



MIDDLE SCHOOL COURSE OUTLINE

Department	Technology			
Course Title	Computers Advanced	Course Code	1339	
Abbreviation	Computers Adv	Grade Level	6-8	
Course Length	1 semester	Required		Elective Yes
Prerequisite	Grade of B or better in Computers Intermediate or demonstration of proficiency in Computers Intermediate skills.			

COURSE DESCRIPTION:

This elective will build on proficiencies acquired in the Intermediate Computer course. Students will integrate previously learned tools, i.e. word processing, multi-media, spreadsheet and database, into a cumulative Web design project. Students will create their own web page, which will showcase their proficiencies. Students will use appropriate technology skills to conduct research and complete core curriculum projects, e.g. historical research, scientific and math investigations, and language arts writing projects. Emphasis on desktop publishing will provide additional opportunities for students to demonstrate application of skills previously learned. Legal, social and ethical issues related to the use of computers in our daily life will continue to be reinforced.

GOALS: National Educational Technology Standards for Students

- 1. Basic operations and concepts**
 - Students demonstrate a sound understanding of the nature and operation of technology systems
 - Students are proficient in the use of technology
- 2. Social, ethical and human issues**
 - Students understand the ethical, cultural, and societal issues related to technology
 - Students practice responsible use of technology systems, information, and software
 - Students develop positive attitudes towards technology uses that support lifelong learning, collaboration, personal pursuits, and productivity
- 3. Technology productivity tools**
 - Students use technology tools to enhance learning, increase productivity, and promote creativity
 - Students use productivity tools to collaborate in constructing technology-enhanced models, prepare publications, and produce other creative works
- 4. Technology communication tools**
 - Students use technology to collaborate, publish, and interact with peers, experts, and other audiences
 - Students use a variety of media and formats to communicate information and ideas effectively to multiple audiences

5. Technology research tools

- Students use technology to locate, evaluate, and collect information from a variety of sources
- Students use technology tools to process data and report results
- Students evaluate and select new information resources and technological innovations based on the appropriateness for specific tasks

6. Technology problem-solving and decision-making tools

- Students use technology resources for solving problems and making informed decisions
- Students employ technology in the development of strategies for solving problems in the real world

PERFORMANCE CRITERIA

Evaluation will be based on student performance on the various applications being taught in the course. Assessments will include speed and accuracy tests for keyboarding, and project portfolios that display proficiency in word-processing. Students who receive a grade of C or D are considered partially proficient in the skills taught in this course. A “C” indicates that the student has sufficient skills to move on to the next level, whereas a “D” indicates that the student needs more development of foundational skills.

Applications	Advanced Proficient	Proficient	Partially Proficient		Not Proficient
	A	B	C	D	F
Web Page Design	Demonstrates a high level of skill in – <ul style="list-style-type: none"> ➢ Planning layout, theme and color scheme ➢ Adding and modifying text ➢ Applying graphic's size rules ➢ Using appropriate file naming conventions ➢ Inserting tables ➢ Creating hyperlinks 	Without making significant errors is able to - <ul style="list-style-type: none"> ➢ Plan layout, theme and color scheme ➢ Add and modify text ➢ Apply graphic's size rules ➢ Use appropriate file naming conventions ➢ Insert tables ➢ Create hyperlinks 	Makes some errors when - <ul style="list-style-type: none"> ➢ Planning layout, theme and color scheme ➢ Adding and modifying text ➢ Applying graphic's size rules ➢ Using appropriate file naming conventions ➢ Inserting tables ➢ Creating hyperlinks 	Makes several errors when - <ul style="list-style-type: none"> ➢ Planning layout, theme and color scheme ➢ Adding and modifying text ➢ Applying graphic's size rules ➢ Using appropriate file naming conventions ➢ Inserting tables ➢ Creating hyperlinks 	Unable to - <ul style="list-style-type: none"> ➢ Plan layout, theme and color scheme ➢ Add and modify text ➢ Apply graphic's size rules ➢ Use appropriate file naming conventions ➢ Insert tables ➢ Create hyperlinks
Content	Demonstrates a high level of skill in – <ul style="list-style-type: none"> ➢ Integrating word processing, spreadsheet, database and multi-media skills in a cumulative project 	Without making significant errors is able to - <ul style="list-style-type: none"> ➢ Integrate word processing, spreadsheet, database and multi-media skills in a cumulative project 	Makes some errors in- <ul style="list-style-type: none"> ➢ Integrating word processing, spreadsheet, database and multi-media skills in a cumulative project 	Makes several errors in - <ul style="list-style-type: none"> ➢ Integrating word processing, spreadsheet, database and multi-media skills in a cumulative project 	Unable to – <ul style="list-style-type: none"> ➢ Integrate word processing, spreadsheet, database and multi-media skills in a cumulative project

