Computer and Information Technology I Syllabus

The purpose of this course is to produce promote “Information Literacy”. “Information literacy forms the basis for lifelong learning. It is common to all disciplines, to all learning environments, and to all levels of education. It enables learners to master content and extend their investigations, become more self-directed, and assume greater control over their own learning.”(Stanford 2012) Computer and Information Technology I is a course designed for students to learn about technology using technology. Project Based Learning, Inquiry and Problem Based learning will be emphasized to create a student centered learning environment. It enables learners to master content and extend their investigations, become more self-directed, and assume greater control over their own learning.”

Students will use and learn the skills needed for the 21st century such as the ability to use digital technology, communication tools, and/or networks to define an information need, access, manage, integrate and evaluate information, create new information or knowledge and be able to communicate this information to others. Students will learn in a Blended Learning environment. Blended Learing combines the best of face-to-face instruction with the best of online learning. This extends the learning beyond the classroom and gives students access 24/7.

Students will:

- Use technology as a tool to research, organize, evaluate and communicate information
- Use digital technologies (computers, PDAs, media players, GPS, etc.), communication/networking tools and social networks appropriately to access, manage, integrate, evaluate and create information to successfully function in a knowledge economy
- Apply a fundamental understanding of the ethical/legal issues surrounding the access and use of information technologies
- Solve real world problems, share ideas and work on collaborative projects
- Contribute to the collective knowledge base of Web 2.0

Students will create, use, and maintain a Blog as a digital portfolio of what they have done in the classroom. Students will create, produce and share a real world product. Students will be able to handle technological problems, assignments, decisions or tasks with the use of information problem-solving strategies.

Scope and Sequence

Unit	Time Frame: Class Periods	Overview and Objectives	Activities and Assessment
1. Using the Operating System	5	Students will: ● Demonstrate the ability to use an Operating System. ● Demonstrate the ability to organize information	● Watch videos and read tutorials on Operating System and basic functions. ● Perform basic and advanced OS functions. ● Organize information with OS files and functions. ● Complete OS assessment.
2. Communicating with the World Wide Web	5	Students will: ● Demonstrate the ability to use Web Browsers and Web Apps. ● Demonstrate the ability to find, manage, and organize information.	● Watch videos and read tutorials on using Web Browsers. ● Use multiple Browser window and tabs. ● Install and use browser tools ● Complete Browser performance assessment.
3. Blogs and Blogging Basics	5	Students will: ● Create, Customize, and Modify a Blog.	● Sign up for a Google/Blogger account. ● Change setting privacy and comment settings. ● Create a mobile version of their Blog. ● Customize and modify Blog layout, settings and comments.

		• Understand, manage and create effective written and/or multimedia communication. • Analyze, access, manage, integrate, evaluate and create information. • Use Blog as a living portfolio.	• Write a proper post using proper grammar, spelling and punctuation. • Follow and comment on others Blogs. • Use RSS to follow other Blogs. • Complete Blog assessment. • Portfolio Assessment.
4. Cyber Safety and Security	5	Students will: • Learn guidelines for determining safe online relationships and ways to avoid risky online behavior • Learn how to guard against phishing and identity theft • Learn strategies for managing what happens to their online information	• Read, discuss and analyze information from articles on Cyber Safety and Security. • Watch videos on Cyber Safety and Security. • Communicate the results to others using oral, written (Blog post), graphic, pictorial, or multi-media methods. • Write response to letters from teens giving advice. • Complete Online Safety assessment.
5. Digital Etiquette	5	Students will: • Define digital citizenship and identify their online responsibilities • Understand the concept of online ethics	• Read, discuss and analyze information from articles on Digital Etiquette. • Watch videos on Digital Etiquette. • Communicate the results to others using oral, written (Blog post), graphic, pictorial, or multi-media methods.

		• Explore and apply online ethics	• Create a multimedia project describing proper online manners. • Complete Digital Etiquette assessment.
6. Digital Privacy and Footprints	5	Students will: • Learn that they have a public presence online called a digital footprint • Recognize the importance of context in posting or viewing online images • Reflect on how to protect the privacy of others online • Present an authentic and positive image of themselves online	• Read, discuss and analyze information from articles on Digital Privacy. • Watch videos on Digital Privacy. • Communicate the results to others using oral, written (Blog post), graphic, pictorial, or multi-media methods. • Create a positive online profile. • Create Blog posts that present a positive and authentic image. • Complete Information Privacy assessment.
7. Online Relationships and Community	5	Students will: • Learn to identify, respond to, and limit the negative impact of Cyberbullying, hate speech, and other forms of online cruelty or unethical behavior • Create a set of community guidelines for dealing with online and offline hate speech at school	• Read, discuss and analyze information from articles on Online Relationships and Community. • Watch videos on Online Relationships and Community. • Communicate the results to others using oral, written (Blog post), graphic, pictorial, or multi-media methods. • Develop a set of guidelines that promote positive online behavior. • Give advice in comments and Blog posts.

