

# Welcome to MATEC NetWorks Webinar

## Industry Expectations of Graduates

NetWorks is an NSF-funded ATE Resource Center supporting faculty in Semiconductor, Automated Manufacturing, and Electronics education

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## TechSpectives Blog

## Webinars

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**MARICOPA  
COMMUNITY  
COLLEGES**

NetWorks is a part of MATEC, a member of  
the Division of Academic and Student Affairs  
at the  
Maricopa Community Colleges.



National  
Science  
Foundation

Funded, in part, by a grant from the  
National Science Foundation.  
DUE-0501626



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# NetWorks Webinar Team

Mark Viquesney



Webinar Host

Lara Smith



Marketing &  
Management Support

Darlene Cieplinski



Administrative Support

Shay Johnson



Technical Support



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# Poll

Participants

Mark Viquesney (Moderator, Me)

1 Participant

Raise hand/smile/clap

Chat

Show All

Joined on February 25, 2009 at 1:08 PM

Chat

Send to This Room

Audio

Microphone Speaker

Ctrl+F2

## Whiteboard - Main Room

15/29 Welcome to MATEC NetWorks Webinar ☒ Follow Moderator ☐ Roam

Welcome to MATEC NetWorks Webinar

# Whiteboard

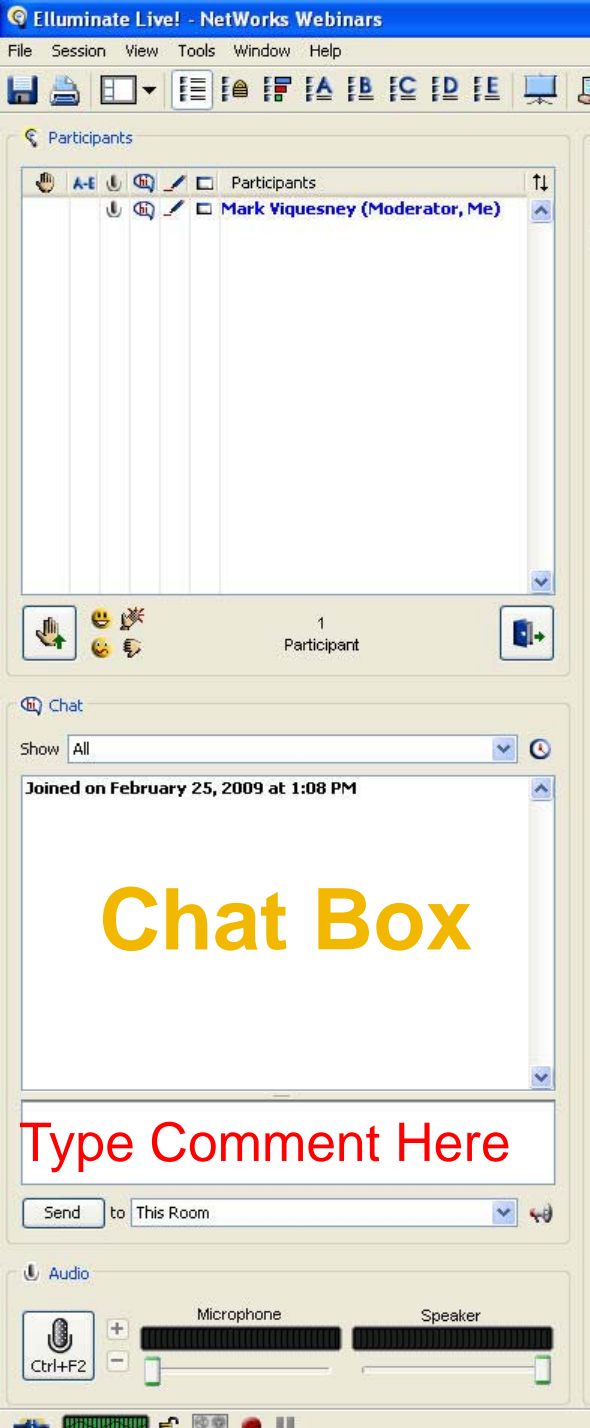
Classroom Ready Resources in the Digital Library

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All this and more at [matecnetworks.org](http://matecnetworks.org)

