Leaping Ahead!

And that's exactly what's happening here at the Career Prep Center

We all know that the U.S. must have a manufacturing base to compete in the world market. In other words, we have to make stuff! One area that has been targeted by the powers that be here at the C.P.C. is a very large baby boomer population that will need everything. Items such as, pharmaceuticals, surgical implants, assisted living, companion care, products and services, and, "Oh yeah", people who know how to make things!

With that in mind, the C.P.C., Macomb C.C.C., Fitzpatrick Engineering, Makino Inc., and other friends of our institute have been busy behind the scenes creating the first of its kind Biomedical Engineering Laboratory under the direction of Mr. Richard Swords, C.B.E. Mr. Swords has over 25 years of experience as a Master Instrument Maker and Bioengineer with a career profile to include Henry Ford Hospital, The Detroit Medical Center/ Wayne State University, the Kresge Eye Institute, and the Karmanos Cancer Center.

The next CTE page will feature Fraser

Our newly renovated facility is where one can learn hands on how to construct things like: surgical implants, scientific instruments, medical devices, and other high-tech gadgets from raw materials. Students will learn how to turn ideas into reality with state-of-the-art design software like MasterCam and Solid Works, using brand new equipment like our new $250,000 Makino CNC Mill, for starters.

There's more... With our dual enrollment program, students can elect to receive college credit while completing their high school diploma! Yes, up to 12 credit hours! These will kick-start your career and allows you to hit the ground running as you ready yourself for the coming challenges. Oh, and did I mention all the other compatible programs here at the C.P.C.? How about electronics, medical technology, building and construction, CAD design, micro mechanics, horticulture, and more!

Students in good standing should contact Mr. Swords at the Career Prep Center at 248-825-2800 for further information.

Autumn Banks seen here working on the vertical mill.

Students Robert Gazo and Curtis Walls analyze data on forensic computers.

New Addition to Career Preparation Center

'Crime Scene Investigation & Computer Forensics'

By Dennis Klaas

We've all been warned not to open emails from unfamiliar addresses — and there's good reason. What looks like simple spam can be the foundation of a serious crime, such as credit card fraud, identity theft, and computer high jacking.

Who will stop cybercrime? With a degree in computer forensics, it could be you. In this major, you'll learn not only how to digitally retrace the steps of criminals, but also how to serve justice by proving them guilty in a court of law.

The Career Preparation Center is revving up its Network Administration program to meet changing demand. With the addition of Crime scene investigation and Introduction to Computer Forensics, the Career Preparation Center has teamed up with Eastern Michigan University to offer these exciting and rewarding additions to their program. Students will work with the latest forensics equipment and software to enhance their skill sets. While learning these new skills at the Career Preparation Center students will be working towards college credit through Eastern Michigan University's Information Assurance Program, through which individuals can investigate and study the problems of our country in such areas as information warfare, cyber security, digital analysis and the emerging science of computer forensics. Maintaining business continuity is also vital for today's e-commerce. The information Assurance platform has been awarded CNSS Certification for its curriculum and has been awarded "Center of Excellence" by the National Security Agency (NSA).

While car manufacturing, farming and fishing are three of Michigan's major industries, computer forensics is a rapidly growing field in this state as well. There is an increasing need for trained computer forensic professionals, especially in the state of Michigan where jobs in forensics continue to increase.

Science, fact or fiction?

From cloning plants to making alternative fuels, students get creative

Remember the scene in the movie "Back to the Future" when the crazy scientist used banana peels and other food scraps to fuel his futuristic car? If you think that was only science fiction, you'd be incorrect. It is a scientific fact, and the Career Prep Center students in the Biotechnology Sciences program will soon prove it, that food scraps from the school's Culinary Arts program can be transformed into ethanol.

"The beauty of my principal, Mr. Antonucc", is that he is a real visionary", explains Ms. Gilka Calazans, the Biotechnology Horticulture Science instructor at CPC. "Mr. A. is always thinking one step ahead. I still remember what he told me when I interviewed for the job four years ago; he wanted students to be able to explain scientifically what would cause a rose stem to arch and die before it opened". Ms. Calazans expressed admiration for a principal who could retire at any time, but instead chooses to use creative leadership to be on the forefront of the battle the career technical school is facing.

Today the former floriculture program has been considerably transformed and expanded to include botany, floral and landscape design, greenhouse and business management. More specifically, it targets the scientific, socio-economic, and environmental implications of technologies such as hydroponics and the newly-emerging biofuels.

Justin Case, Mott senior, dissecting a carnation to expose its xylem.

Every student has their favorite part in this multi-faceted program. In the autumn and winter months, the program's focus is on the principles and elements of floral design; in the spring the emphasis shifts to environmental issues. Many students enjoy floral design, where they have the opportunity to express their artistic abilities. Others find themselves attracted to the biotechnology side of the program such as hydroponics (the growing of edibles without soil) and alternative fuels from plant life.

"We learned last year in greenhouse management that the quickest way to kill a plant is to over water it, so I did not believe it when Ms. Calazans said that we were going to grow plants in just water with no soil," said Michelle Wolf, a Fraser High School senior. She was amazed to see that two months later the tomato seed she planted had become a five foot tall plant, teeming with tomatoes.

Jeremy Peters, a Warren Mott senior, is developing his own cloning system. "Every Monday, the first thing I want to do is check on my hydroponic plants," he explains. "The cool part of the cloning machine is that the cuttings root faster than in soil, and then they can be potted and sold."

In her attempt to promote independent initiatives and inquisitive thinking, Ms. Calazans encourages her students to think "outside the box". As long as the students use the scientific method of investigation, theory, and tested hypothesis, every student is free to run their own experiments. For example, senior

DeaGerald Brazzle, from Cousino High School, wondered what would happen if the plant was watered only with Gatorade. He engaged the class in a highly animated discussion in which everyone had an opinion, and each was able to explain and expand upon his or her own thoughts.

Several months ago, Ms. Calazans was approached by Mr. A., who handed her a piece of paper and said "Tell me what you think of this, and if it is something you can add to your program." It was an article addressing the innovations in alternative fuels from biomass. Ms. Calazans' research led her to include a "state of the art" ethanol-producing machine, the MicorFueler 100, into her curriculum. Ms. Calazans considers the addition of the MicroFueler a step into the twenty-first century, a solution to some very demanding environmental issues, and an outstanding educational tool. Remember that crazy scientist who wanted us to believe that he could run his futuristic car on table scraps? The Microfueler will show students in the Biotechnology Horticulture Sciences that many of today's pressing issues could be answered through biotechnological advances, such as the ethanol-producing machine.

The Career Prep Center is investing in the education of the leaders of tomorrow. The Biotechnology Horticulture Science program's objective is to increase the students' knowledge and expand the students' options in choosing from the vast career pathways it has to offer. Just as the Biotechnology Horticulture program has been transformed and expanded, its students are transformed into environmentally responsible and creative adults who can expand their future opportunities. One student is already thinking ahead, "it would be cool to make my own fuel and not have to worry about gasoline prices."

Ms. Calazans showing the root hairs of a hydroponically grown tomato plant.

MAKING THE Connection to Career Technical Education

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Education • Enrichment • Economic Development
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Macomb Intermediate School District
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For more information about CTE at the high school level contact the Macomb Intermediate School District.
Contact Macomb Community College for college level programs. See contact information above.

MCTEAA
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TECH PREP
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