

DEPARTMENT: TECHNOLOGY EDUCATION	COURSE TITLE: VIDEO & AUDIO TECHNOLOGY I COURSE NUMBER: 520A
GRADE(S): 9-12	PRE-REQUISITES (IF ANY):

UNIT	LENGTH	CONTENT	SKILLS	METHODS OF ASSESSMENT	FRAMEWORK STRAND(S) & STANDARD(S)
Audio Theory	2 days	Physical characteristics of sound (waves, frequencies, amplitude, wavelength, decibels, signal to noise ratio, masking, equalization, echo vs. reverb, envelope)	Students will: <ul style="list-style-type: none"> Learn to listen critically to sounds and to estimate decibel level and frequencies of different sounds, listen for equalization, echo and reverb 	<ul style="list-style-type: none"> Class participation Quiz covering both theory and technology 	STE-Strand IV (6-8) 6.4 STE-Strand IV (9-12) 6.2
Audio Technology	3 days and ongoing	<ul style="list-style-type: none"> How microphones transduce sound waves, how speakers transduce electronic signals, how digital audio differs from analog audio Using mixers, microphones, connectors, digital mini discs, VU meters, multi-track recorders, tape decks, nonlinear editing software, connectors and plugs 	Students will: <ul style="list-style-type: none"> Master hands-on use of mixers, microphones, connectors, digital mini discs, VU meters, multi-track recorders, tape decks, nonlinear editing software 	<ul style="list-style-type: none"> Quiz covering both theory and technology Proper use of audio technology in producing two audio productions 	STE-Strand IV (6-8) 3.2, 6.4 STE-Strand IV (9-12) 6.2, 6.3, 6.5
Application of Audio Theory and Technology	8 days and ongoing	<ul style="list-style-type: none"> Speaking techniques for recording Microphone placement Using mixers, microphones, connectors, digital mini discs, VU meters, multi-track recorders, tape decks, nonlinear editing software, connectors and plugs 	Students will: <ul style="list-style-type: none"> Master scriptwriting Master hands-on use of mixers, microphones, connectors, digital mini discs, VU meters, multi-track recorders, tape decks, nonlinear editing software 	<ul style="list-style-type: none"> In groups of 3, students recreate an existing public service announcement by transcribing the script and performing it themselves Individually, students plan, write and produce, original commercial 	ELA 20.4 (5-8) 20.5, 26.5, 27.7 (9-10)
Demographics and Target Audience	2 days and Ongoing	<ul style="list-style-type: none"> Demographics and target audience Analysis of the commercials broadcast during programs with distinct target audiences (soap opera vs. Monday Night Football) 	Students will: <ul style="list-style-type: none"> Learn to identify the audience of a project and modify the design elements to match the emotional and intellectual needs of that audience Learn how television serves as a vehicle for delivering commercial messages to target audiences 	<ul style="list-style-type: none"> Psychographics Video and worksheet Group learning project. Identification of target audience for commercial recreation and original commercial productions 	ELA 26.5 (9-10)

Marketing & Advertising	2 days & Ongoing	<ul style="list-style-type: none"> • How advertisers manipulate picture and sound to influence the audience to become customers of their product • Advertising appeals - equating product with emotion or value • Marketing clusters target audiences, demographics, Psychographics 	<p>Students will:</p> <ul style="list-style-type: none"> • Be able to deduce the target audience 	<ul style="list-style-type: none"> • Development of advertising appeal in original commercial production 	<p>ELA 15.9 (11-12)</p> <p>ELA26.5 (9-10)</p>
Video Technology	4 days & Ongoing	<ul style="list-style-type: none"> • How cameras and monitors work • Pixels, interlaced vs. progressive scanning, resolution and digital zoom, NTSC vs. HDTV, computer monitors vs. televisions, refresh rate, RGB vs. process color • Camera controls (zoom, exposure, gain, focus, white balance) • Video tape (Formats, record speed, control track, and audio tracks, time code) • Dubbing from camera to VCR 	<p>Students will:</p> <ul style="list-style-type: none"> • Learn the engineering and technological explanations for aspects of the video medium • Learn how to use the camera as a tool 	<ul style="list-style-type: none"> • Students practice using cameras in groups • Exploring the camera activity (use menus and capture footage on tape) • Quiz 	<p>STE-Strand IV (6-8) 3.3</p> <p>Strand IV (9-12) 6.1-6.3 & 6.5</p>
Composition & Camera Movement	7 days & Ongoing	<ul style="list-style-type: none"> • Elements of screen composition • Camera movements 	<p>Students will:</p> <ul style="list-style-type: none"> • Recognize composition and movements in a wide range of settings (documentary, commercials, music video, feature films) • Learn how composition and movements contribute to emotional message of the production • Work in a group with other students of varying abilities by obtaining examples (in groups) of composition and camera movements on tape for a "composition practicum" 	<ul style="list-style-type: none"> • Quality of shots completed for practicum • Quiz 	<p>STE-Strand IV (6-8) 3.4</p> <p>ELA 27.7 (9-10)</p>
Copyright	2 days	<ul style="list-style-type: none"> • Privacy, royalties, use of copyrighted materials, process to obtain permission, fair use 	<p>Students will:</p> <ul style="list-style-type: none"> • Learn what is acceptable use of and how to get permission to use copyrighted material 	<ul style="list-style-type: none"> • Worksheet 	