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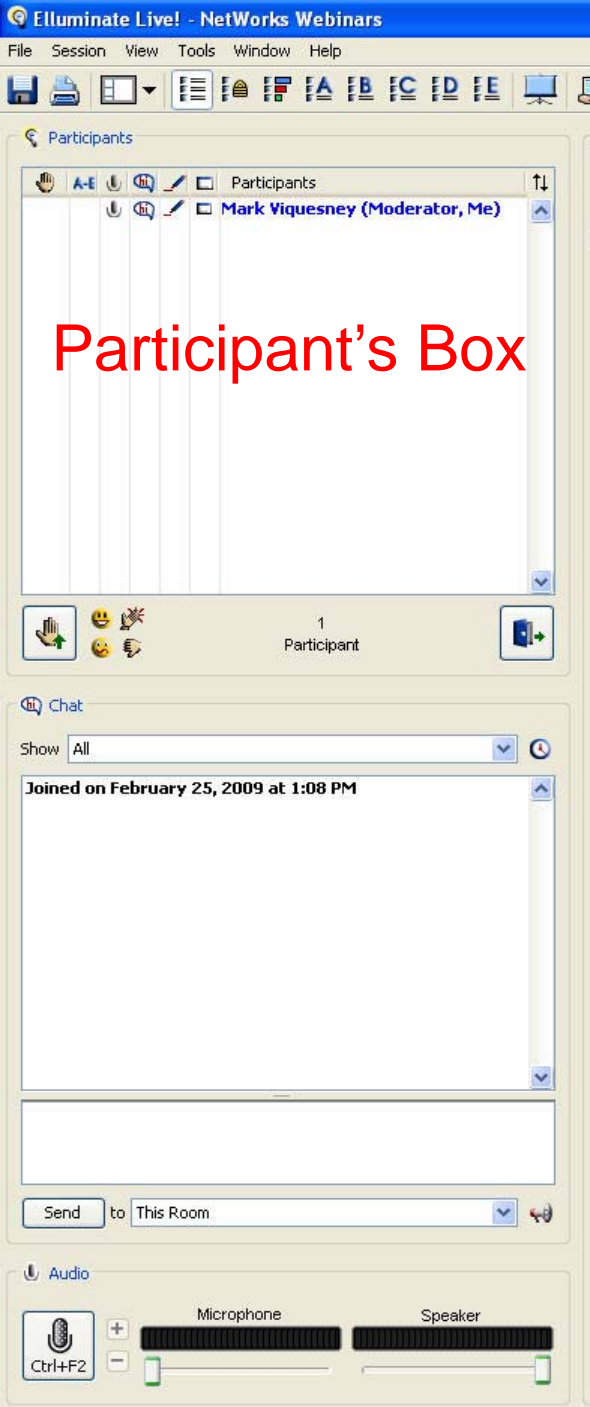


# Chat Box

In the **Chat Box**, please type the name of your school or organization, your location, and how many people are attending with you today.

KS



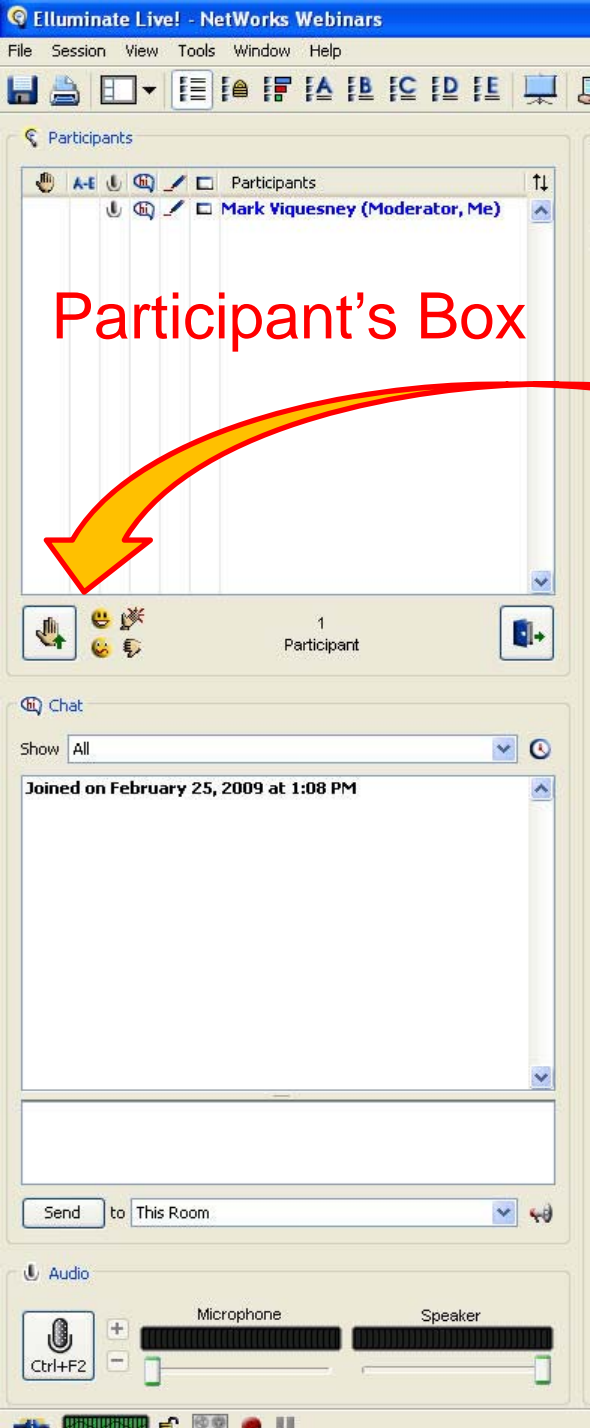


# Participant's Box

Allows you to non-verbally respond to the presenter's comments.

KS





# Participant's Box

Smile



Let the presenters know if you like what they say with a smile or clap. Raise a hand if you have a question – and then type it into the Chat box.







