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Technical Program Recruitment:
10 Tips to Thinking Outside the Box

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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 College District.

National Science Foundation

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

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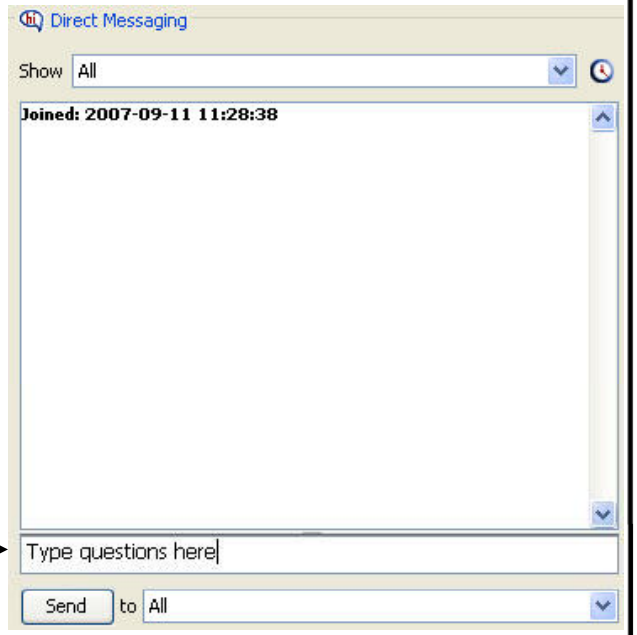
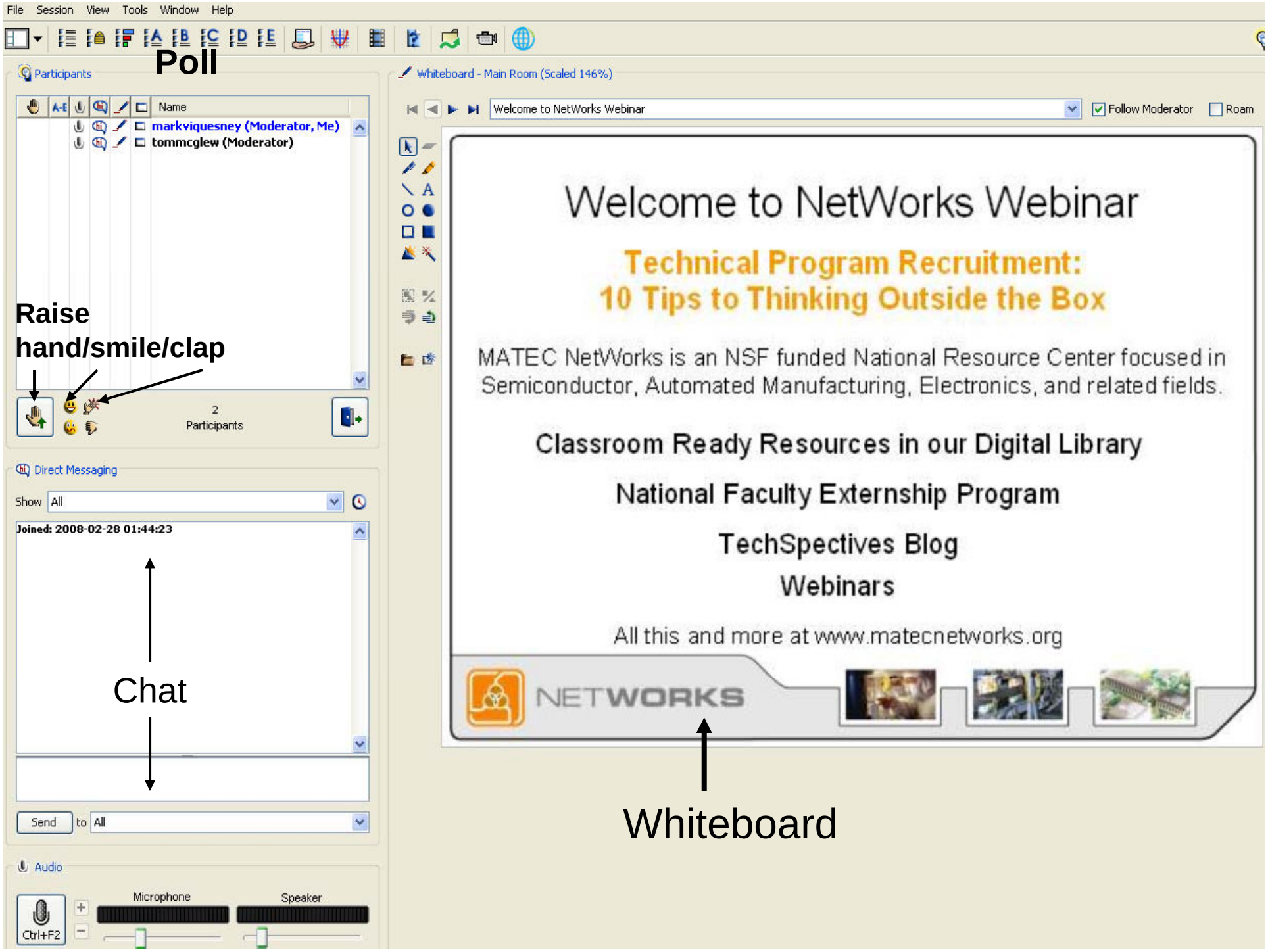
Webinar Procedures



- If you are listening by phone, please mute your phone by pressing #5.
- If you have questions during the presentation, please submit them to “All” in the Chat Box → so that others can follow along with the Question and Answer.
- We will answer questions as time permits and may further address them at a later date.




