EAST®

student technical training

course catalog 2010-2011

EAST initiative

education is *different* here

3D Design Using Solid Edge

How are things designed in this world? Have you wondered how someone can take a idea and make it into a 3D model? Solid Edge is a professional 3D design tool that you can create almost anything. This tool is mainly used in the manufacturing industry but can be used in any application. In this class we will be learning how to design 3D objects and putting them together. We will be working in a team environment to create projects. If you want to learn 3D engineering design, Solid Edge class is the one for you.

Bring: Students should bring a flash drive or CD in order to take their project home.

Instructor: Greg Hamano, Manager of Technical Services, Archway Systems

Adobe InDesign – The Missing Link

What does InDesign have that Photoshop and Illustrator don't? Powerful text formatting tools! InDesign is useful for combining text with images, from single-page documents such as flyers to multi-page publications and even books.

This one-day course introduces the basics of page layout and typesetting with InDesign. Users will learn to create single or multi-page documents, importing text as well as photos and artwork. Users will also be introduced to InDesign's own drawing and special effects tools.

Bring: USB drive to save projects.

Instructor: Terri Parker West, Content Specialist, EAST Initiative

Advanced Adobe Photoshop

For those who are already familiar with Photoshop, here is your chance to take those skills a bit further. This class will focus on creating eye-catching designs using text, and creating and implementing graphics and photography.

Bring: Photos related to your EAST projects and activities as well as some of your favorite personal photos.

Instructor: Ashley Moore, Instructor of Graphic Design, Southern Arkansas University Tech

Advanced Animation in Softimage

This is a two-day advanced course and will cover Inverse Kinematics as it applies to character animation and abstract modeling. The limited subject of the course is due to the short length of the class and the complicated nature of Inverse Kinematics as it applies to character animation. *Not for beginning animators.* The class will cover advanced concepts in Animation and Modeling, therefore, a comprehensive knowledge of the XSI interface and program is required to attend. The short length of the class limits additional time to assist less experienced students. Good note-taking skills are imperative as without them you may lose much of the class content between the end of the class and your arrival back at school. Previous course instruction with Tim Horne is a plus.

Instructor: Tim Horne, Computer Graphics Artist and Animator

Advanced Virtual Reality Development Lab

Workshop Objectives:

- Review of issues, problems and questions from previous VRDL experience
- Previous winners from competition and why?
- Review of hardware and focus on the camera basics
- Photo-taking exercise: lights on, lights off, outside, small room, and large area
- Creative Photography
- 3D Tools for VR enhancement
- Working in VR Skin and why it's a good idea to create a new skin vs. using a pre-loaded one
- Capturing, importing and converting video with the Nikon VR camera
- Capturing still images and voice over's to tell a story
- How to utilize and the best uses of your tour once you are done
- Teaching, education and training of other with the VRDL
- Start outline of project for EAST
- Augmented Reality overview and education

Prerequisites:
Inventory of VRDL equipment and have everything needed for training and software installed. (If you have any questions or concerns please call Digital Tech Frontier the manufacturer of the equipment to check 1.888.587.7529.)

Bring: PC computer with the software installed and the complete VRDL case with all equipment inside. Please check the software is actually installed.

Optional: Apple QuickTime PRO on installed on your computers ($29.95 from www.APPLE.com) Not necessary to do VR, but needed to edit video and integrate video inside VR tours.

PC System Includes:
Laptop or Desktop with the VRDL Software installed and registered
Camera P6000 or P5000 (please note if you have the P5000)
Mouse
Fish-eye lens
Fish-eye lens step-down
Rotator
Tripod
Battery
Battery charger
Smart card
Smart card reader
Bubble level
A music CD or various MP3's
Microphone for the computer

Please note: In advanced class you are required to have shot, stitched and created a VRDL tour before.

Instructor: Scott Jochim, Creative Director, Digital Tech Frontier, LLC.

Animation Using Softimage

This two-day Softimage course will explore the XSI modeling and animation software from Softimage/AVID. We will take an in-depth look at the tools and techniques of digital content creation for film, television, and the games industry. This session will cover modeling, animation, materials, textures, advanced simulation, and rendering. All animation scenes created during the class and the rendered AVI files will be burned to CD at the end of the week for the students to take home. Although this class will explore many of the high end features of XSI it will stress the importance of the fundamentals, the building blocks of CGI.