# Poll

Click A-E to take the Poll

This webinar will have a Poll. Please answer:  
I heard about this webinar through:

- A. @matec
- B. Email from ETD list serv
- C. Email from NetWorks
- D. Friend or colleague
- E. Other (please type where in Chat box)



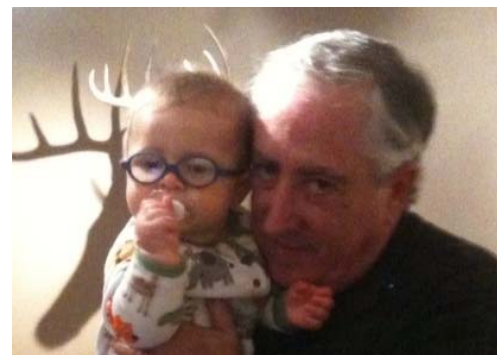


# NetWorks Webinar Presenters

Michael Lesiecki:  
Director of MATEC



Geoff Little:  
Workforce Consultant



Robert Edwards:  
Technical Services  
Manager



Mark Retzer:  
Staffing Consultant



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# Outline: Industry Expectations of Graduates

- Test your Industry IQ
- Mike Lesiecki: How companies see the problem
- The problem as the panelists see it
- Mark Retzer: The Hiring Challenge
- Geoff Little: Workforce Development – Stories from the Trenches
- Robert Edwards: Small Business Perspectives



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# Who is the Primary Customer of my Program?

- A. Businesses that hire
- B. The College that promotes
- C. Students who enroll
- D. Faculty that develop, improve, deliver



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# Why do students fail interviews for high-tech companies?

A. Technical foundation  
B. Negative behaviors

C. Poor safety values  
D. Communication problems



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# Desired Behaviors

- Safety
- Coping
- Tolerance of ambiguity



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# Desired Behaviors

- Safety
- Coping
- Tolerance of ambiguity
- Analytical problem solving
- Goal setting
- Commitment to task



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# Desired Behaviors

- Safety
- Coping
- Tolerance of ambiguity
- Analytical problem solving
- Goal setting
- Commitment to task
- Spoken communication
- Team building
- Drug-free workplace



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Do you have a section in your curriculum that addresses these expectations?

- A. Yes – mark the green X and then in the Chat box how it addresses expectations
- B. No

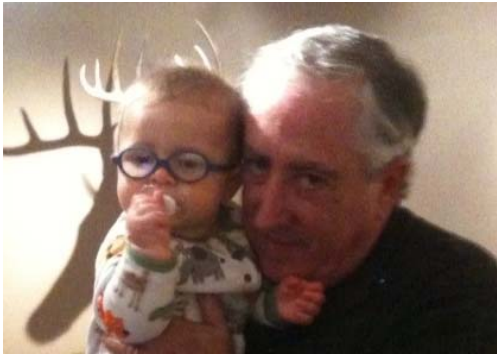


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# The problem and challenge as the panelists see it

Robert Edwards



Geoff Little



Mark Retzer



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# Outline: Industry Expectations of Graduates

- Test your Industry IQ
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# Background

## Professional

20+ years in Semiconductor industry

Began 19 year career at Intel driving forklift

Quickly moved up/on to new fields within Intel

Security, Training and Staffing

Last 10+ years have been in Staffing with a large focus on university programs



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# Background

## Personal

San Jose native (3<sup>rd</sup> generation)

Single parent for a few years

Life long learner, however I have still not earned a 4 year degree



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# Entry Level Characteristics

## Academics

Strong academic knowledge in field of study



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# Entry Level Characteristics

## Skills/Strengths

Self starter – Hit the ground running

Teamwork

Communication

Results focus



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# Entry Level Characteristics

## Experience

Hands on experience in field of study

Relevant experience

Experience that highlights strengths/skills



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# Questions and Comments

Type them in  
your Chat  
window



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# “Are They Really Ready to Work?”

Critical thinking/problem solving

Oral communication

Written communication

Teamwork/collaboration

Diversity

Information technology application

Leadership

Creativity/innovation

Lifelong learning/self direction

Professionalism/work ethic

Ethics/social responsibility

The Conference Board, Corporate Voices for Working Families, the Partnership for 21st Century Skills, and the Society for Human Resource Management study of industry's perspective on the preparedness of recent graduates as they entered the workforce - 2006



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# Clements Group Industry Sector Forums - Typical Results

Communication, both written and verbal

Ability to work in teams

Problem-solving

Clements Group industry-sector forums conducted on behalf of community colleges as part of its Business Partnership Development Program



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# Clements Group Industry Sector Forums - Typical Results

Work ethic (commitment to the job and the company)

Critical thinking

Independent thinking

Self-motivation

Clements Group industry-sector forums conducted on behalf of community colleges as part of its Business Partnership Development Program



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# Clements Group Industry Sector Forums - Typical Results

Taking responsibility for one's work

Leadership

Understanding basic business principles, the particular business in which they are working, and the impact of their actions on the business' success or failure

Clements Group industry-sector forums conducted on behalf of community colleges as part of its Business Partnership Development Program



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# Sample Communications Company Career Ladder

## **Technical Position 1 Summary**

*Tech 1 is an entry-level field position, and typically the start of the employee's telecommunications career.* Under limited supervision, in accordance with company policies, procedures and practices, the Tech 1 performs routine reconnects; performs changes of service for residential and commercial video customers; disconnects all product lines; teaches customers how to use equipment; resolves billing and/or payment questions while on-premise; and up sells and upgrades company products and services. *Continued employment is contingent upon achieving required technical and safety certifications.*



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# Sample Communications Company Career Ladder

## **Technical Position 2 Summary**

Under limited supervision the Tech 2 performs changes of service for the video product line *including routine installs* and reconnects; *performs CLI detection and repair*; *troubleshoots and repairs video service problems*; disconnects all product lines; teaches customers how to use equipment; resolves billing and/or payment questions while on-premise; up sells and upgrades additional company products and services.



