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Ms. Davis' Computer Courses Syllabus

Computer Science- Preparing you for EVERY job.

Jefferson Academy High School
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Instructor and Contact Information	<p>Ms. Davis Email: jdavis@jacomputers.org or jdavis@jajags.com Web site: www.jacomputers.org Mission: Provide quality education in computer science and train students to effectively apply this education to solve real-world problems giving them a competitive advantage in the ever-changing global work environment of the 21st century. On Campus Times: Mondays-Fridays: 7am - 3:55pm As I am often working on technology in other areas of the building and not in my room or in meetings, please let me know if you need to see me. See drop in and appointment times below. Drop In Times: Tuesday-Thursday 7:30-8:15 am Appointment Times: Daily 7:00-7:30am; Monday, Wednesday, Thursday 3:20-3:55pm</p>
Course Description: Click the class title to see the course objectives	<p>Intro to Computers - is an introductory computer science course that empowers students to create authentic artifacts and engage with computer science as a medium for creativity, communication, problem solving, and fun. Office 1 - provides you with the proper knowledge, skills and procedures to create documents, workbooks, and presentations using Office 2016 (Microsoft Word, Microsoft Excel, and Microsoft PowerPoint). (prerequisite Intro to Computers) Office 2 - offers a deeper study of the Microsoft Office 2016 suite including Word, Excel, and PowerPoint. The knowledge gained from Office 1 will be expanded as you learn more functions available in each application. (prerequisite Office 1) HTML5 & CSS - master the HTML5 and CSS3 skills you need to create exceptional web designs. This class covers basic to advanced concepts and skills for developing web pages and websites using the most current versions of HTML5 and CSS3. You will learn to create dynamic websites that incorporate forms, videos, JavaScript, cutting-edge CSS3, and more. (prerequisite Intro to Computers) Dreamweaver - allows you to quickly create Web pages without writing the code in HTML. In this class you learn about the Dreamweaver workspace, how to develop a Web Page, and work with text, graphics, links, tables, and forms. If time permits, you will use style sheets, create layers, and add multimedia elements. (prerequisite HTML) Adobe Animate - offers a fun learning experience because it allows you to create animations, transformations, creative typography, and Internet applications. You will learn the basics of Animate which include learning the Animate environment, drawing objects, working with symbols and interactivity, creating animations, and creating special effects. You will prepare and publish movies and complex animations that run seamlessly across desktops, smart phone and tablets. (prerequisite Intro to Computers) Adobe InDesign - learn how to create engaging page layouts, flow and edit text, create and use styles, incorporate graphics and tables, and create PDF forms and ebooks. (prerequisite Intro to Computers) Pre-Architecture - Building Information Modeling (BIM) is an intelligent model-based process that provides insight for creating and managing building projects faster, more economically, and with less environmental impact. Students will learn basic techniques for creating building information models, including: building elements, building envelope, curtain systems, interiors and circulation, and creating families in AutoDesk Revit. (prerequisite Intro to Computers) 3-D Design - Students will learn to make original designs and maybe even customize those designs to specific people. That means you can't just download and print other people's files— you need to rock that software yourself. Well, if you are just learning how to do that or have outgrown the “starter” apps, you've come to the right place! With this class you'll soon be making your own designs with Autodesk's Fusion 360 software. The course fee covers the 3-D printing of student designs. Course fee - \$30 (prerequisite Intro to Computers) App Development - Never coded but want to learn how to build apps? Then you've come to the right place. This course targets beginners of all ages and starts at the very beginning--setting up App Inventor. With video and text-based lessons, this online class will step you through building progressively more complex apps. You'll learn how to build many types of apps and you'll learn programming concepts and terminology.(prerequisite Intro to Computers) Cybersecurity - As our world becomes increasingly dependent on technology, cybersecurity is a topic of growing importance. It is crucial that companies and individuals take precautions to protect themselves from the growing threat of cyber attacks. This course prepares students with crucial skills to be responsible citizens in a digital future. Students will learn foundational cybersecurity topics including networking fundamentals, software security, and basics of cryptography. (prerequisite Intro to Computers) Python Programming - This course will provide a gentle, yet intense, introduction to programming using Python for highly motivated students with little or no prior experience in programming. The course will focus on planning and organizing programs, as well as the grammar of the Python programming language. (prerequisite Intro to Computers) Raspberry Pi - The Raspberry Pi is a small, affordable single-board computer that you will use to design and develop fun and practical IoT(Internet of Things) devices while learning programming and computer hardware. In addition, you will learn how to setup up the Raspberry Pi environment, get a Linux operating system running, and write and execute some basic Python code on the Raspberry Pi. You will also learn how to use Python-based IDE (integrated development environments) for the Raspberry Pi and how to trace and debug Python code on the device. Course fee - \$54.99 (prerequisite Python Programming) Python Game Programming - Once you have an understanding of the basics of Python programming, you can now expand your abilities using the Pygame library to make games with graphics, animation, and sound.</p>