File Session View Tools Window Help
Poll
Participants
Name
markviquesney (Moderator, Me)
tommcglew (Moderator)
Raise hand/smile/clap
2 Participants
Direct Messaging
Show All
Joined: 2008-02-28 01:44:23
Chat
Send to All
Audio
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Speaker
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Whiteboard - Main Room (Scaled 146%)
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NetWorks Webinar

February 29, 2008

Technical Program Recruitment: 10 Tips to Thinking Outside the Box

Fox Valley TECHNICAL COLLEGE
Knowledge That Works

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Trends in Enrollment

Technology program enrollment at my institution over the last three years has:

A. increased by 25% or more.
B. stayed about the same.
C. decreased by 25%.
D. decreased by 50% or more.
E. in some cases, programs have been cancelled.



NetWorks Webinar Presenter

Terry Bartelt has been an instructor at Fox Valley Technical College in Appleton, Wisconsin since 1981. From 1995-2006 he was Chair of their Electromechanical Technology program. In 1996, he received a National Science Foundation (NSF) grant that supported the development instrumentation and process control courses at the college. In 2005, he received a second NSF grant to produce learning objects for the advanced courses in the Electromechanical Technology program. He has authored three textbooks, Industrial Control Electronics- Devices, Systems, and Applications, 3rd Ed, Delmar learning 2006; Instrumentation and Process Control, Delmar Learning 2007; Digital Electronics-An Integrated Laboratory Approach, Prentice Hall 2002.

920-735-4867
Barteltt@fvtc.edu

Fox Valley TECHNICAL COLLEGE
Knowledge That Works

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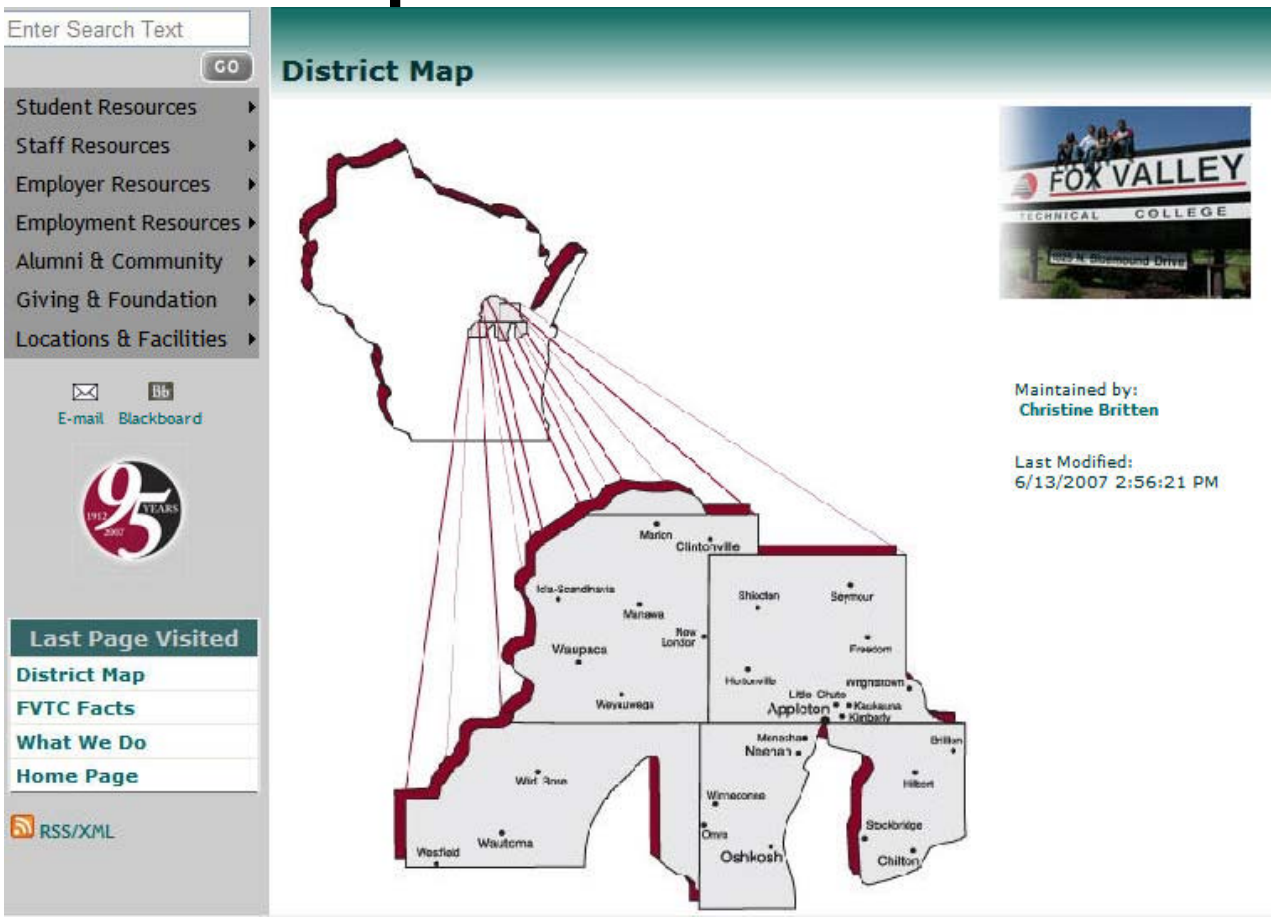
Population

