Center for Communication Technology Magnet
Course Description and Expectations
Coding 1A: semester 1
CE CSC126 – Game Design and Development: semester 2
Instructor: Mr. Fornstrom
Credit: 5 credit hours each semester **Prerequisite:** Intro to CCTM
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Website: **http://sfornstrom.tjspartans.org/**

INSTRUCTOR BIO
I have taught in the TJ CCT Magnet program since 2000. I graduated from the University of Wyoming with a B.A. in Business Administration and from Texas A&M with a M.S. in Management Information Systems. Prior to teaching I worked as an accountant and a computer consultant for businesses.

COURSE DESCRIPTION
This course introduces students to the basics of computer programming. We will use a variety of web-based programming tools and code.org. We will also use **GameMaker**, **Visual Basic.net,** and **Java Script** to learn programming basics. Course topics include: definition of computer and programming terms, systems development life cycle, program design, program logic, program flow, designing and creating programs, forms, controls, properties, events, actions, data types, and variables. All students will create multiple interactive programs; and design and create their own software project.
Completion of both semesters with a grade of "C" or better qualifies the student for **concurrent enrollment credit** for **CSC126 – Game Design and Development** at **Arapahoe Community College**.

FEES
There will not be a class fee for CS1, however students are encouraged to participate in the **TJ Skills USA** club, which will entail a membership fee that is paid to the state organization.

CLASS RULES AND CODE OF CONDUCT
All school rules and policies will be followed. School rules and policies are outlined in the student handbook and on the TJ website.

Thomas Jefferson Center for Communication Technology Magnet (CCTM) students are provided additional opportunities and resources, which requires commitment and responsibility. For this reason, CCTM students are expected to be school leaders and exemplars by setting a positive tone at TJ.

Students are required to use all resources in a safe and respectful manner that contributes to the betterment of the program. Any deliberate misuse of resources or misconduct will be dealt with in accordance with school and district policies and may result in one or more of the following consequences: withdrawal from any/all CCTM courses, fines/fees to repair/replace materials, suspension/expulsion, possible additional legal action.

DAILY WORK POINTS
All students will be able to demonstrate positive work behaviors and personal qualities needed to be employable including professionalism, self direction, communication, collaboration and perseverance by employing teamwork skills, setting goals, using critical thinking skills, applying active listening skills, and using time management tools to produce quality work.

2 points per day. To demonstrate positive work behaviors:
- Students will be in class on-time.
- Students will use the entire period for project work.
- Students will not talk over other students or teachers.
- Students will not play on their phones or other devices.

LAB & OFFICE HOURS
The computer lab is open every day from 7am to 3pm for student project work. Mr. Fornstrom is available in the lab from 7am to 3pm, including during lunch. Please contact him to schedule an appointment or additional lab time.

GRADING

Grades are based upon assignments, programs, quizzes, and tests. There will also be several group projects. Each team member will earn both an individual grade and a group grade on each group project.

GRADING SCALE

90-100% = A
80-89% = B
70-79% = C
60-69% = D
Below 60% = F

COURSE CONTENT

Course content will include, but is not limited to:

Personal & Project Management

Introduce and practice techniques for individual and team planning.
Use of a *Daily Planner* to organize personal responsibilities.
Use of *Google Classroom* to organize course notes and project plans.
Use of a *Project Management Worksheet* to plan and organize individual and group projects.

Software Engineering Basics

Basics of using the Windows operating system.
Programming terms and definitions.
Programming basics – including organization and documentation.
Flowcharting program logic.
Using GameMaker software to program a basic game.
Testing programs and pinpointing the causes of errors.

Programming with Visual Basic.net

Visual Basic and programming terms.
Program organization and documentation.
Introduction to the Visual Basic programming language.
Designing and creating Visual Basic programs.
Forms, controls, and properties.
Events and code.
Data types.
Variables.
Loops and decisions statements in VB.

Software Engineering Project(s)

Brainstorm project ideas.
Pick a project and define requirements.
Choose a programming language appropriate to build the project.
Build the project.
Present project to the class.