If you have been a student of Tim Horne before, this class will not cover anything new to you. If you are currently working on a project from your school, bring it along. If time allows we will examine your scene and try to improve it or solve any problems you may be experiencing.

Bring: A blank CD, writing materials and a positive attitude.

Prerequisite: Read the fundamentals booklet that comes with XSI. Get a working knowledge of how to navigate the interface. Good note-taking skills are imperative as without them you may lose much of the class content between the end of the class and your arrival back at school.

Instructor: Tim Horne**,** Computer Graphics Artist and Animator

ArcGIS Server

What is ArcGIS Server? It's a cool piece of software that EAST schools have access to this year that allows you to publish your maps online for your community and others to use! This 2-day course will cover how to create web pages, publish maps, a little web programming, and how to have your neighbors find the bus stop nearest them through an online map (like Google maps). All students should have a basic familiarity with ArcGIS.

Bring: USB drive and ideas on projects you wish to present on the web
Software required: Adobe Design Premium CS3 or CS4, Google Earth, Firefox with the Firebug add-on

Instructor: CAST (Center for Advanced Spatial Technologies) Staff
Malcolm Williamson, Research Associate
Adam Barnes, Geomatics Specialist
Robyn Dennis, Geospatial Education Specialist
Robin Gregory, Geospatial Education Specialist
Hayley Hames, Geospatial Education Specialist
Peter Smith, Geospatial Application Designer

Architecture Using Microstation 3D

Your new project is designing a building. You need a floor plan and a model. Which software product do you use? Bentley Microstation is a professional product used to design buildings and roads. The Microstation class at EAST uses a Bentley add-on package called Bentley Architect. In this class you will not only learn how to use the software but you will learn architecture tips, how an architect works. Learn how designs make a difference in walking through buildings, making them more efficient. The class includes taking an existing floor plan, making it into a 3D model and doing an animation fly-through.

Bring: Students should bring a flash drive or CD in order to take their project home and a tape measure at least 15 feet long.

Instructor: Greg Hamano, Manager of Technical Services, Archway Systems

Augmented Reality Education

This session is both a hands-on training and an educational learning session to showcase the ability of Augmented Reality in EAST. There is no need to have or own any prior equipment before signing up for this training. We will provide all that is needed on site. Bring an open mind to the endless possibilities of what you have seen in movies such as *Iron Man, Terminator* and *Minority Report*. This tech demo and training day will put you in the driver's seat of the technology that will change the way we see the world around us. Students, teachers, administrators and EAST staff all are welcome.

- What is Augmented Reality?
- Showcase math, science and social studies examples
- How it will affect us today and tomorrow in education, training, entertainment and more…
- Why Augmented Reality works and how
- Using Augmented Reality in Google SketchUp
- Using SketchUp
- Using the Augmented Reality Simple Module Builder
- Ideas, inspiration and project ideas!

Prerequisites for Advanced Techniques: (Would be nice but not mandatory.)

- SketchUp
- Any 3D Modeling Software
- Ability to do flow charts
- Want, need and desire to have fun and see the coolest thing in educational technology

Instructor: Scott Jochim, Creative Director, Digital Tech Frontier, LLC.

Basics of Virtual Reality

This session is for all schools that have a PC based VRDL system that was installed/purchased prior to the 2009-2010 school year.

Prerequisites: Inventory of VRDL equipment and have everything needed for training and software installed (If you have any questions or concerns please call Digital Tech Frontier the manufacturer of the equipment to check 1.888.587.7529.)

Bring: PC computer with the software installed and the complete VRDL case with all equipment inside. Please check to make sure the software is actually installed.

PC System Includes:
Laptop or desktop with the VRDL Software installed and registered
Camera P6000 or P5000 (please note if you have the P5000)
Mouse
Fish-eye lens
Fish-eye lens step-down
Rotator
Tripod
Battery
Battery charger
Smart card
Smart card reader
Bubble level
A music CD or various MP3's
Microphone for the computer

Instructor: Scott Jochim, Creative Director, Digital Tech Frontier, LLC.