Population:

225k in the Fox Cities

435k in the district



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Enrollment

Enrollment in the electronic based programs is 450 students on the main campus



NSF Funded

http://wisc-online.com/bartelt

Wisconline.org gets 3 million hits per month

Search Learning Objects

GO

- Automation
- Process Control
- DC Electronics
- AC Electronics
- Solid State
- Digital
- Ladder/PLC's
- Mechanical Drives
- Mechanical Linkages
- Hydraulics
- Pneumatics
- Robotics
- Sensors
- Generators/Distribution
- Electric Motors
- Variable Speed Drives

Home Assessment Partners

About Our Digital Library

Click on the green buttons on the left to view the learning objects in those categories.

These interactive learning objects focus on concepts that cover a broad-based electromechanical program. The majority of these objects have been created for electronics, but during the next three years (until 2008), at least 300 more objects will be built that will focus on other topic areas such as hydraulics, pneumatics, mechanical design, and process control (see complete list on the left side of this page).

Instructors from Fox Valley Technical College and other colleges in the Wisconsin Technical College System are creating these objects. FVTC has partnered with four other colleges throughout the United States that will be contributing to this repository. The effectiveness of learning objects was demonstrated in an evaluation conducted at FVTC during the 2004-2005 academic year. A brief summary of the evaluation can be read by clicking on the Assessment button on this Home Page.

These objects can also be found on the Wisc-Online digital library at www.wisconline.org. Learning objects are available to be used at no cost by teachers and students worldwide via the Internet. For more information about these learning objects, contact Terry Bartelt, electromechanical technology instructor, 920-735-4867, barteltt@fvtc.edu.

Partially funded by: NSF

In cooperation with: Wisc-Online Wisconsin Online Resource Center

This material is based upon work supported by the National Science Foundation under Grant Nos. 0101443 and 0501412.

Questions or problems with this site? Contact Webmaster.

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15 NSF Grants

Initial Starter Grants for schools who have not had a grant in the last 10 years in the Advance Technological Education (ATE) program. Visit www.nsf.gov to learn more about the grants as well as www.atecenters.org.

