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ABSTRACT

This annual performance report for the Mt. Hood Community College (MHCC) National Tech Prep Demonstration Center (TPDC), in Gresham, Oregon, reflects TPDC's accomplishments and activities during the period of January 1, 1993 through February 28, 1994. The major purpose of the TPDC's grant is to disseminate information about Tech Prep to high schools in the form of course guidelines, sample articulation agreements, counseling materials, marketing guidelines, applied mathematics and communications packets, and conference materials. TPDC's 1993-94 accomplishments included the following: (1) increasing articulation agreements from 65 in 1992 to 78, covering 17 different professional-technical areas taught at MHCC and all 6 of the high school Certificate of Advanced Mastery (CAM) areas; (2) providing teleconferences and workshops for Tech Prep and Applied Academics; (3) exceeding the expected number of campus visits, including a group of 70 high school and community college administrators and instructors from Eastern Washington; (4) integrating applied academics into the 6 CAM's prescribed by the state; and (5) increasing staff development through participating in conventions and providing teleconferences and workshops. Although TPDC met or exceeded its expectations, it encountered funding limitations for further applied academics/tech prep implementation and staff and curriculum development activities. Appendixes include lists of on- and off-cite presentations, schools and agencies receiving TPDC packets, a Tech Prep/Applied Learning workshop brochure, a statistical summary of TPDC's work, materials from a TPDC mathematics workshop, and the TPDC winter newsletter. (MAB)

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ANNUAL PERFORMANCE REPORT

March 8, 1994

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MT. HOOD COMMUNITY COLLEGE

NATIONAL TECH PREP DEMONSTRATION CENTER

ANNUAL PERFORMANCE REPORT

The following is our annual performance report for the Mt. Hood Community College National Tech Prep Demonstration Center Grant, implemented in January 1993. This report reflects the Center's accomplishments and activities during the period beginning January 1, 1993, and ending February 28, 1994.

DISSEMINATION OF INFORMATION

Since this grant's major purpose has been dissemination of information and evaluation, this has been our major thrust in the majority of our activities. We consider our efforts as having been highly rewarding to those beneficiaries of our dissemination activities.

- As of February 28, 1994, the Center has provided packets of information to over 600 sites over the nation and in five foreign countries. In response to requests for information, we have developed supplemental packets of articulation agreements, high school course guides, counseling, and marketing guidelines. These have been added to our general packet of information and sent as additional information to sites requesting such information. Pamela Matthews and Elaine Johnson have provided the Center with packets of their integrated and applied learning packets in communications and mathematics, and these packets are also sent to requesting sites. Appendix C contains a list of the sites to which dissemination materials have been sent.
- The Center has hosted over forty group visitations to the Mt. Hood Community College campus and to our eight area high school tech prep sites. These groups have come from over twenty-five states and have consisted of from 1 to 50 individuals. Associate Deans Pamela Matthews and Elaine Johnson of the Mt. Hood Community College Mathematics and Literature and Composition Divisions, respectively, have also taken part in these presentations, which have been supplemented by visitations to our eight district high schools to enable these groups to get first-hand information from active Tech Prep programs. Our counseling department has also cooperated by providing information to visiting groups in the form of question-answer sessions and written materials on how to coordinate and promote Tech Prep and Applied Academics. Appendix C contains a list of the groups which have visited our campus to date.
- The Center developed a convention booth that represents all nine NTDP Centers. To date, we have presented this booth at the 1993 AACC convention in Portland and at the 1993 AVA convention in Nashville. Over 200 organizations walked away from the AVA convention with dissemination materials from all nine Centers and an additional 275 received dissemination materials by way of their leaving their cards or names/addresses at the booth and then the Center's following up by sending typed addressed labels to each of the other eight centers.



- Jack Miller has presented, both as a featured speaker as well as a panel participant, at a variety of conferences, including the National Tech Prep Network Convention in Anaheim, and the AACC League of Innovation, the AVA in Nashville, the Tech Prep conference in Atlanta, and the Work Now and In the Future Workshop in Portland. Appendix A contains a list of the Jack Miller's past and future presentation activities for Tech Prep.
- Both Pamela Matthews and Elaine Johnson have presented, both as featured speakers at conventions and meetings and as facilitators at hands-on workshops in the area of Applied Mathematics and Applied Communications, respectively. Appendix B contains a list of Pamela Matthews's and Elaine Johnson's past and future presentation activities for Tech Prep.
- We have advertised our state-of-the-art program in the prominent <u>Oregon Business</u>
 <u>Magazine</u>, which has a distribution throughout Oregon of over 20,000 businesses and organizations. This magazine is also available at Oregon tourist bureaus.
- Numerous telephone assistance consultations have been handled over the past twelve months. These consultations have ranged from answering a few questions to responding in depth to help problem solve for an emerging tech prep program.
- Two newsletters have been produced and distributed to local organizations as well as to out-of-area locations via the dissemination packet. The first, rather generic letter, served to introduce the main people involved in the Center and its activities. The second newsletter highlights achievements and activities within our District's high schools and at Mt. Hood Community College.
- We have produced a video tape entitled, Oregon's Dream, to promote the Oregon Tech
 Prep movement nationally. This project was in cooperation with Dr. Dale Parnell of
 Oregon State University.
- The Center also sponsored a hands-on training workshop entitled, "Teaching Mathematics in a 21st Century School, " and a three-state teleconference on applied mathematics and the graphing calculator.
- We are finalizing plans for a workshop for our Consortium membe, schools in April. This workshop will approach the Tech Prep movement from the administrative, instructor, and counselor perspective. It will be an all-day workshop, hosted on the MHCC campus. The presenters are from the National Tech Prep Demonstration Center in Southern Maryland. (See Appendix D for the brochure.)
- The Annual Report for our consortium is included in our dissemination packets. This report has been highly praised by all those who have received a copy. (See Appendix E for this report.)
- The Center has developed a series of applied academics information packets in mathematics, English, and Economics, through the cooperation and participation of Pamela Matthews in Mathematics, Dr. Elaine Johnson in Literature and Composition, and Ted Scheinman in Economics, respectively.