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# Sample Communications Company Career Ladder

## ***Technical Position 3 Summary***

Under limited supervision the Tech 3 *Universal* handles a full range of *service calls* for residential and commercial customers for all products and services. Installs, reconnects, and performs changes of service for *all products and services*. *Learns and applies troubleshooting skills for all services*. Disconnects all product lines. Teaches customers how to use equipment. Resolves billing and/or payment questions while on-premise. Up-sells and upgrades company products and services.



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# Sample Communications Company Career Ladder

## Tech 1 Operational Competencies

Ability to use basic cable installation tools and hand tools

Ability to perform job from high places (on ladders and/or poles)

Knowledge of the National Electrical Code (NEC), the National Electrical Safety Code (NESC), the Occupational Safety and Health Act (OSHA), Federal Communications Commission (FCC), Environmental Protection Agency (EPA), Department of Transportation (DOT), American National Standards Institute (ANSI), and various state and local codes including G.O. 95 and G.O. 128, (when applicable).

Ability to read general system layouts from blueprints

Knowledge of cable television products and services

Ability to comply with safety procedures and requirements

Ability to safely operate motor vehicle assigned for this job

Knowledge of basic mathematics

Ability to count and handle U.S. currency

*Ability to communicate with customers in a clear and straight forward manner*

*Ability to work independently, prioritize and organize effectively*



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# Sample Communications Company Career Ladder

## Tech 2 and 3 Operational Competencies

### **Operational Competencies: Tech 2**

#### **All Tech 1 Competencies Plus**

Ability to use basic cable test equipment

Ability to work on a computer

### **Operational Competencies: Tech 3**

#### **All Tech 1 & 2 Competencies Plus**

Knowledge of PC hardware, software and the internet

Knowledge of components on the PC desktop and ability to perform the following:

- Launch an application

- Add a shortcut

- Log into and navigate through a dial-up or other internet service

### **Operational Competencies: Tech 3 (cont)**

#### **All Tech 1 & 2 Competencies Plus**

Install software like Microsoft Internet Explorer, Netscape Communicator, Microsoft Windows, MS Office applications, educational software or games

Navigate through a file system via the DOS prompt or window interface

Access the Control Panel to configure components such as a printer, modem, and monitor

Knowledge of telephone provisioning and other related procedures and processes

Knowledge of telephony test equipment including digital test equipment

Knowledge of telephony interior wiring



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# Sample Communications Company Career Ladder

## Work Experience/Credentials

### **Related Work Experience:**

- Tech 1 - Entry-level position
- Tech 2 - CATV or wiring experience
- Tech 3 - Nine months CATV or wiring experience



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# Sample Communications Company Career Ladder

## Work Experience/Credentials

### **Training/Licenses/Certifications:**

Tech 1 - Valid drivers license and satisfactory driving record

High school diploma or equivalent

Tech 2 - Valid drivers license and satisfactory driving record

High school diploma or equivalent

Tech 3 - Valid drivers license and satisfactory driving record

High school diploma or equivalent



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# Sample Communications Company Career Ladder

## Core Competencies - All Tech Levels

**Customer Focus:** Exhibits behaviors that support “best in class” customer satisfaction. Focuses on understanding, meeting, and exceeding customer expectations. Able to see issues from customer’s perspective and determine their needs. Builds customer confidence by answering customer questions with self-assurance. Supports company marketing strategies and campaigns. Familiar with competitor products and services and is able to articulate the value and advantages of our products and services.



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# Sample Communications Company Career Ladder

## Core Competencies - All Tech Levels

**Team Focus:** Demonstrates knowledge and skills related to the functional area. Supports the success of his/her immediate team as well as other departments. Serves as a resource to team members. Shows respect for coworkers and customers and respects diversity in all its forms. Contributes to the development of others through effective coaching. Uses effective listening, verbal, and written skills to provide necessary information clearly and in a timely fashion. Is safety conscious; avoids unsafe acts and conditions; recognizes hazards and corrects them when possible or notifies management; accepts responsibility for personal, team, and public safety. Monitors own actions to be sure of following the rules and regulations set forth by both company and other regulating bodies.



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# Sample Communications Company Career Ladder

## Core Competencies - All Tech Levels

Continued

**Business Results Focus:** Considers the impact on the business when performing job related duties. Able to overcome obstacles to finish projects and work activities. Able to follow instructions or take action and address opportunities with little supervision. Able to take extra steps to prevent mistakes or create opportunities. Works proactively to reduce or avoid risk. Takes personal responsibility and conveys a sense of urgency to drive issues to closure.

**Innovation Focus:** Fosters an environment that accepts and embraces change. Flexible, and willing to listen to other's ideas.. Able to apply common sense, theory and experience to decision making. Able to recognize similarities between past and present situations to make effective decisions. Actively pursues learning and self development in the spirit of continuous improvement.