http://www.nsf.gov/pubs/2007/nsf07530/nsf07530.htm



10 Ideas for Thinking Outside the Box

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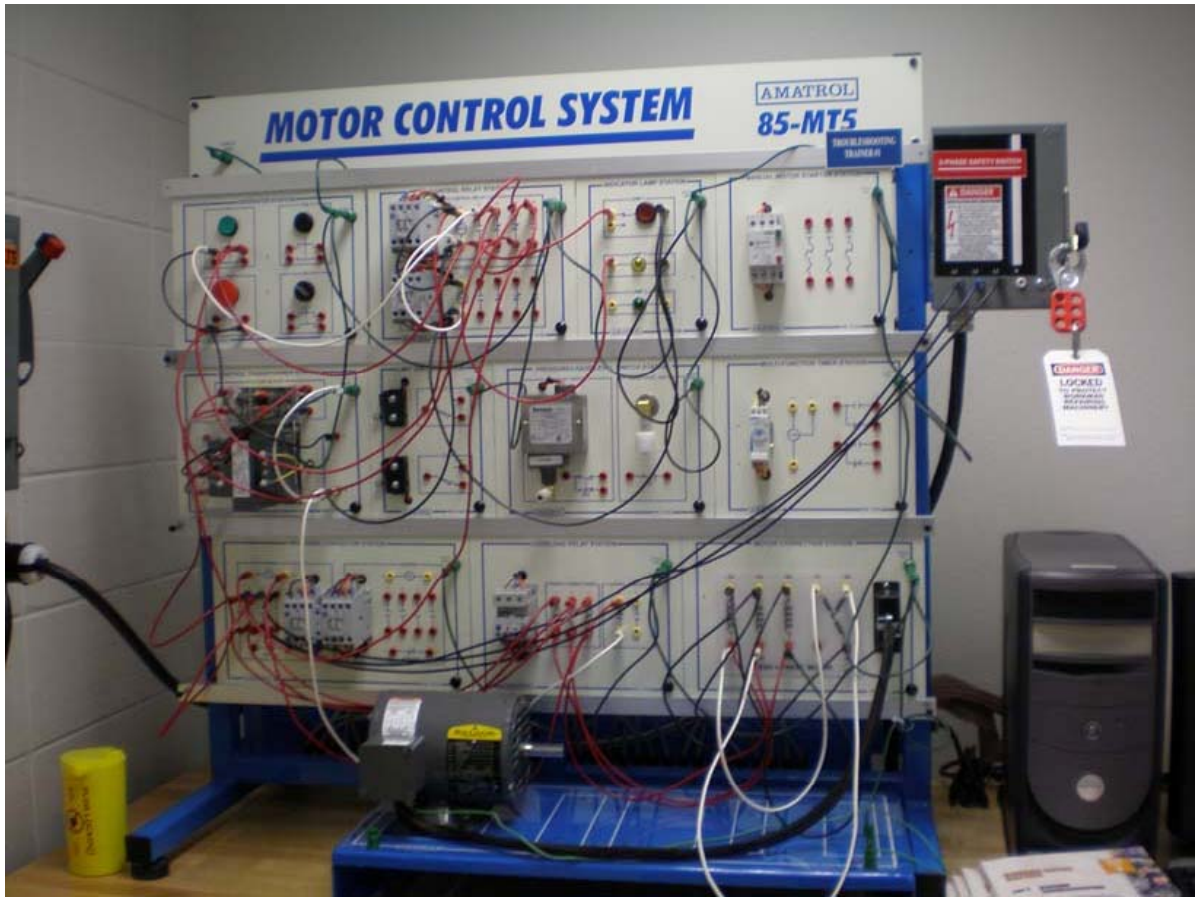
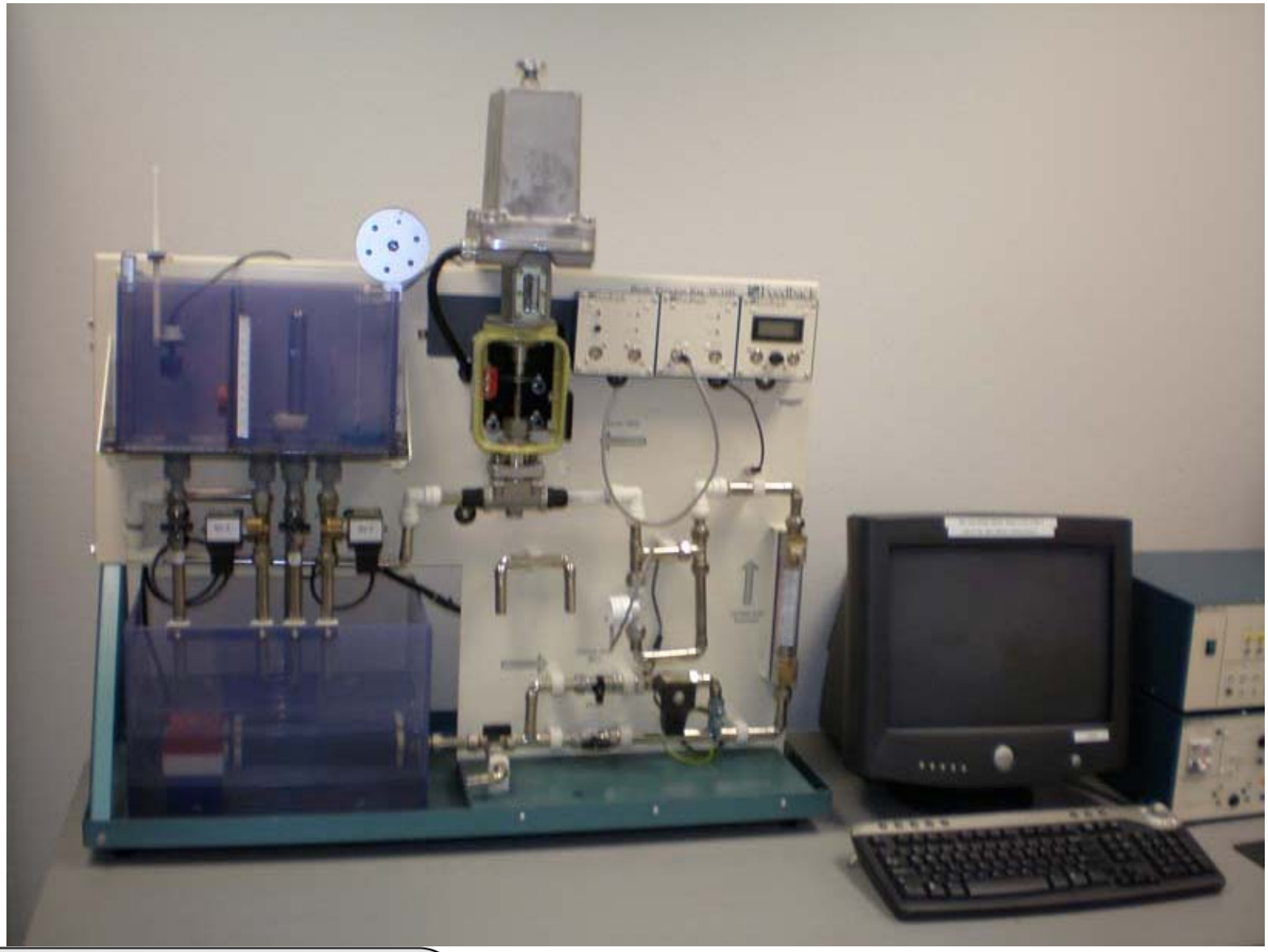
Tip 1: Focus on one student at a time.