	<p>(prerequisite Python Programming) Beginning Java Programming– An introduction to Java using a project-oriented approach to learning, presenting difficult Java programming concepts in a straightforward and exciting way! The real-world examples provided reinforce concepts and empower student to apply the knowledge acquired. This course maps the Computer Science AP examination. (prerequisite Intro to Computers) Java Game Programming – This hands-on class for beginners allows you to increase your skill level along the way as you create a game full of cool artwork and intricate details. The class serves as an introduction to the field of game programming using Java. From the basics of creating simple Java programs and writing graphics code to utilizing Java's advanced 2D library and adding sound effects and music, this class will help you acquire all the skills you need to create a professional-quality, sprite-based game.(prerequisite Beginning Java Programming) AP Computer Science A - AP® Computer Science A is both a college-prep course for potential computer science majors and a foundation course for students planning to study in other technical fields such as engineering, physics, chemistry, and geology. The course emphasizes programming methodology, procedural abstraction, and in-depth study of algorithms, data structures, and data abstractions, as well as a detailed examination of a large case study program. Instruction includes preparation for the AP Computer Science A Exam. Click here for additional info on AP Computer Science (prerequisite Beginning Java Programming and Permission of Instructor) Note: the written AP Exam is May 17, 2019 in the afternoon. Computing Ideas - The Computing Ideas course is a first computer science course introducing the basics of designing a web page, and how information and images are represented with computers. Students will learn to code using blocks to drag and drop, but they can switch between blocks and text as desired. Students will create a portfolio on the web of projects they build throughout the course. With a unique focus on creativity, problem solving and project based learning, Computing Ideas gives students the opportunity to explore several important topics of computing using their own ideas and creativity and develop an interest in computer science that will foster further endeavors in the field. (prerequisite Intro to Computers) AP Computer Science Principles - This course is a rigorous, entry-level computer science course that introduces high school students to the foundations of modern computing. The course covers a broad range of foundational topics such as programming, algorithms, the Internet, big data, digital privacy and security, and the societal impacts of computing. (prerequisite Creative Computing and Permission of Instructor) Note: the written AP Exam is May 10, 2019 in the afternoon. C# Programming - This course gives students who are new to programming an introduction to programming principles and concepts and hands-on coding skills by incorporating engaging new examples to introduce a variety of fundamental programming concepts, from data types and expressions to arrays and collections, all using the latest version of today's popular C# language. (prerequisite Intro to Computers) Immersive Realities- Virtual Reality is the computer-generated simulation of a three-dimensional image or environment that can be interacted with in a seemingly real or physical way. Students will create content for virtual reality. Mixed reality blends real-world and virtual content into hybrid environments where physical and digital objects coexist and interact. Students will learn to build mixed reality experiences for Microsoft HoloLens. (prerequisite C# Programming)</p>
Homework:	Homework will be assigned as needed. If you do not complete your work in class, I expect the work to be completed outside of class time. Time management is a big part of the class. You are expected to complete all assignments either in class or outside of class and manage your time and effort accordingly. If you complete work on time in class, homework will not be assigned.
Materials:	Pen or Pencil

Deadlines

Just as an employer expects efficiency out of an employee, so do I. You are expected to complete the required assignments of the course. If you fall behind, you are expected to make up assignments outside of class time and by increasing your focus in class. You are expected to set intermediate goals for completing your work and to keep track of your time. I do accept work after the first and second deadlines for up to full credit but the third deadline is a final deadline to allow for grading time. Plan accordingly to make sure you finish everything before the third and final deadline. You will be graded on meeting the following deadlines:

