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Vision Tech

DCTC has found a unique way to raise funding for new equipment in its Machine Tool Careers program through the creation of a radio-controlled racing boat engine. With limited resources to help replace equipment, Instructor Brian Nelson came up with the idea of giving students real-life experience in their field by establishing a company which creates, manufactures, and sells a product while raising funds for the program.

The project and company, called Vision Tech Engine, is in the prototype testing phase. Initially tests have surpassed Nelson's expectations for the engine.

"Our students are learning to design, machine, test, inspect, and create a real product while understanding how to run a business through selling, recordkeeping, and marketing a product," said Nelsen. Funds raised from the sales of the boat engines will go back to the Machine Tool Careers program for the purchase of new equipment.

According to Nelson, who is a radio-controlled racing boat enthusiast, the project started in September 2000 when drawings of the engine were begun. By April 2001, the first cast-

ings were ready and interior design of the engine was done. On November 2, 2001 the first test runs with the engine mounted on a boat were done. The boat was taken to the test pond and clocked at 55-65 miles per hour. Currently, the college is finalizing the parts designs.



The engine is a 0.45 cubic inch outboard power head, designed with the latest in two-cycle technology using proven mathematical formulas. All Vision Tech engines are produced on state-of-the-art CNC turning and milling machines, and all of the designing and programming work is done using master cam multi-axis CAD/Cam software.

State-of-the-art quality assurance procedures are being developed to ensure that Vision Tech engines are of the best quality.

The college plans to market the engine worldwide to radio-controlled boat racing enthusiasts. Plans are to have production units available by April 2002. Races are held nationwide, and there are three organizations in the United States for the racing. A website is under development for people to view the boat engine; a link will be added to the college's website.



Happy Holidays!



Volume 3, Issue 1
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DCTC DISPATCH

Special Edition

Legislative Capital Investment Committees Visit DCTC

Members of the House of Representatives Capital Investment Committee visited Dakota County Technical College (DCTC) on October 26, and members of the Senate Capital Investment Committee visited DCTC on November 14. Both visits were to discuss DCTC's bonding request to create an information technology and telecommunications center of excellence.

The creation of this center will accommodate additional instructional needs for students, business and industry, and incumbent workers in the field. Other components of the project include the integration of the college's library,

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House Representative
Jim Rhodes

DCTC's bonding request is for \$6 million. As part of the plan, DCTC has established an internal goal of raising approximately \$546,000 in user and non-state financial resources to be applied to funding of the corporate training and workforce development components of the project.

Commenting on the Senate Committee's tour, Senator Keith Langseth stated, "We get around the state to find out about the various requests so that we can intelligently set priorities about funding."

"DCTC has nearly 30 years of experience instructing in the field, proving our delivery of education produces trained technicians," said Thomas. "Through the years, DCTC has developed strong partnerships with business in the communications technology industry which have donated equipment to our program. The college's vision is to expand to accommodate the increasing need for communications technology training as well as the need for training of the incumbent worker."



Pictured are DCTC Telecommunications program graduate Michelle Truman, DCTC instructor Doug Thompson, Senator Keith Langseth, and DCTC MIS Specialist Pam Garretson.

library technology center, and learning support center; upgrading of auxiliary student support services; and renovating space for a Dakota County Workforce Center. In addition, the college will relocate programs in the facility as part of an internal reorganization effort.

During the visits, legislators had the opportunity to discuss the project with DCTC President Ronald E. Thomas, representatives of business and industry, and college staff. House Representative Jim Rhodes commented on the purpose of the House committee tour by saying, "It is helpful to see the project so



DCTC Instructor Tim McCluskey explains the operation of the General Motors Training Center to State Representatives Geri Evans, Jim Knobloch, and Jim Rhodes.

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The DCTC Dispatch is a publication of the Dakota County Technical College President's Office. Please submit articles or suggestions to Kim Gelhar, Editor.

DCTC Celebrates Strength in Partners

Grants happen in threes - at least for Dakota County Technical College. With grants from Minnesota Job Skills Partnership (MJSP), Dakota County Technical College will train more than 950 employees of three local businesses: Lloyd's Barbeque, Tapemark, and Renewal by Andersen. The grants total more than \$875,000, making fall 2001 the season to celebrate business and education partnerships.