Tip 2:

Have a tour that is interesting and informative.





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3 SERIOUS
2 MODERATE
1 SLIGHT
0 MINIMAL
EQUIPMENT INDEX
H
I
J
K
X

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Give a demo or have them play a game.

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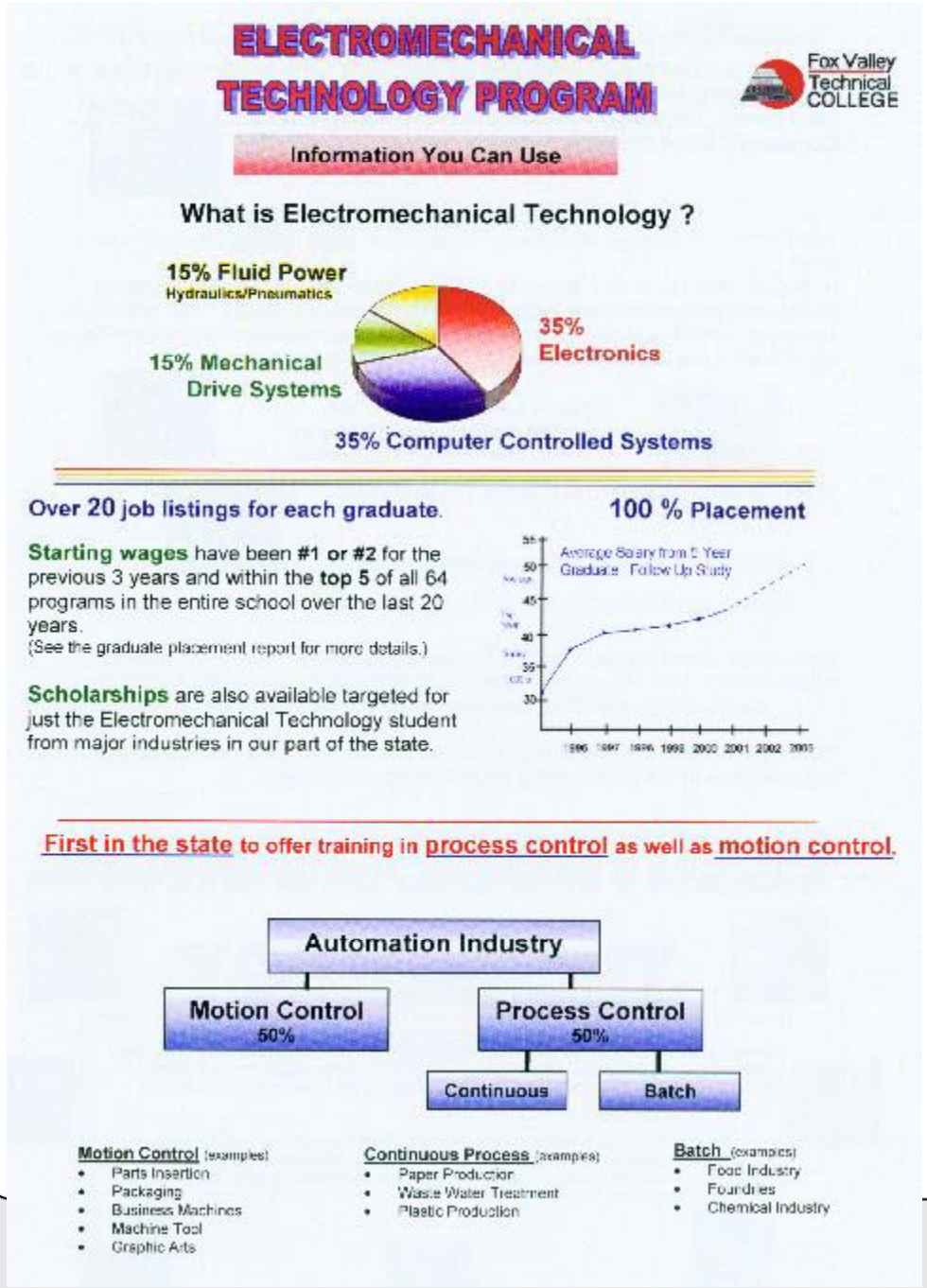
Provide a handout that includes salaries, companies who hire, types of jobs, etc.



ELECTROMECHANICAL TECHNOLOGY PROGRAM

Fox Valley Technical COLLEGE

Information You Can Use

What is Electromechanical Technology ?

15% Fluid Power
Hydraulics/Pneumatics

15% Mechanical Drive Systems

35% Electronics

35% Computer Controlled Systems

Over 20 job listings for each graduate.

100 % Placement

Starting wages have been **#1 or #2** for the previous 3 years and within the **top 5** of all 64 programs in the entire school over the last 20 years.
(See the graduate placement report for more details.)