	Common Assignments	First deadline	Second deadline	Third deadline (Final deadline)
Due	Due by August 17 for all Classes	Sept 4	Sept 19	Oct 5
Intro to Computers		Office, Web Design	Animations and Game Design	Programming and 3-D Design
Office 1 (PA each Section) SEE BELOW FOR ADDITIONAL CHECKPOINTS		Word 1-3, WPAs	Excel 1-3, EPA	Powerpoint 1-3, PPA
Office 2 (PA each Section)		Word 4, 6,7, WPAs	Excel 4-6, EPAs	PowerPoint 4-6, PPA
HTML5 & CSS3 (PA each chapter)		Chapters 1-3	Chapters 4-6	Chapters 7-8 & PA finalized
Dreamweaver (PA each chapter)		Chapters 1-4	Chapters 5-7	Chapters 8-10
Animate (PA each chapter)		Chapters 1-4, PA each	Chapters 5-8 , PA each chapter	Chapters 9-12 & PA each Ch
InDesign (PA each deadline)		Chapters 1-6	Chapters 7-11	Chapters 12-15
Pre-Architecture(PA Final)		Intro, Warmup 1-3	Tutorial 1-4	Tutorial 5-7 & PA
3-D design (PA each Chapter 6-13)		Chapters 1-5	Chapters 6-9 & PAs	Chapters 10-13 & PAs
JavaScript Programming		Unit 1	Unit 1-2	Unit 3-4
App Development		Modules 1-2	Modules 3-4	Modules 5-6
Python Programming		Level 1 - Chapters 1-5	Level 2 - Chapters 1-5	Level 3 - Chapters 1-6
Raspberry Pi		Projects 1-10	Projects 11-20	Projects 21-25 & PA
Python Game Programming		Chapters 1-4	Chapters 5-8	Chapters 9-12 & PA
Java Programming (PA Final)		Chapters 1 -2	Chapters 3-4	Chapters 5-6
Java Game Programming(End Project)		Chapters 1-4	Chapters 5-8	Chapters 9-10 and project
AP Computer Science A		See notes	See notes	See notes
Computing Ideas		Unit 2	Unit 3	Unit 4

AP Computer Science Principles	See notes	See notes	See notes
C# Programming	Chapter 1-2	Chapters 3-4	Chapters 5-6
Immersive Realities	VR Ch 1-3	VR Ch 4 and AR 100-210	AR 211-250

Learning Needs

- By making the course self-paced, this allows you to progress at your own speed. However, make your time count. This does not mean you slack off during class. In fact, the amount of material is about what a student can do if 100% of the time is spent on the assignments. If you are absent for any reason, spend a lot of time talking or on breaks, or need extra time to finish assignments, you'll probably have a lot of work to do outside of class hours or you may not pass the class.
- This will meet the needs of both fast and slow students. However, students are expected to focus on their work for the entire period every day and do their best job. The grade will be a direct reflection on how much a student is on-task and completing assignments correctly.

Preparation for the Work World (minutes points)