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# Sample Communications Company Career Ladder Advancement Time Line

**Tech 1** - Within the first 90 days (maximum) of service, an Employee must complete the certification required for Tech 1. The employee must successfully complete the training programs as described on this Job Description and pass the Tech 1 certification exams. In order to be certified as a Tech 1, the employee must:

Pass the Written Assessment for Tech 1

Pass the Skills Assessment for Tech 1

Meet Company Employee Standards



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# Sample Communications Company Career Ladder

## Advancement Time Line

**Tech 2** - The employee must successfully complete the training as described on this Job Description and pass the Tech 2 certification exams. In order to be certified as a Tech 2, the employee must:

- Pass the Written Assessment for Tech 2

- Pass the Skills Assessment for Tech 2

- Meet Company Employee Standards

- Meet time in grade -- Certification to Tech 2 can take place no sooner than 180 days after Tech 1 certification.

- Acquire Supervisor approval

**Tech 3** – Follows same pattern



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# Questions and Comments

Type them in  
your Chat  
window



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## Overview of the San Patricio Municipal Water District & “Plant C”

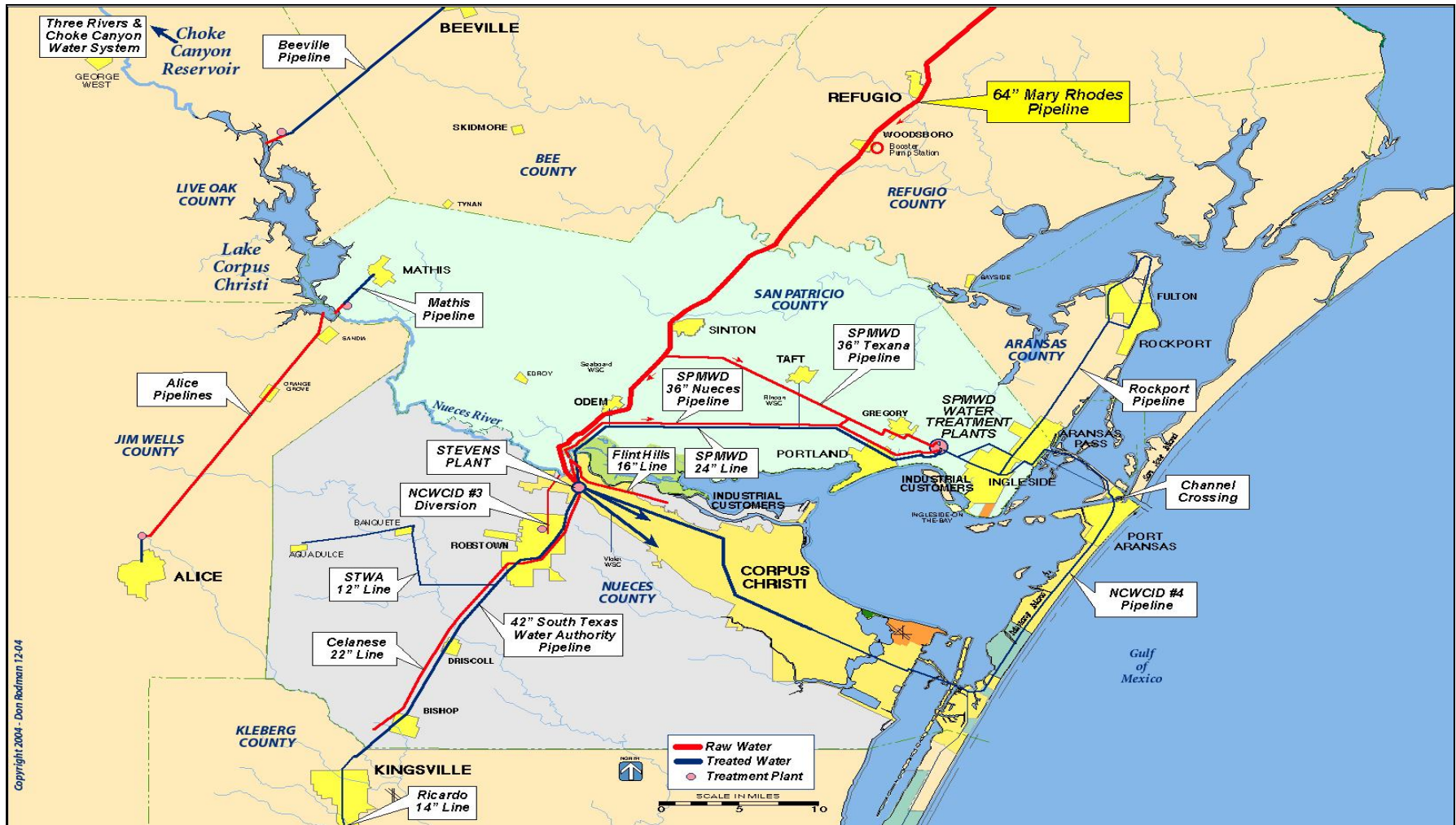


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# Coastal Bend Water Supply System