The process worked like this: Tapemark, Renewal, and Lloyd's recognized the need for training. Through discussions with Dakota County Technical College Customized Training Coordinators, the partners explored options. The college wrote project proposals and submitted them to the Minnesota Job Skills Partnership program, a state agency of the Minnesota Department of Trade and Economic Development. The grants were reviewed by the MJSP board and approved. Grant signing ceremonies were held.

Dakota County Technical College (DCTC) is no stranger to such grants. In the past ten years, DCTC has administered more than \$25 million in grant-funded programs. Beneficiaries of similar projects include 3M, AT&T, Northern Natural Gas, and Koch Petroleum Group.

Regardless of the focus of the training, be it in manufacturing, management, or technology, all training provided by the college gears the receiving business for long-term growth. Through its partnerships, Dakota County Technical College has established a number of systems to assess a company's training needs and to implement measurable results. Expected outcomes include productivity, safety, and job satisfaction. "Work-based education and training is a critical factor in a company's success," said Roger Hughes, Executive Director of MJSP. "What makes this recent surge of grants unique is that they come in the midst of a struggling economy," said Ronald E. Thomas, President of Dakota County Technical College. "By developing a stronger workforce, we are strengthening our economy and improving the health of our community. These partnerships are a definite sign of progress."



The **Lloyd's Barbeque** partnership entails a \$240,000 grant from the Minnesota Job Skills Partnership.

Standing left to right: Jim Backstrom, Dakota County Attorney; Mary Jeanne Schneeman, Mendota Heights City Council; Willis Branning, Dakota County Commissioner; Tess Hohman, General Mills; Charles Mertensotto, Mendota Heights Mayor; Linda DeHaven, Dakota County Employment and Training Center; Brian Merchant, Dakota County Employment and Training Center; David Knutson, State Senator. Seated left to right: Roger Hughes, Minnesota Job Skills Partnership; Brooks Geckler, Lloyd's Barbeque General Manager; Ronald Thomas, DCTC President; Ronald Shimitz, Lloyd's Barbeque Vice President of Operations; Michael Murphy, MnSCU.

Dakota County Technical College will use the Manufacturing Skills Standards that were previously defined through an Incumbent Worker Demonstration project funded by the U.S. Department of Labor. The Lloyd's training program will target the production process to improve quality, safety, and cost-efficiency, while fostering teamwork. More than 300 employees will be trained within two years of the grant signing.

Tapemark Company of West St. Paul, Minnesota Job Skills Partnership, and Dakota County Technical College are forging a \$300,000 partnership that focuses on developing career pathways and manufacturing skills. By using standards recently adopted by the Manufacturing Skills Standards Council (MSSC), Tapemark and DCTC will develop workers of diverse cultures in the areas of general technical training in manufacturing skills, high-level technical training, learning readiness skills, and occupational English when needed. More than 250 Tapemark employees will benefit from the training.



Standing left to right: Kim Mueller, Communications and Community Relations Manager, Tapemark; Jim Metzen, State Senator; Don Maher, County Commissioner; Michael Murphy, MnSCU; Larry Raddatz, DCTC Customized Training Coordinator; Aggie Robinson, Human Resource Consultant, Tapemark; Pat McQuillan, DCTC Customized Training Coordinator; Jerry Zembrycki, Operations Manager, Tapemark. Seated left to right: Tom Pugh, State Representative; Rebecca Yanisch, Minnesota Commissioner of Trade and Economic Development; Ronald Thomas, DCTC President; Bob Klas Jr., Tapemark President.

With the \$335,812 grant from Minnesota Job Skills Partnership, more than 400 **Renewal by Andersen** employees will be cross-trained in the "Best Practices in Manufacturing and Management System" (BPM2 System). Training will focus on management systems, leadership skills, project management, quality systems, statistical process control, strategic planning, and team problem solving. Through this training, DCTC will help Renewal by Andersen achieve excellence on the shop floor. The combined funds from MJSP, Renewal by Andersen, and DCTC will total \$1.4 million by the end of the two-year project.