OUTLINE OF CONTENT AND TIME ALLOTMENT: (18 weeks)

The course of study includes skills in using and applying various applications. The skills covered in this course are foundational computer skills based on the National Educational Technology Standards for Students. The sequencing and time allotments are recommendations and may be modified to meet student needs.

Application	NETS Standard	Skills	Time
Introduction & Legal Issues (Review)	<ol style="list-style-type: none"> 1. <i>Basic operations and concepts</i> <ul style="list-style-type: none"> ▪ Nature and operation of technology systems 2. <i>Social, ethical and human issues</i> <ul style="list-style-type: none"> ▪ Ethical, cultural, societal issues Responsible use of technology systems, information & software <ol style="list-style-type: none"> 3. <i>Productivity tools</i> <ul style="list-style-type: none"> ▪ Use productivity tools to enhance learning, increase productivity 	Review <ul style="list-style-type: none"> ▪ How to operate a multi-media computer ▪ Care and appropriate use of hardware/peripherals ▪ Keyboarding ▪ File management ▪ Desktop set-up ▪ Legal, ethical, copyright issues ▪ District Acceptable Use Policy ▪ Privacy/safety issues ▪ Citation of sources 	2 weeks
Word Processing, Spreadsheet, Database (Review)	<ol style="list-style-type: none"> 3. <i>Productivity tools</i> <ul style="list-style-type: none"> ▪ Use productivity tools to enhance learning, increase productivity 	Review skills from Introduction to Computers and Intermediate Computers: <ul style="list-style-type: none"> ▪ Word processing ▪ Spreadsheet ▪ Database 	2 weeks
Web Design	<ol style="list-style-type: none"> 3. <i>Productivity tools</i> <ul style="list-style-type: none"> ▪ Use productivity tools to enhance learning, increase productivity 4. <i>Communication tools</i> <ul style="list-style-type: none"> ▪ Use a variety of media and formats to communicate information and ideas effectively to multiple audiences 5. <i>Research tools</i> <ul style="list-style-type: none"> ▪ Use technology to process data and report results 	Students will learn web-publishing skills which include how to: <ul style="list-style-type: none"> ▪ Plan layout, theme, color scheme ▪ Add and modify text ▪ Graphic's size rules ▪ File naming conventions ▪ File path management ▪ Insert tables ▪ Create hyperlinks 	4 weeks
Projects and sharing	<ol style="list-style-type: none"> 3. <i>Productivity tools</i> <ul style="list-style-type: none"> ▪ Use productivity tools to enhance learning, increase productivity 6. <i>Communication tools</i> <ul style="list-style-type: none"> ▪ Use a variety of media and formats to communicate information and ideas effectively to multiple audiences 7. <i>Research tools</i> <ul style="list-style-type: none"> ▪ Use technology to process data and report results 	Students will integrate all previously learned skills into a cumulative project.	10 weeks

METHODS: A variety of instructional strategies will be utilized to accommodate all learning styles including, but not limited to:

Lesson Design & Delivery: Teachers will incorporate these components of lesson design during direct instruction and inquiry activities. The order of components is flexible, depending on the teacher’s vision for the individual lesson. For instance, the objective and purpose, while present in the teacher’s lesson plan, are not made known to the students at the beginning of an inquiry lesson.

