# Chino Valley Unified School District Jr. High School Course Description

CONTACTS	
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A. COVER PAGE - COURSE ID	
1. Course Title:	Intro to Computer Science and Technology
2. Transcript Title/Abbreviation:	Intro Comp Sci and Tech
3. Transcript Course Code/Number:	3172
4. Subject Area/Category:	Elective
5. Grade level(s):	7-8
6. Is this course classified as a Career	Yes
Technical Education course:	
7. Date of Board Approval:	June 11, 2015

#### 8. Brief Course Description:

Intro to Computer Science and Technology would give students the foundation to explore a multitude of technical skills including coding, game design, digital design, computer aided drafting (CAD), creating 3D digital models and building objects in the workshop based on models developed using auto CAD. Students will gain an understanding of the different components which comprise of digital citizenship as well the in-depth knowledge of the legal issues surrounding copyright, plagiarism, cyberbullying, and cyber safety.

## 9. Prerequisites: None

#### 10. Context for Course:

This course would allow students to gain foundational level exposure to technical tools, such as Auto CAD and build objects in the workshop. This course would simulate a real-world business application.

## 11. History of Course Development:

This course is a progressive evolution of technology being utilized to guide hands-on building projects. Modern programs, such as Adobe Illustrator, Flash Animation, Dreamweaver Web Design and CAD programs such as Sketch Up will be used to create products in the workshop. This course will incorporate programing applications for lap tops, phones and tablets. Additionally, it will utilize computer programs such as Auto CAD (instead of drawing by hand) to create models for consumer products that will be built in a shop. 3D printers may also be utilized to build consumer items.

12. Supplemental Instructional Materials:	Program tutorials, online videos and other sources.
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# **B. COURSE CONTENT**

#### **Course Purpose:**

The purpose of this course would be to provide students with foundational level tools that make them more marketable and productive in the 21st century workforce. Early exposure to computer and technology skills applied within a business context would give students a competitive advantage. Learning to create products and build them, will equip students with tools to change our world for the better!

#### Course Guide:

At a foundational level, students will learn valuable professional programs that aid in design for products and media. Learn to think like a designer and put these tools into practice by Computer Aided-Design (Sketch Up). Students will make two-dimensional (2D) and 3D art and then build some of those designs with power tools. Students will design

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and build several projects that will meet criteria specified in the project guidelines. Professional tools in the tech lab (workshop) and in the computer lab will be utilized. Professional programs such as Adobe Photoshop and Illustrator will help students manipulate digital photos and draw simple characters. Adobe Flash will be utilized to animate art work, and potentially incorporate them into games or web pages. Programming games growing in complexity will also be a component of the course.

Students will gain an understanding of the different components which comprise of digital citizenship as well the indepth knowledge of the legal issues surrounding copyright, plagiarism, cyberbullying, and cyber safety.

## **Instructional Methods and/or Strategies:**

Strategies used to learn multiple programs will be based on the fact that this generation of students is more comfortable with technology. Students today have grown up with it and it is almost second nature. Students tend to learn quickly and can almost self-guide through a program after learning the basics. The teacher's role will be a facilitator to guide students through projects and make sure they meet established criteria. Differentiating for slower self-paced students needing to keep up with the quicker self-paced students will be a challenge. Higher complexity and depth within projects for advanced students will be incorporated.

### Assessment Including Methods and/or Tools:

All assessments will be project based and graded with a differentiated rubric.