- Employers want a job done well. Therefore, credit will only be given for documents that complete the objectives of the assignment, look professional, and have a minimum of mistakes. Since the spell-check feature is a tool of the computer, this includes correct spelling on all documents. Examples of completed documents are in the book and/or on the Web site. You are expected to check your work against these examples. If an assignment does not meet these guidelines, I will give feedback and may give you the opportunity to make corrections. Chapter assignments that are completed correctly the first time with no errors will receive a 100.
- An employer expects employees to use the resources available to them for solving problems. If you run across problems when creating a document (with either the software or hardware), you are expected to try trouble-shooting yourself, use books and on-line help resources, and your co-workers. Use the instructor as a last resort because she will not be available when you leave the class.
- All employers want employees who arrive to work on-time and are productive throughout the day. Therefore, a minutes grade (90 minutes or points per day) is given based on the number of minutes worked out of the expected 3600 minutes in class (90 minutes points per day for 40 class days) based on the following:
 - You are allowed two 5 minute breaks without penalty per day to stretch, stand up, look at something besides the screen, or use the restroom **as long as you do not disrupt other people in the classroom**. If you fall behind in assignments, this break privilege may be revoked until you have caught up on your assignments. You may also lose this privilege if you disrupt anyone else's work or break any school rules. You must sign out when you leave the classroom. Only one student may be out of the room at a time. **You may only leave the room once per day.** Break Procedure
 - You are expected to be working on your assignments every class period. If you are going to Web sites, playing games, getting out of your chair, talking about things not related to the class and not getting your work done, the teacher may deduct time from your minutes grade and move you to a different location away from distractions.
 - Unexcused** absences, **tardies**, or suspensions count for twice the actual amount of time missed. For example, if you are absent one day without an excuse (skipping), you are docked 180 minutes (2 class periods) toward your productivity grade. If you are late 5 minutes one day to class without an excuse, you are docked 10 minutes on your minutes grade. After the third tardy there are also office consequences.
 - If a student misses half a class or more (unexcused) it counts as an absence not a tardy. Therefore, in this situation, you will have 180 minutes deducted from your productivity grade. Every unexcused tardy after two will also count as 90 minutes deducted from your minutes grade.
 - Suspended students will lose all productivity minutes for any time missed and may make up time at the teacher's discretion.
 - At the discretion and convenience of the teacher, you may make up missed time before or after school, at lunch, or during another class. The teacher may add this time to your productivity grade.** This only applies to unexcused time out of class. If you are absent excused, you are not required to make up time but may need to come in to get caught up on work.

Assignments

Assignments are listed on Ms. Davis' Web site (www.jacomputers.org). The student is responsible for checking this location periodically to see if there are any changes to assignments or notes for their completion.

Assignments are graded for completeness and for quality. Generally, here is how the documents will be graded:

- 2-5 points off if files are saved incorrectly.
- 2-5 points off for an error in doing a procedure or a missing step.
- 1-2 points off for general typos in a document.
- 1-5 points off if words are spelled incorrectly. One point per word, up to five points. Always do a spell check!

Quizzes and Tests

- Below is a schedule of all quizzes and tests for this class.*

September 17 :	<i>Syllabus and Procedures Quiz</i>
September 4 :	<i>Quiz over material from Deadline 1 (see above)</i>
September 19:	<i>Quiz over material from Deadline 2 (see above)</i>
October 5 :	<i>Quiz over material from Deadline 3 (see above)</i>
October 8 & 9 :	<i>Performance Based Project Test</i>
October 10 :	<i>Final Written Exam</i>

Grading System Weights

All Classes (Classes without a Personal Assignment will be 10% for whiteboards and 10% for common assignments)

Whiteboards: 5%

Minutes Points: 20%

Common Assignments: 5%

Deadline 1 Assignments: 10%

Deadline 2 Assignments: 10%
Deadline 3 Assignments: 10%
Personal Assignments: 10%
Quizzes: 10%
Performance Based Test: 10%
Final Exam: 10%

- *The Final Written Exam* in all classes will account for **10%** of your score.

Grading Scale	What Each Grade Means:
A: 90-100%	If you earn an A in this course it means that you put forth maximum effort on each and every task assigned, activity in class, project given, and overall had a positive attitude in class. Very high level of self advocacy.
B: 80%-89%	If you earn a B in this course it means that you put forth good effort on each and every task assigned, activity in class, project given, and had a good attitude the majority of the time in class. Self advocacy is a priority for the student.
C: 70%-79%	If you earn a C in this course it means that you put forth average effort on each task assigned, activity, project, and had a mostly positive attitude in class. Some attempt made to get extra help. Average level of self advocacy.
D: 60%-69%	If you earn a D in this course it means that you put forth very little effort on each task assigned, activity, project, and had a somewhat negative attitude in class. Little effort put into getting extra help.
F: Below 59%	If you earn an F in this course it means that you put forth no effort on each task assigned, activity, project, and had a negative attitude in class. No effort to receive extra help.

- Grades are available on-line through the school website by clicking on the Infinite Campus link. Grades are updated at least weekly.

