

Unit #1: Safety & Ergonomics/Intro to Communications Technology

Comfortable Computing

- **Ergonomics**

- The science that seeks to adapt work or working conditions to suit worker
- Repetitive movements and sitting at a workstation for extended periods of time can result in injuries in the form of :
 - Pain, tingling, numbness of the hands, headaches, neck pain
 - Soreness in legs, arms and back
 - Eyestrain, carpal tunnel syndrome
- These are all considered to be **Repetitive Strain** injuries

The Chair

- Backrest of chair should have a snug fit against your back
- You should be level with the monitor when seated upright in your chair

The Display

- The recommended viewing distance is to have your face about one arm lengths away from the monitor.
- If glare is a problem, position the screen at right angles to the light source
- Do not face a window
- Keep the screen clean
- Adjust the brightness and contrast controls
- Reflections can be eliminated by tilting the screen

The Keyboard

- With computer keyboards, all you need is a light touch while typing
- Typing too hard is bad for your joints and is also bad for the keyboard
- Your wrists should be as straight as possible and your arms should be parallel to the floor

Breaks

- Break up your computer tasks by getting up every once in a while to stretch or walk around
- A good rule of thumb is to only be in front of the computer for 50 minutes of every hour

Computer Lab Safety

- Make sure that all wiring and cables do not obstruct areas where people will be walking
- Be very careful that you don't get an electric shock when plugging and unplugging cables
- Food and beverages can damage the equipment in the lab therefore no food or beverages around the computers
- No horseplay in the computer lab
- The **“One Finger Rule”**: If it takes more than one finger of pressure, it is too much and is considered forcing the object
- **Cables** are to be taped down to the floor
- **Cables** are to be coiled when not in use
- **Lighting** – never touch the light bulbs on studio lamps

Computer Survival Skills

- Know how to manipulate files and folders
 - Cut
 - Copy
 - Paste
 - Rename

The Socio Economic Context of Communications Technology

What is Communication?

- Communication is the sending and receiving of information or messages
- In order for communication to occur a message must be both sent and received
- Important: if the receiver does not understand the message then it has not been received!

Purposes of Communication

Persuade – to convince or influence

Inform – to notify or report

Educate – to teach or instruct

Control – to manage or be in command of

Entertain – to amuse or divert

Types of Communication

- Human to Human
- Human to Machine
- Machine to Machine
- Machine to Human
- Supplementary types

Types of Human Communication

- Verbal Communication
- Nonverbal Communication

Perception

- Perception is the process of understanding a message
- You may receive a verbal or nonverbal message from someone, but that message has to make sense in order for it to be received
- The process of perception can change how you understand a message
- depends on the receivers personal experiences in the past

History of Communication

- pictograms (an easily recognized symbol) e.g. Walk Sign
- Ideograms are symbols that must be learned, e.g. Stop Sign

History of Communication

- A true alphabet was formed when symbols began to represent sounds
- As the alphabet and various languages were developed the printing process and artistic communication arose
- After electricity and computers were discovered data communication was developed
- Data communication is communication between computers

Technology and Communication

- Technology is... The practical (hands on) application of scientific knowledge.
- Without technology science would just simply remain knowledge!

Technology, Industry and Change

- How does technology differ from industry?
 - Industry is an organization that uses technology to produce goods and services for a profit.

Major Eras in American History

The Information Age

- Currently we are in the midst of the information age
- Defined as an era where the majority of people are involved in jobs related to information

Communication Technology

- The purpose of communication technology is to transfer information by technical means
- Communication Technology extends the capabilities of our human senses, e.g. the telephone

Comm. Tech. Categories

- Graphic communications
- Electronic Communications
- Drafting
- Photography
- Print and media
- Telecommunications

The Communication System

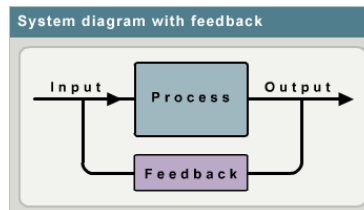
- Communication can be described as a system with the goal of transferring information
- Using this systems approach makes it easier to understand the communication process

The Universal Systems Model

- A system has a purpose or goal, this can be called the desired OUTPUT of the system
- The INPUTs are the resources necessary for achieving the OUTPUT
- The PROCESS is the action part of the system, in this step the inputs are changed (or processed) achieve the OUTPUT