<p>Essential Elements of Effective Instruction Model for Lesson Design Using Task Analysis</p>	<p>Anticipatory Set Objective Standard Reference Purpose Input Modeling Check for Understanding Guided Practice Closure Independent Practice</p>
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Some components may occur once in a lesson, but others will recur many times. Checking for understanding occurs continually; input, modeling, guided practice and closure may occur several times. There may even be more than one anticipatory set when more than one content piece is introduced.

Active Participation: Teachers will incorporate the principles of active participation and specific strategies to ensure consistent, simultaneous involvement of the minds of all learners in the classroom. Teachers should include both covert and overt active participation strategies, incorporating cooperative learning structures and brain research. Some of the possible active participation strategies include:

Possible methods to implement overt active participation (Oral, Written and/or Gestures)			Active Participation	Possible lesson design component to incorporate the given active participation strategy		
O	W	G	Strategy Name & Description	Anticipatory Set	Check for Understanding	Closure
X			Think-Pair-Share: All students receive individual time to formulate an answer, pair up with a partner to discuss and then share out to class.	X	X	X
	X		Response Boards: Students type their responses on the computer and share with their neighbor	X	X	X
		X	Hand Signals: A private gesture with the hands. Most effective to teacher (as a check for understanding) when students keep gestures close to their chest so other students can not see their answer. Examples include: Thumbs up/down, open/closed fist, one-finger/two fingers, arms crossed/uncrossed.		X	
X			Whip Around, Pass Option: Teacher whips around the room until getting an oral answer/comment from each student. Students do have the option to pass the first time around.	X		X
	X		Reflection/Summary writing: Students use electronic journals to independently reflect on the learning.			X
	X		Attentive Lecture: In this strategy students are not allowed to take notes as the teacher is giving content information. Every 2-3 minutes, the teacher stops giving instruction and students are to write the crucial input given in the last few minutes in their notebooks.		X	
X		X	Group Alerting: After presenting material, teacher asks a question. Without calling on an individual, the teacher pauses to let the entire group formulate an answer. After pausing, the teacher calls on a particular student. When the student has finished answering, the teacher cues the whole class to respond to the individual’s answer with a thumbs-up or thumbs-down gesture.		X	X

Literacy and Differentiation Strategies:

Learning styles and learning challenges of your students may be addressed by implementing combinations of the following:

<u>Reading Strategies in Technology</u>	<u>SDAIE Strategies for English Learners</u>	<u>Differentiation for Advanced Learners</u>
<ul style="list-style-type: none"> ▪ Learning Logs ▪ Pre-teaching ▪ Vocabulary ▪ Pre-reading ▪ Text Structures ▪ Trail Markers ▪ Reciprocal Teaching ▪ Functional Text ▪ Anticipation Guide 	<ul style="list-style-type: none"> ▪ Tapping/Building Prior Knowledge (Graphic Organizers, Schema) ▪ Grouping Strategies ▪ Multiple Intelligences ▪ Adapt the Text ▪ Interactive Learning (Tutorials, Simulations, Visuals) ▪ Acquisition Levels ▪ Language Sensitivity ▪ Lower the Affective Filter (including Processing Time) ▪ Home/School Connection (including Cultural Aspects) 	<ul style="list-style-type: none"> ▪ Curriculum Compacting ▪ Tiered Assignments ▪ Flexible Grouping ▪ Acceleration ▪ Depth and Complexity ▪ Independent Study

MATERIALS USED IN TEACHING THE COURSE: A variety of instructional tools will be used to meet the needs of all students –

- Macs or PCs
- Word-processing applications
 - Microsoft Word
- Multimedia applications
 - PowerPoint
- Spreadsheet
 - Excel
- Database
 - Access
- Internet Access
- Web Design Software
 - FrontPage
 - DreamWeaver
 - Netscape Composer
- Textbooks:
 - Web Design Basics

STANDARD GRADING SCALE

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

EVALUATION: Student achievement in this course will be measured using multiple assessment tools including but not limited to:

- Quizzes/tests
- Projects
- Portfolios
- Technology Performance Criteria

The standard grading scale is used to determine grades on quizzes and tests. The performance criteria determine the proficiency level of students in using and applying computer skills.

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