		• Understand risky forms of self-disclosure and their possible consequences	• Complete the Cyberbullying assessment.
8. Self Expression and Identity	5	Students will: • Reflect on the similarities and differences in how people represent themselves online and offline • Understand that they might choose to show different parts of themselves online, depending on context and audience • Consider the risks and benefits of assuming different personas online, and think critically about what it means to be genuine in an online context	• Read, discuss and analyze information from articles on Self Expression and Identity. • Watch videos on Self Expression and Identity. • Communicate the results to others using oral, written (Blog post), graphic, pictorial, or multi-media methods. • Create avatars for three different online settings. • Complete the Social Networking assessment.
9. Respecting Creative Works	5	Students will: • Learn such basic terms as creative work, copyright, fair use, public domain, plagiarism, and privacy	• Read, discuss and analyze information from articles on Respecting Creative Works. • Watch videos on Respecting Creative Works. • Communicate the results to others using oral, written (Blog post), graphic, pictorial, or multi-media methods.

		• Make decisions about the use of materials based on the principles of copyright and fair use • Consider the perspectives of the original creator, potential audiences, and the broader community when using others' material	• Choose a form of fair use for an online creative work and defend the reasoning behind it. • Complete the Copyright assessment.
10. Searching and Evaluating Web Resources	10	Students will: • Understand the importance of using a variety of search strategies • Master new strategies for effective and efficient online searches • Learn to create and execute a five-step plan for conducting an online search • To develop critical thinking skills in evaluating information	• Read, discuss and analyze information from articles they find after performing an online search. • Watch videos on online searches. • Communicate the results to others using oral, written (Blog post), graphic, pictorial, or multi-media methods. • Practice keyword searching techniques. • Perform a variety of different types of online searches including Web, Books, News, Scholar, and Image search. • Create an alert or automatic search. • Complete the Online Sources assessment.
11. Research and Evaluation	10	Students will: • Think critically about how information is collected, reshaped and shared online	• Research and write for a variety of purposes as well as produce a variety of products, which engage readers. • Evaluate web sites for authority, accuracy, relevance, currency, and objectivity.

		• Consider the upsides and downsides of collective intelligence and photo alterations and how to practices impact online communities • Evaluate the different possible sources to determine priorities (select the best sources). • Engage (e.g. read, hear, view, touch) the information in a source	• Evaluate information, photo images and video for authenticity and accuracy. • Perform a variety of different types of online searches including Web, Books, News, Scholar, and Image search. • Complete the Internet Search and the Research assessment.
12. Information Literacy Process	10	Students will: • Define the information problem • Identify information needed in order to complete the task (to solve the information problem) • Extract relevant information from a source. • Organize information from multiple sources • Present the information • Judge the product (effectiveness) • Judge the information problem-solving process (efficiency).	• Organize their thinking process using a graphic organizer, mind map and/or outline. • Research, write for a variety of purposes and produce a variety of products, which engage readers. • Learn to extract information from a source. • Cite Internet sources in the correct bibliographic format. • Evaluate their own thinking process and apply the information they gather. • Evaluate the project and process using a rubric. • Complete the Plagiarism assessment. • Assessment Rubric.

13. ICT Literacy and Tech Competency	25	Students will: ● Consider the perspectives of new and emerging tools, technologies, software and Apps ● Keep up to date on current technologies and products ● Identify how to maintain ICT literacy and Tech competencies ● Think critically about the effects of technology on people and society	● Read, discuss and analyze information from articles on the topics below. ● Watch video on the topics below and complete assessment. ● Communicate the results to others using oral, written (Blog post), graphic, pictorial, or multi-media methods. ○ New and emerging tools, technologies, software and Apps ○ Current technologies and products ○ The effects of technology on people and society ● Assessment of Blog writing, projects, online discussions and comments.
14. Tools for Digital Storytelling	10	Students will: ● Use and integrate multiple Computer Applications, Mobile Apps, and Online Tools to complete multimedia projects ● Evaluate Computer Applications, Online Tools and Mobile Apps	● Create dynamic multimedia projects. ● Communicate the results to others using oral, written (Blog post), graphic, pictorial, or multi-media methods. ● Complete video and graphic tutorials. ● Follow step by step instructions. ● Use the help sections of software, investigate online tutorials, and experiment with techniques, tools and software. ● Complete Computer Applications, Online Tools and Mobile Apps assessments. ● Complete self and peer assessments using a rubric. ● Assessment of the process and of the final project.

12. Introduction to Programming	50	Students will:
		● Identify and apply programming fundamentals, including:
		  ● Sequential Processing
		  ● Conditional Programming Logic
		  ● Use of Variables
		  ● Iterative Processing
		  ● Boolean Logic
		  ● Interface Design
		  ● Program Synchronization
		  ● Event Handling
		  ● Application and Game Development
		  ● Sprite Programming
		  ● Application Troubleshooting
			● Read, discuss and analyze information from articles on Programming fundamentals.
			● Watch videos on Programming fundamentals.
			● Communicate the results to others using written (Blog post), graphic, pictorial, or multi-media methods.
			● Follow step by step directions, view video tutorials and create and share their own interactive stories, games, music and art projects.
			● Examine, evaluate and build upon the project of other students.
			● Complete assessments on procedures, programming basics, program interface.
			● Share and evaluate projects.