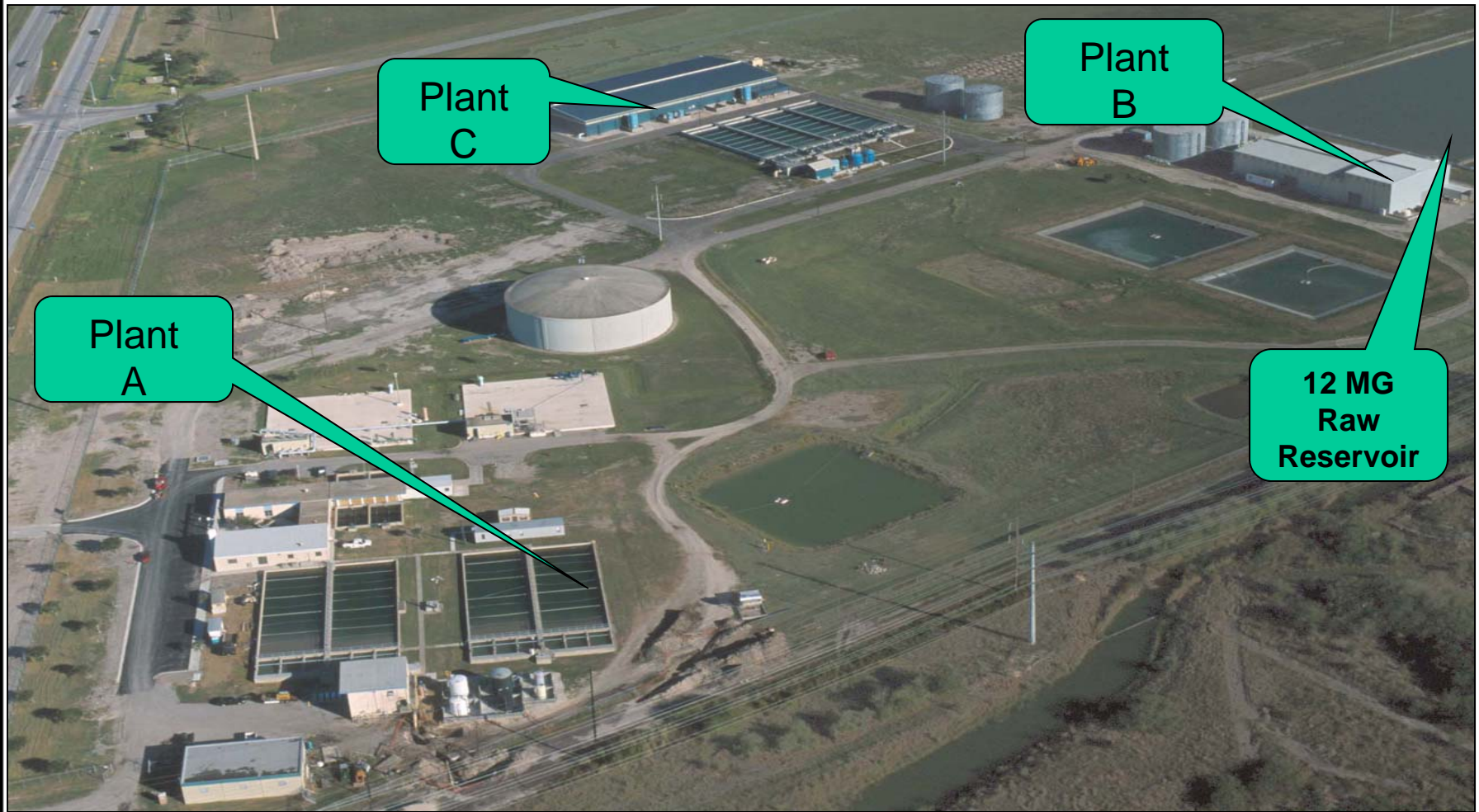
Copyright 2004 - Don Bedman 12-04



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# Three Water Treatment Plants