Scholarships are also available targeted for just the Electromechanical Technology student from major industries in our part of the state.

Average Salary from 5 Year Graduate Follow Up Study

First in the state to offer training in **process control** as well as **motion control**.

- **Automation Industry**
  - **Motion Control** 50%
  - **Process Control** 50%
    - **Continuous**
    - **Batch**

Motion Control (examples)
- Parts Insertion
- Packaging
- Business Machines
- Machine Tool
- Graphic Arts

Continuous Process (examples)
- Paper Production
- Waste Water Treatment
- Plastic Production

Batch (examples)
- Food Industry
- Foundries
- Chemical Industry

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Learn **Technical Skills** and become employed with an exciting future in the **Manufacturing Automation Field** combining **Electronics, Fluid Power, Mechanics, Instrumentation, and Industrial Computer Control Systems.**

The Electromechanical Technology Program at Fox Valley Technical COLLEGE **is unique unto itself.**

With extended hours of 7:30 am to 10 PM and the **Self–Paced Individualized Instruction** delivery method, flexible scheduling is unsurpassed by most other technical programs at FVTC. All technical credits of the Electromechanical Technology Program are offered in one-credit increments to facilitate customization.

Progress as quickly as you feel comfortable within a technical area or spend additional time as needed.

Theory is reinforced with many **Hands–On experiences.**

If you like to work with your head *and* your hands,

The Electromechanical Technology Program is for you.

Dual credit is now available to **High School Students** interested in the area of **Electromechanical Technolgy.** Get **1, 2, 3, or 4** high school credits *AND* college credits at the same time. **Ask your guidance counselor for more information.**

Over $250,000.00 from grants and donations over the last few years have allowed us to become **state of the art** in training equipment and curriculum.

ELECTROMECHANICAL TECHNOLOGY

A Few of the Many Local Companies and Job Titles of Graduates

Kimberly-Clark-Miller Electric-Pentair-Allen Bradley-Menasha Corp-Plexus-Wisconsin Tissue Mills-Berns Converting-Pierce Manufacturing-Raytheon Corp-Banner Packaging-Praxair-Scandia Plastics- Point Beach Nuclear-Artek-Waupaca Foundry-Control Systems- Ripon Foods, etc

---

Field Service Technician, Industrial Control Technician, Manufacturing Processes Engineer, Industrial Maintenance, Installation and Calibration Technician, Research and Development, Engineering Technician, Controls Programmer, Maintenance Supervisor, Systems Technician, etc.

Dear Jesse:

It was a pleasure to meet you yesterday. During the brief time we had to describe the Electromechanical program, a large amount of information was presented. It is very likely that I forgot to mention something, or you may have thought of a question after leaving the school.

I invite you to phone me at (920)996-2802 if you would like to have another discussion to clarify any questions that you may have. I want to make sure that we provide all the information you need to make a correct decision about your future. The Electromechanical program is a very challenging yet very rewarding program. I am confident that you will do very well. We look forward to serving you in the future.

Sincerely,

After the tour, send a follow-up letter the next day.

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Questions from the Audience



Tip 3: Create a database and mail out letters to:



Dear David,

I have been informed that you filled out a form at Fox Valley Technical College, and indicated that you intend to enroll in the Electromechanical Technology program. I am an instructor in this program, and look forward to meeting you in the future.

There is a tremendous demand for Electromechanical technicians. Last year the placement office at FVTC received 21.7 requests for every graduate in our program. For the past 15 years, the starting salaries for our graduates have been in the top 5 of all 62 programs at our school. We recently received three grants to upgrade our curriculum, and to purchase new equipment that provide

Students who have inquired about your program

career. We want to make sure that you are making an informed decision before you make a commitment to enter our program. I can be reached at (920)735-4867 to answer any questions you may have, or to make an appointment so that we can meet in person.

I look forward to meeting you in the near future.

Sincerely,

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Drop-outs to invite them back



Graduates to inform them of
updated courses
they may want to take



Questions from the Audience



Tip 4: Capitalize on college partners interested in collaboration.



College Career Counselors who meet with incoming recruits

- **Attend** their meeting once a year to explain changes to program
- Show up at their office area **once** a month

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College Career Counselors who meet with incoming recruits

- Go to their office to thank them after bringing a student to the lab for a **Tour**
- **Invite** them to your annual advisory committee meeting



Stay in communication
with the college staff working
with displaced worker agencies.



Offer courses for other college programs as electives or required courses.

- Industrial Engineering – Mechanics
- Aircraft Maintenance – Hydraulics, Pneumatics and Basic Electronics

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Offer courses for other college programs as electives or required courses.