Community Mapping

Have you ever thought about what makes your community unique and interesting? Or how you'd share that with someone else? You can do it with maps! We'll show you how to find geographic data and create your own, and then put them together in ArcGIS 10 to make beautiful, professional-looking maps. This is an introductory course, so no previous experience is necessary.

Bring: USB drive

Software required: ArcGIS 10

Instructor: CAST (Center for Advanced Spatial Technologies) Staff
Malcolm Williamson, Research Associate
Adam Barnes, Geomatics Specialist
Robyn Dennis, Geospatial Education Specialist
Robin Gregory, Geospatial Education Specialist
Hayley Hames, Geospatial Education Specialist
Peter Smith, Geospatial Application Designer

Community Mapping Online

Interested in learning the basics of ArcGIS from your EAST classroom during your regular class time? This five-week online course is divided into five modules that let you move at your own pace as you learn the fundamental skills taught in our two-day Community Mapping course!

Note: This online course does not fulfill the new EAST programs Geospatial training requirement.

Instructor: CAST (Center for Advanced Spatial Technologies) Staff
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Peter Smith, Geospatial Application Designer

Designing with Dreamweaver and Introduction to Content Management Systems

This workshop will introduce students to the basic principles of web design and online communication. It is a lab and project-based workshop. Students will learn how to plan, design and manage websites using web authoring software like Dreamweaver, and also learn how to install and use Content Management Systems like Joomla and WordPress. Also students will learn how to use peripheral software for editing images, encoding, sound and video for the web and an FTP Client (File Transfer Protocol) for remote transfer of files.

Workshop Objectives:
1. Learn how to design and build a website using web authoring tools
2. Learn how to transfer files onto a server using an FTP Client (File Transfer Protocol)
3. Learn how to install, and use CMSs (Content Management System)
4. Learn how to edit images, create graphics and encode audio and video for the web
5. Reflect on the professional and civic value of the skills developed

Bring: Students should bring a flash drive or CD in order to bring their project home.

Student Participation and Prerequisite: Active participation during workshop is mandatory. Students are expected to participate in workshop activities by doing their lab work and contributing to workshop discussions. The main prerequisite is enthusiasm and the willingness to do workshop exercises. The trainer assumes that students are familiar with basic image, audio and video editing The workshop activities will build on that. However, if you do not know how to do any of these, inform the trainer.

Instructor: Kwasi Boateng, Assistant Professor, School of Mass Communication
University of Arkansas at Little Rock

Environmental/Natural Resource Mapping and Management

Learn how professionals use geographic data to do things like measure change in the landscape, predict where wildlife can be found, and manage natural resources like forests and water. This course introduces concepts and applications used in environmental analysis and resource management; previous experience with GIS is advised.

Bring: USB drive

Software required: ArcGIS 10 and the Spatial Analyst extension

Instructor: CAST (Center for Advanced Spatial Technologies) Staff
Malcolm Williamson, Research Associate
Adam Barnes, Geomatics Specialist
Robyn Dennis, Geospatial Education Specialist
Robin Gregory, Geospatial Education Specialist
Hayley Hames, Geospatial Education Specialist
Peter Smith, Geospatial Application Designer

Fruity Loops

Music is an important part of the human experience. The thumping beat of music literally sends signals from the brain down the spine to the waist, legs, and feet. These signals are completely involuntary but are the basis of dance. When we hear the pulse of music we instinctively tap along to the beat. Music adds a level of emotion that is deeply ingrained in all of us. The key is to tap into that emotion and exploit it to our uses. How can we achieve this? Two words…Fruity Loops. Although the software is geared towards techno and hip hop styles of music, the program is versatile enough to handle a wide range of genres. This training session will cover set-up, instruments, recording effects, filters, Midi devices, mastering, and audio formats.

Bring: Headphones and flash drive.

Instructor: Doug Gusewelle, Technical Support Group, EAST Initiative

GPS Project Development

Do you want to get practical, “hands-on” experience with your program’s GPS unit? We’ll show you how to set up your project, best practices for collecting data, how to troubleshoot common problems and evaluate the data you collect, and finally, how to get it into ArcGIS. And we’ll do some geocaching, too!