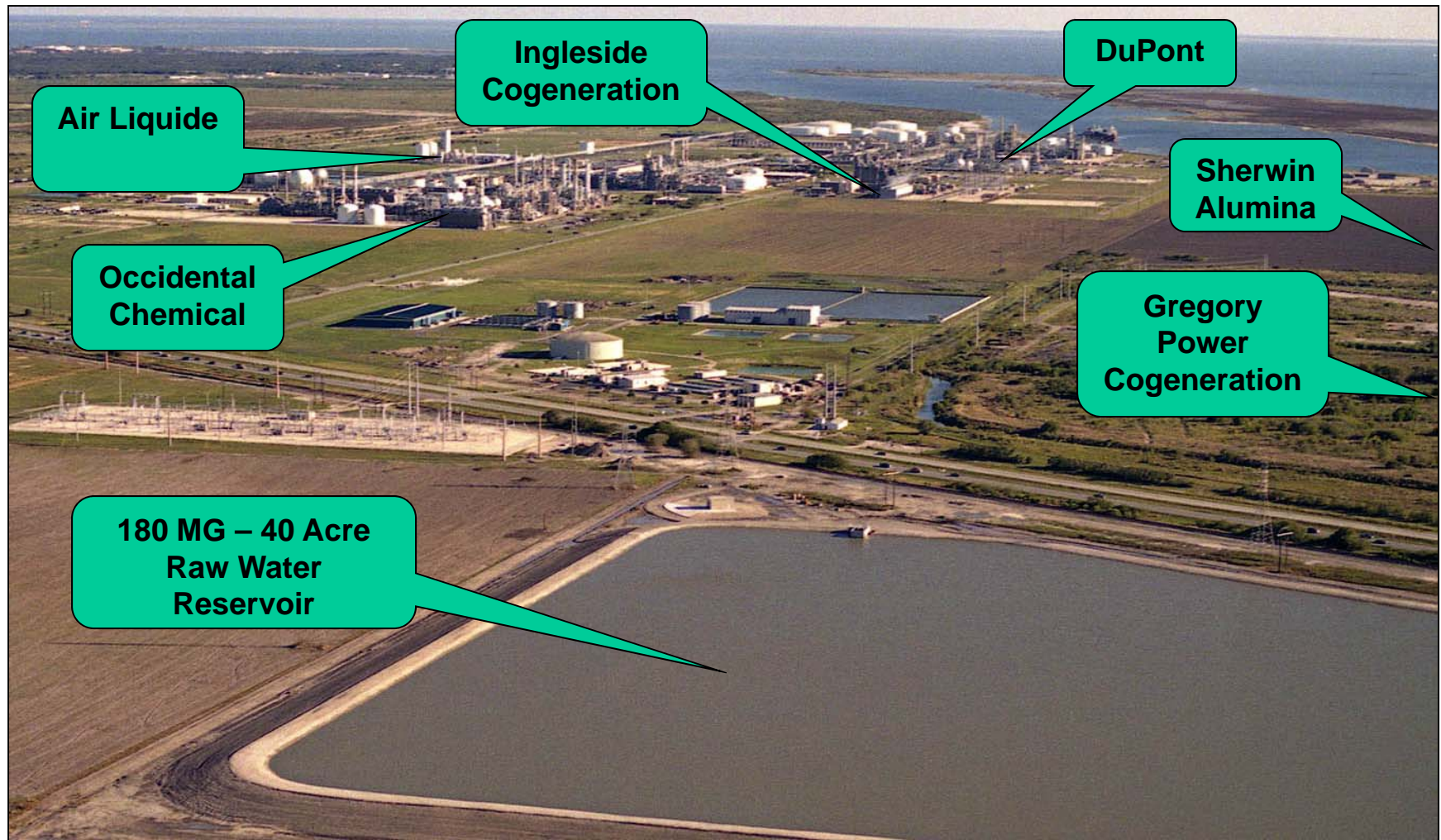


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# Located on Corpus Christi Bay



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# Feed End of Racks A-F



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## 50 Modules Per Rack



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# Clean-in-Place Area



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# Questions and Comments

Type them in  
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window



# Industry stresses technical writing and communication skills for its potential employees – *What's an educator to do?*

- Document results or log information
- Give reports and make presentations
- Pass down
- Teach/instruct
- Communicate and listen
- Research and specify



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# How Can We Better Serve You?

Whether you are joining us live or watching the recorded version of this webinar, please take 1 minute to provide your feedback and suggestions.

<http://questionpro.com/t/ABkVkZF5Gd>



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# Thank you for attending

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### **Industry Expectations of Graduates**

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TechSpectives Blog  
Webinars

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KEYWORD SEARCH

LOGIN | REQUEST ACCOUNT

NETWORKS HOME DIGITAL LIBRARY

## SEARCH RESULTS

Searched For: **electronics**

Results 1 - 10 of 243



### AC Electronics

A page filled with over 80 learning objects: Oscilloscopes, Capacitors, Inductors, Transformers, etc.



### Electronics Infoline

This website has exciting electronics, computer, and science information for students and enthusiasts. This website is great for students.



### Systems View of Electronics

Today, the greater part of a tech's work is done with systems containing many ICs, plug-in modules, sub-systems, etc.



### Electronics Circuits

The first courses taught in most 2-year technical schools are electrical theory, current, voltage sources, and circuits.



### Electronics Labs

Welcome to Electronics Lab! Here you can find many labs and downloads. I hope you enjoy the tour.



### DC Electronics

A website with many learning objects on DC circuits: Ohm's Law, Magnetism, Parallel Circuits, Series Circuits, etc.



### Electronics Tutorials, Electronics materials

Link to more than 90 tutorials that are available through optical communication. Animations, etc.



### Introduction to Electronics

The dictionary defines electronics as a branch of physics and engineering that deals with the properties and uses of electronic devices.

## MATEC NetWork's Online Resource Portal - Full Resource Record Display - Windows Inter

Browser window showing the URL: <http://www.matecnetworks.org/cwis/SPT--FullRecord.php?ResourceId=109>

Navigation buttons: File, Edit, View, Favorites, Tools, Help

Search bar: Google G Go

Bookmarks: 60 blocked

Star icon

MATEC NetWork's Online Resource Portal - Full Resou...



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## RECORD

[Edit This Resource](#)

**Title:** [Work Ready Electronics](#)  
**Alternate Title:** WRE  
**Uri:** <http://www.work-readyelectronics.org>

**Description:** Set of online resources for faculty instructing electronics courses in areas such as AC and DC circuits, Switch mode power supplies, Data Conversion, Wireless Communication, and others.