Sharon Marko, State Representative; Ronald Thomas, President, Dakota County Technical College; Rebecca Yanisch, Minnesota Commissioner of Trade and Economic Development; and Gordon Olson, Lean Coordinator from Renewal by Andersen, are provided a tour of the shop floor where the training will take place.

New Programs and Courses at DCTC

DCTC is planning to launch six new programs for the 2002-2003 academic year: Electrical Construction and Maintenance, Small Business/Entrepreneurship, Exercise Science, Auto Restoration, Sales Specialist, and Marketing Specialist.

Electrical Construction and Maintenance will be offered as a two-year diploma program to prepare students to enter an apprenticeship. The program will consist of technical courses in electrical/electronic theory, installation and testing of electrical apparatus and wiring, installation and testing of electrical/electronic control devices and wiring, and interpretation of the National Electric Code.

The Small Business/Entrepreneurship program will provide training for students seeking to develop personal and professional skills that entrepreneurs must have to succeed in today's ever-changing business world.

Exercise Science will be offered as a two-year A.A.S. degree or as a one-year diploma option. This program's coursework will focus on the application of knowledge in fitness leadership and exercise physiology.

Auto Restoration, as a diploma and/or certificate option, will train students in fabrication, restoration, and customization of collectible vehicles.

The **Sales Specialist** program will train students in less than one year to become a professional sales representative.

The **Marketing Specialist** program will offer students an education in advertising, sales, promotions, public relations, media knowledge, brand management, web marketing, marketing research, and product development and distribution.

Plans are also being developed to expand/re-design several programs. The Graphic Design Technology program plans to add a certificate in Computer Modeling and 3-D Animation; the Computer Careers program is adding two new A.A.S. degree options in Database and Web Developer; E-commerce and E-business options are being explored by the Graphic Design Technology program and Computer Careers program; the Wood Finishing program plans to expand its program to offer Antique Preservation; and several General Education courses are being developed at the request of various advisory committees. Customized Training is also exploring course options in Security Training to meet the needs of business and industry, and the college is looking at offering English as a Second Language courses off campus at industry workplace sites.

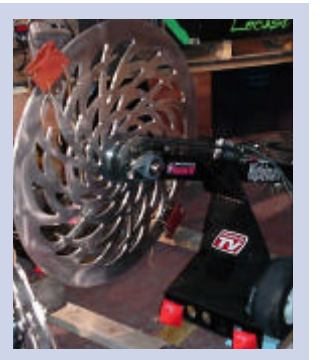
Beginning spring semester the college will offer several new courses, including six in fitness (kickboxing, Tai Chi, personal fitness, aerobics, wrestling, and weight training); two in the Flextime Lab (Quickbook and Project Manager); Beginning Spanish; a series of computer modeling and 3-D animation courses; and an additional course in Photographic Technology.

Battle Bot

The DCTC Machine Tool Careers program is building a Battle Bot, a robot which fights in competition with other robots on *Comedy Central*, a national cable channel. According to program instructor Brian Nelsen, the purpose of building the Battle Bot is to give students real-world experience ranging from formulating an idea to creating a product.

Nelsen and first-year Machine Tool Careers student Richard Cuipiki recently attended a Battle Bot fight in San Francisco to better understand the competition and to study the pit area where the robots battle. "While we were at the competition, the Battle Bots Director of Education allowed us to go into the pit area and take pictures and told us about a one-year educational curriculum proposed by Battle Bots to help teach aspects needed to build working machines and robots," said Nelsen.

The courses in the one-year educational curriculum include pre-engineering, physics, math, electro-mechanics, materials and machine processes, and the engineering software CAD. Web development and desktop publishing are also taught to help people promote the products they build. Progress of the Battle Bot development will be shown on the college website starting in January.



Upcoming Dates to Remember:

December 20 - January 4
Winter Break

December 25
Christmas Holiday

January 1
New Year's Holiday

January 7
Spring Semester Starts

January 21
Martin Luther King Holiday

April 11
30th Anniversary Community Celebration
Mark your calendar now!