 1B-AP-12, 1B-AP-09, 1B-AP-10, 1B-AP
Information Communication Technologies Career Ready Anchor Standards: 2.4, 2.5, 10.3, 10.9
Information Support & Services Pathway Standards: A1.0, A3.1, A3.2, A4.1, A4.2, A7.0, A8.0

    A. Description: Ozobots are small smart robots that are programmable through drawn lines and color codes, and through OzoBlockly editor where students can create autonomous behaviors and complex programs. Students will learn basic robotics and programming with a hands-on approach.
    B. Summary: Student Production: Students will complete an introductory coding unit using Ozobots. First, students will complete ten lessons to learn to control Ozobots using color codes and to become familiar with basic coding concepts like cause/effect and debugging. Next, students will take full control of their bot with a block-based programming editor. They will complete ten lessons to learn higher-level programming concepts. The block programming will build a foundation on which to explore JavaScript, Python, and other programming languages. At the end of the unit, students will collaborate to create a maze that applies learned concepts and demonstrates their understanding of core programming con

Student Learning Outcome: Students will develop basic robotics and coding literacy through the Ozobot program, and therefore gain key 21st century skills to unlock future academic and career opportunities. The 21st century skills they will develop include collaboration, communication, creativity, critical thinking, and problem solving. After completing the introductory unit, students will understand more complex coding concepts like sequences, variables, functions, loops, logic and conditional statements, as well as be able to deconstruct and rebuild the code to improve the robots' functionality. At the end of the unit, students will work collaboratively in groups to create a maze that utilizes the concepts they have learned and applies their understanding. Students will be tested on understanding of core programming concepts before and after the program. Students will also be surveyed on overall interest in pursuing computer science, robotics or programming for higher education and a career.

Unit IV: Arts, Media, and Entertainment Pathway   **(4 weeks)**
Adobe Spark

STANDARDS:
Common Core Standards: ELA.7-8.LS.C.1.3, ELA.7-8.R.CAGT.2.6
Career Technical Education Manufacturing & Product Development Pathway Standards: A.A1, A1.2,
B.B1.1, B.B1.2 , A2.1, A2.2, A3.1, A2.4, A1.1
ISTE Standards for Students:
- 1c Students use technology to seek feedback that informs and improves their practice and to demonstrate their learning in a variety of ways.
- 4b Students select and use digital tools to plan and manage a design process that considers design constraints and calculated risks.
- 6b Students create original works or responsibly repurpose or remix digital resources into new creations.
- 6d Students publish or present content that customizes the message and medium for their intended audiences.

A. Description: This unit is designed to provide a basic overview of digital media and design. Students will review types of design, media selection, and visual communication concepts such as composition, typography, and color. Students will gain an understanding of the application of basic graphic art design principles to achieve specific goals.
B. Summary: Student Production: Students will explore their own creative process and impactful creative communication. They will also explore how to use language, images, color, music, and themes to set a tone and cater a message to a specific audience. Students will create different digital media projects using Adobe Spark. They will create a social media post, greeting card and inspirational quote poster, a topical video and a personal webpage.

Student Learning Outcome: This unit serves as a brief introduction to the Design, Visual and Media Arts sector of the Arts, Media and Entertainment pathway. Students will become familiar with skills and tools for creating, refining, and sharing work. Students will also understand that digital media is a primary means of communication and expression and that this pathway requires the development of knowledge and skills in both visual art concepts as well as new and emerging digital processes. Through the projects completed, students will demonstrate the ability to integrate visual art elements into design projects.

Unit V: Manufacturing and Product Development Pathway   **(4 weeks)**
Sticker Printer, SketchUp, 3D Printer

STANDARDS:
Manufacturing and Product Development Anchor Standards: 2.0, 4.0, 5.0, 10.0, 11.0
Manufacturing and Product Development Pathway Standards: B1.0, D4.0
Engineering and Architecture Pathway Standards: A4.0

A. Description: Students will be introduced on how to use applications to create digital and physical products that follow specific specifications as well as creative effort.

B. Summary: Student Production: Students will learn how to use a 3D modeling software. They will learn how to use the different tools in the program to create freehand models as well as follow specific measurements from diagrams to create an exact replica. Students will use the digital 3D models or 2D drawings to produce physical representations.

Student Learning Outcome: Students will learn how to create a 3D object from a 2D shape, they will learn how to measure using feet and inches and how to convert these measurements. Students will learn how to use the 3D software to add/take away parts of an object. Students will learn how to follow a 2D diagram in order to create a 3D model. Students will use this knowledge to create something of their own creation that shows their understanding and creative effort for this unit. Students will learn how to use hardware to manufacture their digital creations into reality.

Unit VI: Website Portfolio   **(2 weeks)**
Google Sites

STANDARDS:
CTE Anchor Standards: 1.0, 2.0, 3.0, 4.0, 11.0
Common Core Standards: LS 9-10, 11-12.6; SLS 11-12.2; WS 11-12.6

A. Description: The Website Portfolio will allow students to reflect on what they've learned about each pathway throughout the entire semester. In addition, students will showcase their projects related to each unit in a cohesive and creative website.
B. Summary:
Student Production: Students will create a website (Google Site) at the start of the semester and learn the formatting skills for this application. Throughout the semester, students will create pages based on each unit where they will upload their projects as well as complete a written reflection.

Student Learning Outcome: Students will create a website that will display their projects and show their understanding of each unit and pathway. Students will research courses available to them after this class (whether in middle school or high school) that can further their learning and exploration of that pathway. At the end of the semester, students will reflect on what they have learned about each pathway, skills they have gained, how these skills can be used in the real world, and which pathway interests them in the future.