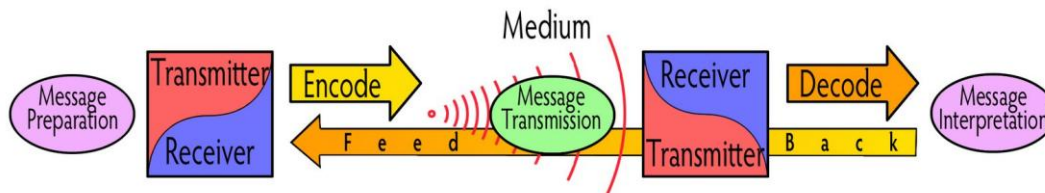
Control Systems

- In many systems, a FEEDBACK loop is added
- FEEDBACK is a way of determining whether the actual results, or output, is the same as the desired results



The Communication System Model

- In a communication system, the purpose of the system is the transfer of information, or the sending of a message
- Inputs are all of the resources necessary for sending the message.
- Processing is the act of communication



Unit #2: Photoshop & Principles of Design

The 7 Principles of Design

1. Balance

- symmetric → centered
- asymmetric → off centered

2. Contrast

- fonts, shapes, size, colour, shadows and light

3. Proportion

- the relationship by size between objects in the design

4. Rhythm

- patterns achieved through the use of lines, forms, colours, and texture

5. Variety

- variety should be simple, creative
- too much variety in the image can cause a chaotic look

6. Unity

- unity considers the relationships of all the images used
- each graphic and text element needs to work together toward the whole

7. Continuance

- continuance is the idea that once you begin looking in one direction, you will continue to do so until something more significant catches your attention
- perspective, or the use of dominant directional lines, tends to successfully direct the viewers eye in a given direction

Also Know ...

Photoshop CS5 basics

1. Review the following tutorials from the class webpage:
 - P1 - Introduction
 - P2 - Font Styles
 - P4 - Removing Backgrounds
 - P5 - Picture Frames
 - P10 - Clone Stamp
2. **layers** – know how they work and how to manipulate them
3. how to **insert** images/photos
4. how to **set** the **document size** and **resolution**
5. know the following **icons** and **how they work**
 - a. **paint bucket** tool
 - b. **lasso** tool
 - c. **adjustment layer** tool
 - d. **clone** tool
 - e. **background eraser** tool
 - f. **new layer** icon
 - g. **gradient** tool

Unit #3: Studio Production & Digital Video

The Production Process

Pre-Production

- Pre-Production is the planning stage of the production process
- Generating ideas, script, storyboard, screenplay, etc.

Production

- The actual filming of the video production
- Creating sets, filming scenes, etc.

Post- Production

- Editing the video and the audio
- Adding special effects, titles, credits, formatting for different screens, etc.

Video Style

Types of angles

- **High Angle**
 - Is shot from above the subject with the camera looking down
 - The effect of this angle is that people or objects appear small
 - The viewer in the audience feels dominance over the subject in the film
- **Normal Angle**
 - Is the angle of everyday viewing
 - The camera is positioned at eye level and shoots exactly what a person would see
 - This angle is very comfortable since it is the one that all of us are accustomed to
- **Low Angle**
 - Is shot from below the subject with the camera looking up
 - It makes objects look larger than life
 - The viewer in the audience feels dominated by the subject in the film

Types of Shots

1. Extreme Long Shot (XLS)

- Is used to show a large area or landscape
- It is the most impersonal shot possible in video
- An example of an XLS would be a shot of a school

2. Long Shot (LS)

- Is a closer shot than an XLS and would contain a person's entire body from the top of their head to the bottom of their feet

3. Medium Long Shot (MLS)

- Would contain a person from their knees to the top of the head

4. Medium Shot (MS)

- Is considered to be what a person would see if they were standing and talking to another person
- It is the most comfortable view and is used the most in productions
- The shot contains a person from the waist to the top of the head

5. Medium Close-Up (MCU)

- Is often referred to as a head and shoulders shot
- The reason for this is because it contains a person's head and shoulders completely

6. Close-Up (CU)

- Is used to show emotion on the subject's face
- It is slightly closer than the MCU with just the top of the shoulders visible

7. Extreme Close-Up (XCU)

- It can show emotion very clearly
- It contains the entire face of the subject
- This shot does have the tendency to make the viewer feel uncomfortable because it is too close

Camera Movements

1. Pan

- Is a camera movement where the tripod or operator stays stationary in one place and the camcorder is turned from left to right or right to left
- Pans are used to give the viewer a sense of what is contained within a scene

2. Tilt

- A tilt also has a stationary base but the camera is gradually moved from top to bottom or bottom to top

3. Zoom

- Is the gradual narrowing of the camera's view from a stationary location
- People tend to use it so much because it is an easy way to get close to a subject without moving
- The problem arises when the camcorder is zoomed into its maximum and the operator has a hard time keeping it steady