Bring: Charged GPS unit with TerraSync installed; all cables and accessories for the GPS unit

Software required: ArcGIS 10, Pathfinder Office 4.2, Trimble – TerraSync Updater, Trimble Office – Hyperpage, Planning

Instructor: CAST (Center for Advanced Spatial Technologies) Staff
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Hayley Hames, Geospatial Education Specialist
Peter Smith, Geospatial Application Designer

Introduction to Adobe Photoshop

DON’T BE INTIMIDATED BY PHOTOSHOP! Yes, it’s cool Yes, it’s in-depth, to say the least, but you too can learn some really cool tricks using Adobe Photoshop!

This is an introductory course dedicated to teaching the basic tools and applications of Adobe Photoshop. The class will focus on photo manipulation and color correction.

Bring: Photos related to your EAST projects and activities as well as some of your favorite personal photos and a CD or flash drive to save your project.

Instructor: Ashley Moore, Instructor of Graphic Design, Southern Arkansas University Tech

Landscape Visualization with Vue

Envision the future or recreate the past quickly and easily with Vue. Incorporate files from ArcGIS, SketchUp, SoftImage and other 3D software into one package to create realistic visualizations of the landscape.

Bring: USB drive

Software required: Vue

Instructor: CAST (Center for Advanced Spatial Technologies) Staff
Malcolm Williamson, Research Associate
Adam Barnes, Geomatics Specialist
Robyn Dennis, Geospatial Education Specialist
Robin Gregory, Geospatial Education Specialist
Hayley Hames, Geospatial Education Specialist
Peter Smith, Geospatial Application Designer

Learn the Basics of Adobe Illustrator

Come prepared to impress yourself with your digital drawing skills…even if you can't draw a stick figure! This is an introductory course using Adobe Illustrator to create simple eye-catching illustrations and logos for all aspects of Multimedia. The class will focus on using the pen tool and others tools to create high quality vector graphics.

Instructor: Ashley Moore, Instructor of Graphic Design, Southern Arkansas University Tech

Making a Movie

This regional workshop will be held at SAU Tech in Camden. That means you get to use the big toys to learn how the big boys make videos. Fun, practical and informative, this workshop will give you the total package when you're working on your next project. From newbie to advanced students, Video Production will teach you how to be successful on your next shoot. No need to bring gear, we'll use mine! :-)

Bring: A flash drive or CD to take your project home.

Instructor: Steve Taylor, Instructor of Film & Video Production, Southern Arkansas University Tech

Optimizing Locations and Routes

At last! A 2-day course that focuses on bus routing that incorporates both Network Analyst and ArcLogistics! You'll learn about geocoding and geodatabases as well as basic analysis tools that can be used in lots of other projects too.

Previous experience with ArcGIS advised.

Bring: USB drive

Software requirements: ArcGIS 10, Network Analyst extension, ArcLogistics

Instructor: CAST (Center for Advanced Spatial Technologies) Staff
Malcolm Williamson, Research Associate
Adam Barnes, Geomatics Specialist
Robyn Dennis, Geospatial Education Specialist
Robin Gregory, Geospatial Education Specialist
Hayley Hames, Geospatial Education Specialist
Peter Smith, Geospatial Application Designer

Pre-Production Planning & Visualization

This all-day workshop will provide a comprehensive look at how to visualize and plan a complex video production whether it is a non-fictional documentary or a fictional narrative. The seminar will provide a basic look at the and grammar and syntax of the visual narrative. This will include the types of shots and editing transitions available to the writer, producer and director. After examining the building blocks of visual narrative, students will learn how to conceptualize, visualize and then write a script for a non-fictional narrative. This will include how to format a standard two-column video script in MS Word. This three-step process will include exercises in arriving at a concept for a topic including an approach that targets specific audiences as well as exercises in visualizing the topic in simple and direct ways and then converting the visualized concept on to a producible video script.

Additional topics included in this all-day workshop will include tips on interviewing techniques, music selection, licensing and copyright issues. The seminar will also provide valuable information about how to schedule and budget your production.

Bring: Flash drive to save your project.