Discipline Policy

The discipline policy for this class is a simple process. The objective is to change behavior, not punishment. If you violate the class rules, you will be given verbal and written warnings. Further problems will result in detention, notification of parents, and consequences which may include removal from the classroom.

Discipline Consequences: Procedural Steps

1. Verbal warning
2. After School Detention with Ms. Davis
3. Friday School, notification of parents
4. Office Referral

Classroom Rules

- Respect all people by talking and listening appropriately.
- Participate and behave appropriately in group situations.
- Be at your desk and working when the bell rings. See [minutes points](#) for tardy consequences as well as school tardy policy below.
- Each individual is responsible for maintaining the equipment in the classroom and to pickup trash. Avoid spills. In the computer lab, drinks must be in containers with lids. Food is allowed but must be consumed during a break away from the computers.
- Because of viruses, spyware, and other problems, no downloads or changes in settings will be allowed unless approved by the teacher. On your own login you may change desktop or screen saver settings. However, if you are using a guest or group login, you cannot make any changes to the settings.
- *The default in this class is that ALL work will be accomplished individually, UNLESS my permission is given in advance of an assignment/quiz/exam/take-home exam/final. If you are in doubt, please ask.*
- **Electronics**
 - In general, students are not allowed to use any personal electronic device in the classroom. However, since most of the work is independent and some students' productivity is enhanced with music, music players are allowed during independent work and not during lectures as long as they do not disrupt anyone's learning. Cell phones should be set to silent and only used for music during class. Students **must have headphones** in order to listen to music.
 - If a student chooses to inappropriately use an electronic device in class, the following measures will be implemented:
 - First offense: The teacher will confiscate the device and take it to the office. A student can retrieve the device between 3:00 and 3:30 that day.
 - Second offense: The teacher will confiscate the device and take it to the office. Only a parent can retrieve the device between 3:00 and 3:30 that day or any day after. The office will not call the parent. It is the responsibility of the student to let the parent know.
 - Third offense: The teacher will confiscate the device and take it to the office. A parent conference with administration will be required before the device will be returned. The student will not be allowed to use their device for music in the classroom.
- We will also follow all rules outlined in the JA student handbook and Jeffco Conduct Code.

Plagiarism Policy

Turning in any work that is not your own without citation is considered plagiarism. *The default in this class is that ALL work will be accomplished individually, UNLESS my permission is given in advance of an assignment/quiz/exam/take-home exam/final. If you are in doubt, please ask.* Your own words, ideas, and work are the constant expectation. Students will receive no credit for work determined to be plagiarized and will face appropriate consequences determined by the administration.

Tardy Policy

- 1st Tardy-teacher conference
- 2nd Tardy-teacher notifies parent by phone and speaks to the student
- 3rd Tardy-teacher contacts parent-student receives teacher led detention/consequence
- 4th Tardy-referral to office
- 5th Tardy-parent, student and admin meeting at school

Course Requirements

- Attendance: If you are absent, it is your responsibility to determine and make up missed assignments. Since most of the work is done in the lab or on the lab computers, or with textbooks that are only available in the classroom, you may need to schedule a time before or after school or at lunch to complete the work.
- You are expected to make up time for unexcused tardies or absences. Unexcused time requires twice the time to make up the points.
- You are expected to be at every class, on time, and working when the bell rings and ready for instruction whenever the instructor starts.
- You will be expected to participate in class activities: discussions, workshops, and small group opportunities.
- You will be responsible to create and store assignments on the network, personal computer, flash drive, and may be required to prepare some hard copies.
- You should support other students and not disrupt their learning.
- If you need help, you are expected to consult the tools you will always have first: the book, on-line help, and a peer. If you still need help, ask the instructor.

Class and Office Times

Official Office Hours	A	B	C	D	Official Office Hours
Open Lab Daily 7:15-8:15am	Daily(Planning) 8:20 - 9:50	Daily 9:55 - 11:25	Daily 12:10 - 1:40	Daily 1:45 - 3:15	Open Lab Tuesday-Thursday 3:20-4:00pm
Appointments Available Daily 7:15-8:15am					Appointments Available Tuesday-Thursday 3:20-4:00pm

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