- Automotive – Electronics
- Mechanical Design – Electronics



Questions from the Audience



Tip 5: Retention Key to Enrollments



Start with 10 minute
individual bonding session
the **first** 2 days of the semester



Send out a letter
after the **first** week



Make a **phone** call
if a beginning student
misses 2 consecutive days



Call **veteran** students as soon as you notice them **not** attending



Stay engaged with students

- Say **hello** and **goodbye**
- Make the **rounds** in lab every hour



Stay engaged with students

- Review exams **together** (focus on incorrect answers)
- Offer **mini**-lectures

Stay engaged with students

- Be an advisor **before** students **sign up** for next semester courses
- Send letters to **returning** students in the summer (phone the students who you think may drop out)



Questions from the Audience



Tip 6: Focus on Course Takers



Offer **certificates**

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Customized company certificates

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Create **relationships** with business and industry partners (HR and Plant Managers)

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Post certificate **brochures**
on company bulletin boards



Mailing college booklets with semester **schedules** are most **successful**

Name_____ Registration Block Dates: 3/17/08 – 5/16/08

S.S.#_____ Section A/B M-Th 7:30 AM – 2:30PM
Stack ID: 92262 F 7:30 AM – 12:00

Electromechanical Technology – Appleton-Days

***Discuss with your instructor the number of lab hours required per week for each course.*

Unique #	Course Title	Course #	Cost
	Semester 1		
92262	DC Circuits 1	10660110	
92266	DC Circuits 2	10660111	
92270	Pneumatics 1	10620162	
92274	Mechanical Linkages 1	10620160	
92278	DC Circuits 3-Aircraft/Electromechanical	10620103	
92320	AC Circuits 1	10660114	
92337	Hydraulics 1	10620154	
92341	Mechanical Drives 1	10620177	
	Semester 2		
92346	Solid State 1	10660120	
92350	Digital Electronics 1	10660130	
92354	Hydraulics 2	10620155	
92358	Ladder Logic and Control Devices	10609170	
92362	System Troubleshooting	10620188	
92366	Electrical Generators and Power Distribution Systems	10620170	
92586	Mechanical Linkages 2	10620161	
	Summer		
92590	Solid State 2	10660121	
92635	Digital Electronics 2	10660131	
92645	Mechanical Drives 2	10620178	
	Semester 3		
92653	Industrial Solid State 1	10620152	
92661	Sensors	10620187	
92671	Programmable Logic Controllers 1	10609173	
92675	Programmable Logic Controllers 2	10620182	
92679	Advanced Programmable Logic Controllers 1 (Elective)	10620192	
92686	AC Circuits 2	10660115	
92690	Industrial Solid State 2	10620153	
92694	Electrial Motors	10609171	
92698	Electrical Machines - AC Motors	10620172	
92702	DC/AC Variable Speed Drives	10609172	
92769	Adv AC/DC Variable Speed Drives	10620190	
	Semester 4		
92773	Pneumatics 2	10620163	
92777	Hydraulics 3	10620156	
92781	Servomechanisms 1	10620173	
92785	Servomechanisms 2	10620174	
92789	Electromechanical Systems 1	10620189	
92793	Process Variables and Measurements 1	10620183	
92797	Process Variables and Measurements 2	10620184	
92801	Instrumentation and Process Control 1	10620185	
92842	Instrumentation and Process Control 2	10620186	
92851	Advanced Systems Control	10620191	
	Electives		
92857	Advanced Programmable Logic Controllers 2	10620193	
92865	Advanced Process Control	10620194	
92874	Industrial Operations 1	10620195	
92883	Industrial Operations 2	10620196	
92889	Robotics 1	10620197	
92893	Robotics 2	10620198	
92898	Electronics Shop Practices	10620169	



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Questions from the Audience



Tip 7: Articulation Agreements

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Find **interested**
high school teachers



Offer high school teachers **evening** and **summer** courses



Offer **curriculum**
to high school teachers

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Find 4-year colleges who will **accept** transfer credits

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Emphasize how much **money** will be **saved** by taking the first **two** years at the community college



Questions from the Audience



Tip 8: Make a good school website page that includes:



Make a good school website page that includes

- Placement Percentages
- Starting salaries

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Make a good school website page that includes