Instructor: Mark Giese, Assistant Professor, School of Mass Communication
University of Arkansas at Little Rock

Special Effects

Learn how to use your camera to create special effects. No need for post production know-how when you can do your own special effects in camera. These are NOT the built-in effects that come with certain cameras. These effects can be done with just about any camera if you know how. This is a one-day workshop with lots of hands-on time. You'll need to bring your own camera and sticks to make this one VERY special workshop!

Bring: Your own camera and tripod

Instructor: Steve Taylor, Instructor of Film & Video Production, Southern Arkansas University Tech

Systems Administration

Are you the person everyone turns to when the network is down? Does the term Blue Screen of Death stir up any emotions in you? Or do you just want to know more about how things operate in your classroom network? If so then this is the class for you. We will take an overview of how a typical EAST classroom network is set up and cover some general networking principles before diving head first into working with server, creating user accounts in active directory and troubleshooting when things go wrong.

This is a hands-on class that will take a close look at how the PC's, Macs, and other devices interact with each other in a network.

Prerequisite: The only prerequisite is that you have an interest in learning how to set up and maintain the network that you and your classmates rely on every day.

Instructor: Tim Van Dusen**,** Network Manager, EAST initiative

Using Open Source Tools for Websites – WordPress and Joomla

This workshop will introduce students to Content Management Systems (CMS) as tools for online communication – websites. It is a lab and project-based workshop. Students will learn how to install CMSs; Joomla and WordPress. Students will learn how to use peripheral software for image editing, media encoding (sound and video) for the web, and an FTP Client (File Transfer Protocol) for remote transfer of files.

Workshop Objectives:

1. Learn how to install, configure and use CMSs (Content Management System)
2. Learn how to transfer files onto a server using an FTP Client (File Transfer Protocol)
3. Learn how to edit images, create graphics and encode audio and video for the web
4. Reflect on the professional and civic value of the skills developed

Bring: Student should bring a flash drive or CD in order to bring their project home.

Student Participation and Prerequisite: Active participation during workshop is mandatory. Students are expected to participate in workshop activities by doing their lab work and contributing to workshop discussions. The main prerequisite is enthusiasm and the willingness to do workshop exercises. The trainer assumes that students are familiar with basic web design. The workshop activities will build on that. However, if you do not know web design, inform the trainer before the beginning of the workshop.

Instructor: Kwasi Boateng, Assistant Professor, School of Mass Communication
University of Arkansas at Little Rock

Video Editing with Final Cut Pro

So you've got all this video footage for a great project that you've been working on. What do you do now? This class will show you how to tell your story using Final Cut Pro — just like the pros do. We'll focus on basic editing techniques, transitions, credits, as well as special effects like spit screen, time mapping, and green screen.

Prerequisite: Schools will need to bring their own Mac computer with Final Cut (versions 6 or 7) preloaded or Final Cut Express, if taking class in Fall 2010. Feel free to bring your own footage or your video camera as we will also look at capturing and converting video from various formats into Final Cut.

Instructor: Tim Van Dusen**,** Network Manager, EAST initiative

Web Design/Dreamweaver – Intro to Open Source Tools *(Elementary/Middle Schools)*

This session is designed specifically for elementary through 8th grade students only.

This workshop will introduce students to the basic principles of web design and online communication. It is a lab and project-based workshop. Students will learn how to:

1. Plan, design and manage web sites using web authoring software like Dreamweaver.
2. Learn how to install and use Content Management Systems like Joomla and or WordPress.
3. Learn how to use peripheral software for editing images, encoding sound and video for the web, and an FTP Client (File Transfer Protocol) for remote transfer of files.

Prerequisites and Student Participation: Active participation during workshop is mandatory. Students are expected to participate in workshop activities by doing their lab work and contributing to workshop discussions. The main prerequisite is enthusiasm and the willingness to do workshop exercises. The trainer assumes that students are familiar with basic image, audio and video editing. The workshop activities will build on that. However, if you do not know how to do any of these, inform the trainer at beginning of class.

Bring: Student should bring a flash drive or CD in order to take their project home

Instructor: Kwasi Boateng, Assistant Professor, School of Mass Communication
University of Arkansas at Little Rock