Instructional Video	5 days	<ul style="list-style-type: none"> A complex, multi-step process using the video medium 	<p>Students will:</p> <ul style="list-style-type: none"> Learn to “show” rather than “tell” using video Break down a process into distinct steps Organize what steps are the most important to be shown on video Decide the best composition to show each step Problem solve Work in a group with other students of varying abilities 	<ul style="list-style-type: none"> “How To” video project requiring students in groups of three to produce an instructional video using no dialogue or speaking 	<p>STE- Strand IV (6-8) 3.4</p> <p>ELA. 27.7 (9-10)</p>
Lighting	2 days & ongoing	<ul style="list-style-type: none"> 3-point lighting (fill, key and rim) Contrast Hard and soft lighting, silhouette Psychological implications of various lighting styles. 	<p>Students will:</p> <ul style="list-style-type: none"> Set up lights and control directionality, brightness, and color of lights 	<ul style="list-style-type: none"> Students and teacher critique lighting as part of rubric for evaluating projects Quiz. 	<p>STE- Strand IV (6-8) 3.4, 6.4</p> <p>STE-Strand IV (9-12) 6.1</p>
Color	1 day & ongoing	<ul style="list-style-type: none"> Warm and Cool colors Psychological and symbolic implications of various colors 	<p>Students will:</p> <ul style="list-style-type: none"> Determine whether cool or warm colors would be appropriate to evoke a certain mood or symbolize an abstraction (red=communism) for a video production 	<ul style="list-style-type: none"> Color worksheets and activities Use of color in commercial recreation and original commercial productions. 	<p>STE-Strand IV (9-12) 6.1</p> <p>STE- Strand IV (6-8) 3.4</p>
Editing	3 Days & Ongoing	<ul style="list-style-type: none"> Transitions (cut, dissolve, fade to black, wipe) time and space Continuity editing and jump cuts, montage Pace, and how it influences emotion and perception of time 	<p>Students will:</p> <ul style="list-style-type: none"> Identify editing elements and styles in a variety of styles 	<ul style="list-style-type: none"> Use of editing theory and techniques in commercial productions 	<p>STE-Strand IV (9-12) 6.3</p> <p>STE- Strand IV (6-8) 3.4</p>
Commercial Recreation	7 Days	<ul style="list-style-type: none"> Scripts and storyboards of existing professional video advertisements with descriptions of setting, blocking of actors, dialogue, composition, editing and lighting 	<p>Students will:</p> <ul style="list-style-type: none"> Apply marketing, and demographics knowledge. Apply script writing skills Apply storyboard production skills Apply composition, camera movement knowledge 	<ul style="list-style-type: none"> Demonstration of cumulative skills and knowledge of course content 	<p>STE- Strand IV (6-8) 3.4</p> <p>ELA 27.7 (9-10)</p>
Original Commercial	5 Days	<ul style="list-style-type: none"> Comprehensive project. 	<p>Students will:</p> <ul style="list-style-type: none"> Apply of marketing, and demographics knowledge Apply of script writing skills Apply storyboard production skills Apply composition knowledge 	<ul style="list-style-type: none"> Final Project 	<p>STE- Strand IV (6-8) 3.4</p> <p>ELA 26.5, 27.7 (9-10)</p> <p>ELA-15.9 (11-12)</p> <p>ELA- 20.4 (5-8)</p>

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