- **Name** of employers
- Types of **jobs**
- **Testimonials** of graduates



Questions from the Audience



Tip 9: Consider Making Your Program Flexible

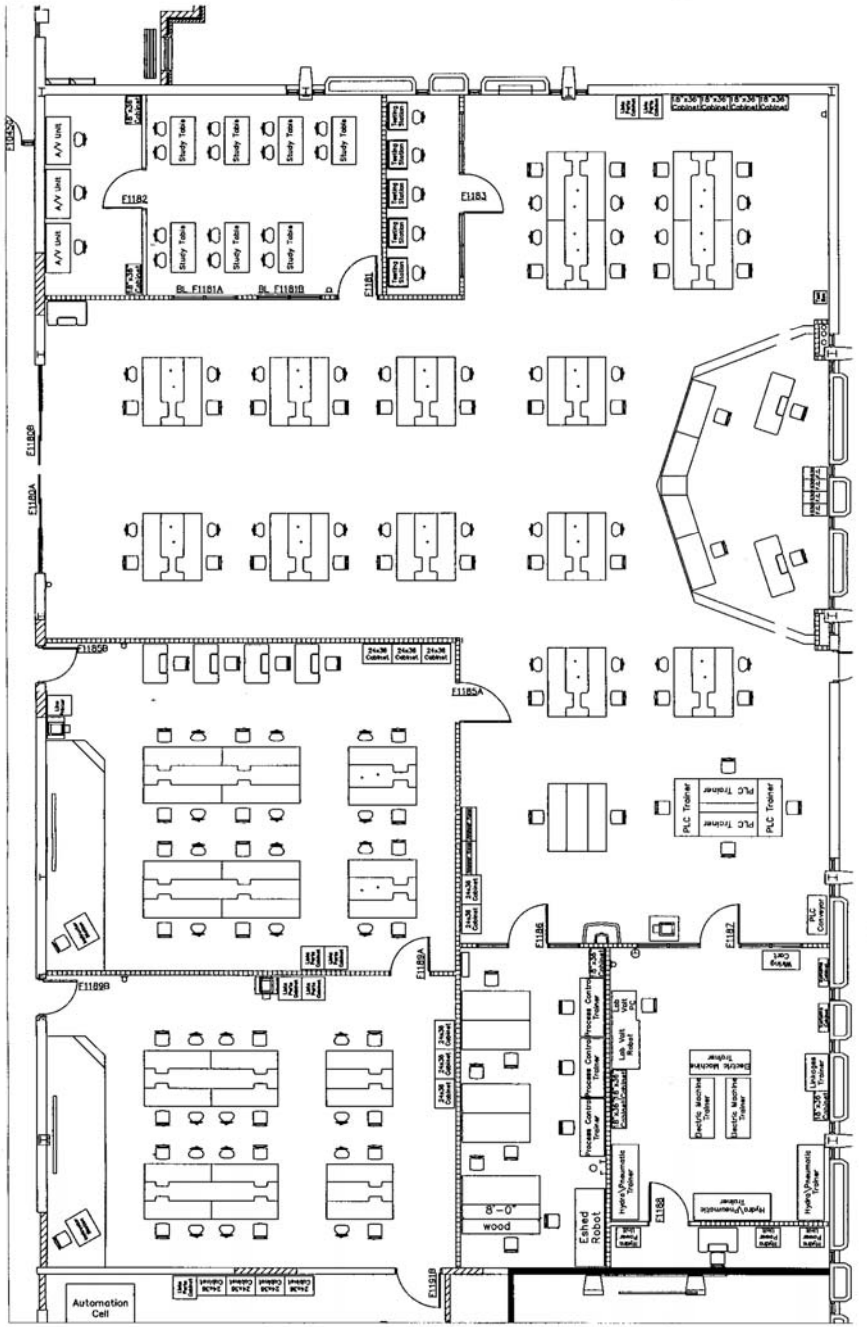


Self-paced format,
or combined **lecture/self-paced**



Consider Making Your Program Flexible

- 7:30am to 9:30pm on Monday – Thursday
- 7:30am to 12:30pm on Friday



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All 1-credit courses
(Offered at **all** times,
never cancelled)



9-week grading periods (2 per semester & 1 each summer)

Name_____ **Registration Block Dates: 3/17/08 – 5/16/08**

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	Summer		
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92635	Digital Electronics 2	10660131	
92645	Mechanical Drives 2	10620178	
	Semester 3		
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92661	Sensors	10620187	
92671	Programmable Logic Controllers 1	10609173	
92675	Programmable Logic Controllers 2	10620182	
92679	Advanced Programmable Logic Controllers 1 (Elective)	10620192	
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92698	Electrical Machines - AC Motors	10620172	
92702	DC/AC Variable Speed Drives	10609172	
92769	Adv AC/DC Variable Speed Drives	10620190	
	Semester 4		
92773	Pneumatics 2	10620163	
92777	Hydraulics 3	10620156	
92781	Servomechanisms 1	10620173	
92785	Servomechanisms 2	10620174	
92789	Electromechanical Systems 1	10620189	
92793	Process Variables and Measurements 1	10620183	
92797	Process Variables and Measurements 2	10620184	
92801	Instrumentation and Process Control 1	10620185	
92842	Instrumentation and Process Control 2	10620186	
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92874	Industrial Operations 1	10620195	
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92889	Robotics 1	10620197	
92893	Robotics 2	10620198	
92898	Electronics Shop Practices	10620169	

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Accommodates:

- **Full-time** students
- **Part-time** students



Accommodates:

- **Incumbent** Workers
- Customization is **easy**
- Certificate and program **courses** are the same

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Equipment Cost Savings

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Branch Campus

Branch Campus **serves**
45 electromechanical students.

Schedule:
8AM to 1PM Monday – Thursday
3PM to 8PM Monday – Wednesday



Questions from the Audience



Tip 10: The Jackson State Community College Model



Technical Division **Recruiter**

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Office **space** with instructors



Learns to **perform**
a demonstration in each lab



Tries to recruit

one

student each day

Helps students **enroll**



Works on **helping** with **retention**



Identifies
high school **counselors**
who are
community college **champions**



Takes one of his students
to **talk** to high school classes



Questions from the Audience



Final Question

Do you think our discussion today
gives you ideas
and approaches you can use?



Thank you for attending

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Future Webinars

- March 28 – Teaching & Reaching Gen Y
- April 11 – Multi-media Learning Objects
- April 18 – Creating Learning Objects
- April 25 – Technical Programs: Here to Stay or Too Expensive to Maintain?



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