4. Dolly

- Is the physical movement of the camera towards or away from a subject
- A dolly does not use the zoom function
- The camera is actually moved by either walking with it or pushing it along the ground or floor (the name "dolly" also refers to the wheel attachment for tripods)
- To "dolly in" means that the camera is getting closer to the subject
- A dolly out is moving the camera further away

5. Truck

- Is the physical movement of the camera from left to right or right to left
- Like the dolly, a truck actually involves the camera moving
- This type of movement is used most often when following a person or object
- A truck left moves the camera from its current position to a new position to its left side
- A truck right moves the camera to the right

6. Arc

- Is the physical movement of the camera left or right while always keeping the subject in the middle of the picture
- A continuous arc would eventually end up back at the starting point

7. Pedestal

- Is the movement of the camera up or down from a fixed position usually while using a tripod
- This type of movement is very easy to do with a tripod since they have a crank on them to perform this exact function

8. Realistic Television

- Is a relatively new type of filming or videotaping that involves moving the camera very slightly to achieve a more realistic feel to the picture
- The look that is achieved may look amateurish to some people because it breaks the "always use a tripod" rule
- The slight movements make the picture look like it has been taped by a person using their home camcorder

- People feel like they are part of the scene and are observing everything not on their television screen but as a third person looking in

Lighting

1. Three Point Lighting

- Involves the placement of three lights around your scene
- The lights are called **Key Light**, **Fill Light**, and **Back Light**
- **Key Light**
 - Is the first light you set up and is the major light source
 - It is usually pointed directly at the scene and it is located to one side of the subject
- **Fill Light**
 - Is not as powerful as the key light and is placed on the opposite side of the key light
 - Its purpose is to fill in the shadows with light to give a more natural look to the overall scene
- **Back Light**
 - Is placed behind the subject at about the same height as the key light
 - Be careful that the back light does not light up the subject's entire head
 - Ideally it should not cast any light onto the front of the subject
 - This light adds depth to the picture and separates the foreground from the background

Story Boarding

What is a Storyboard and what is it used for?

- a) A storyboard is a series of drawings or sequence of images used to show key scenes
- b) It is used to communicate visually the idea of what you want to accomplish
- c) Ties audio and video together – it acts as a planning map

Elements of a Storyboard

- a) The left frame represents the shot or screen (visual)
- b) The right frame represents the audio (dialogue, sound effects) for that sequence
- c) A sequence of these frames combine together to illustrate your vision for the sequence
- d) Usually 6 to 12 frames are sufficient
- e) Only key scenes are included on the storyboard visuals

Method of Making a Storyboard

- a) Rough sketching and/or stick drawings
- b) Illustration
- c) Digital layout on computer
- d) Photography

The Importance of a Storyboard

- a) Timing - helps you keep manage the length of production
- b) Helps organize visual direction of your production
- c) Aids in problem solving - help you see if the video will actually work within the timeframe before you spend \$ to produce the video
- d) Keeps the flow of the video
- e) People may interpret scripts differently so the storyboard helps you illustrate to others how you see the final product
- f) Acts as a visual aid to sell idea to client if you have a client

Adobe Premiere CS4

Review and study the Adobe Premiere CS4 tutorials on the class web page. Know how to do the following:

Workspace Tutorial

- How to use the premiere workspace
- How to import footage
- How to unlink and delete sound track

Slice and blend videos

- Unlink the audio track
- Use the razor tool to slice footage

Using effects

- Simple use of the effects palette

Simple green screen removal

- How to remove a simple colour background by using simple keying effect

Icons and Windows

- Razor blade tool, source window, program window, timeline window, project window
- Set in point, set out point

Unit 4 - Interactive Multimedia Production - Flash

The Flash Main Screen



Flash Icons

- **Selection tool**
- **Scaling tool**
- **Creating a new Layer**
- **Selecting a Scene**
- **Text tool**
- **Fill tool**
- **Line tool**
- **Erase tool**
- **Zoom tool**
- **Brush tool**
- **Lasso tool**

Types of Animation

Frame by Frame - animation is created much the same way Stop Motion videos are created, that is one frame at a time

- new keyframes are added for each modification to the graphic
- example – writing your name in cursive, step by step

Motion Tweening - a start and end keyframe is created

- Flash interpolates the intermediate positions of the objects being animated
- example making an object change position and/or size across the stage

• Also know how to:

- import the images into the library, and place them on the stage in specific frames
- stretch/scale images
- rename layers
- create a new layers
- choose colours, brush styles and sizes.
- use the brush tool to create a “frame by frame” animation
- use the rectangle and oval tool
- convert objects to symbols
- create motion tweens
- import music