WRE

**Classification:** [Electrical Engineering -- Circuit Theory](#)  
[Electrical Engineering -- Communications](#)  
[Electrical Engineering -- Controls and Systems](#)  
[Electrical Engineering -- Electronics](#)  
[Professional Development -- Career and Personal Development](#)

**Date Issued:** 2006-06-19

**Resource Type:** [Unit/Module](#)

**Audience:** [Industry Personnel](#)  
[Government Personnel](#)



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Join our community of education and industry professionals dedicated to improving faculty and technician education and training.



What Is It?



Events

Can you guess what this image is?



- If you guess correctly, you will be entered into a prize drawing.
  - [EMAIL](#) your answer before 12/31/09.
- The answer & winner will be revealed in the Jan./Feb. [@MATEC](#)

## TECHSPECTIVES BLOG

Join a discussion or start your own at  
[TECHSPECTIVES](#)

### [THIS FRIDAY - FREE WEBINAR](#)

by Mark Viquesney - Dec 08, 2009

This semester I had a very interesting group of students - One student was in

### ▶ [THIS FRIDAY - FREE WEBINAR](#)

[ON THE WINGS OF A BUTTERFLY](#)

[REACHING AND TEACHING ACROSS GENERATIONS - FREE WEBINAR DECEMBER 10](#)  
[10 EMERGING TECHS FOR 2010](#)

## COMMUNITY RESOURCES

NETWORKS Community Resource Links.

- ▶ [FACULTY ADVISORY BOARD](#)
- ▶ [RECOMMENDED LINKS](#)
- ▶ [NATIONAL SURVEY RESULTS - 2009](#)

## WELCOME TO OUR COMMUNITY



## SOCIAL NETWORKING



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## NETWORKS PROFESSIONAL GROWTH







## ONLINE WEBINARS

NETWORKS produces **FREE** Online Webinars covering various topics in advanced technology education. A Webinar is a seminar, a workshop, or a lecture administered through the computer where participants and presenter can interact together. It is not just a one-way presentation, but a two-way connection between presenter and attendees. The Webinars will be conducted through Elluminate, a virtual meeting room accessible online from virtually anywhere. Participants will be awarded a certificate of attendance upon request.

NETWORKS also provides [WEBINAR HOSTING SERVICES](#).

## NETWORKS WEBINARS

For more information and to [REGISTER](#), click the links below.

Date	Webinars
December 11 <sup>th</sup>	 <a href="#">REACHING AND TEACHING ACROSS GENERATIONS</a>
February 12 <sup>th</sup>	 <a href="#">EVALUATING STUDENT IMPACT</a>
March 12 <sup>th</sup>	 <a href="#">INDUSTRY EXPECTATIONS OF GRADUATES</a>
April 9 <sup>th</sup>	 <a href="#">CONVERGING TECHNOLOGIES CAREER EXPLORATION</a>
May 14 <sup>th</sup>	 <a href="#">REVITALIZING ELECTRONICS PROGRAMS</a>
June 10 <sup>th</sup>	 <a href="#">RECRUITING DIVERSE POPULATIONS</a>

## HI-TEC CONFERENCE 2010



*Educating America's Technical Workforce*

**Join Us for HI-TEC 2010**

July 26-29 Orlando, FL

Check the website as details continue to develop

[WWW.HIGHIMPACT-TEC.ORG](http://WWW.HIGHIMPACT-TEC.ORG)

## PAST WEBINAR RECORDINGS

Webinar	Date	Link
Nanotechnology in the Classroom Laboratory	11/13/09	<a href="#">VIEW</a>
Sustaining Technical Programs	10/09/09	<a href="#">VIEW</a>
Energy Utilization	09/11/09	<a href="#">VIEW</a>
Teaching and Learning with i-Technologies	08/14/09	<a href="#">VIEW</a>
Developing Strong Evaluations for ATE Projects Part II	07/10/09	<a href="#">VIEW</a>
Developing Strong Evaluations for ATE Projects Part I	07/09/09	<a href="#">VIEW</a>
Learning Objects: What are they? How do I use them?	06/18/09	<a href="#">VIEW</a>
Electronics 2010: eSyst Update 6	05/15/09	<a href="#">VIEW</a>
Making Your Program Flexible	04/17/09	<a href="#">VIEW</a>



# Webinar Recordings

To access this recording, visit

**[www.matecnetworks.org](http://www.matecnetworks.org)**,

Keyword Search:

**“webinar Industry Expectations of Graduates”**



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# NetWorks Upcoming Webinars

**May 14: Revitalizing Electronic Programs**

**June 10: Recruiting Diverse Populations**

Visit [www.matecnetworks.org](http://www.matecnetworks.org) for more details about these upcoming webinars.



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Join Us in Orlando, FL  
July 26-29, 2010

Visit [www.highimpact-tec.org](http://www.highimpact-tec.org) as more details develop



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# Certificate of Participation

If you attended the live version of this  
1.5 hour webinar and would like a  
certificate of participation, please email  
**[darlene.cieplinski@domail.maricopa.edu](mailto:darlene.cieplinski@domail.maricopa.edu)**



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