TECHNICAL ASSISTANCE TO OTHER SITES

Our technical assistance efforts have been especially effective. We have been using our district's multi-talented personnel to provide this assistance to sites across the nation.

- Associate Dean of Mathematics Pamela Matthews, Associate Dean of Literature and Composition Dr. Elaine Johnson, and Dean of Professional Technical Development Dr. Jack Miller have visited a variety of sites across the nation to provide information on how to set up Tech Prep programs and integrate vocational and academic curriculum with both applied academics and integrated academics. Sites visited include areas in Alabama, Arizona, Illinois, Iowa, Montana, Texas, and Washington. Appendix B is a complete listing of these sites.
- In addition, both Pamela Matthews and Elaine Johnson have presented valuable handson workshops to many groups over the nation. Both are nationally recognized leaders in applied and/or interactive academics. Please see Appendix B for a listing of sites visited.
- The Center has provided extensive awareness programs for our District's high schools through the MHCC Counseling Office, particularly through the fine efforts of Kathleen Waldron.
- Mt. Hood Economics Instructor Ted Scheinman is developing an applied economics course for our area's high schools, sponsored by the Mt. Hood Cooperative Consortium. This course will be shared with requesting sites across the nation once it is formalized and has been tested in the classroom.
- High school tech prep instructor internships are being set up through a cooperative effort with such corporations as Boeing, Fred Meyer, and Fujitsu.
- Some technical assistance has also been handled through phone requests.
- The Center has continued to work closely with the other National Tech Prep Demonstration Centers to plan dissemination projects and presentation activities, such as a workshop panel that has presented at the 1993 AVA convention and at other national conventions.

PROGRESS IN COLLECTING AND ANALYZING DATA

Because we realize that data collecting and analyzing is highly important to the success of our project, we have spent many hours working with our outside project evaluators. Dr. Tom Owens, our project evaluator from Northwest Regional Education Laboratory, has developed evaluation data and has been collecting and analyzing the Center's achievements and student success. Specifically:

 The MHCC Consortium members have provided input to NW Regional Education Laboratory on defining Tech Prep curriculum and students.



- NW Regional Education Laboratory participated in the May one-day Consortium retreat to outline strategies for data collection and analysis.
- Multnomah ESD, through the MHCC Consortium Coordinator, Vern Halcromb, is assisting NW Regional Education Laboratory in gathering data for all regional high schools regarding retention of Tech Prep student enrollment.
- In Atlanta on September 25, 1993, NW Regional Education Laboratory presented data information and analysis to the Tech Prep Centers' National Review Committee, chaired by Dr. Dale Parnell of Oregon State University. This committee includes Dr. Dan Hull of CORD and Dr. Debra Bragg of the Center for Research and Vocational Education.
- NW Regional Educational Laboratory attended a research and evaluation meeting in imarch that was sponsored by the United States Department of Education. Dr. Owens is a participant in the Mathematica Project that is evaluating Tech Prep activities for PEP.
- At MHCC, the office of institution research and admission and records has met with NW Regional Educational Laboratory to develop computer programming for data collection and analysis for articulated students.
- Appendix E contains the Consortium's Annual Report, which lists the statistics of our achievements, including the number of articulation agreements that have now been set up, the number of students participating in Tech Prep activities, and other pertinent data.
- Our program efforts in obtaining statistics on student completion, curriculum improvement, and secondary and post-secondary articulation efforts are being evaluated through questionnaires and follow-up studies by Northwest Educational Laboratory.

These activities have been implemented during the past year months as part of the United States Department of Education grant responsibility. This is in addition to MHCC's and the Consortium's efforts to provide data as reflected in the annual <u>Benchmarks and Milestones</u> report that lists the Consortium's objectives, visions, and accomplishments.

PROBLEMS ENCOUNTERED

Overall, the MHCC National Tech Prep Demonstration Center project has been progressing exceedingly well. Our District continues to maintain a high level of interest and intensity. One major problem we have encountered is the limitation placed on further implementation of applied academics/tech prep by available funding. We failed to anticipate the popularity of our major "actors," namely Pamela Matthews, Elaine Johnson, and Jack Miller, all of whom have been called upon to travel to present workshops and provide guidance in tech prep and applied academics.

Staff and curriculum development activities are essential to moving this program forward throughout our region. The lack of resources is a major impediment to a regional school-to-work transitional program for our high school and colleges. Hopefully, these can be addressed in future United States Office of Education funding programs.



ANTICIPATED CHANGES

One anticipated change is in realigning grant funds. Because of the Center's funding many off-site Tech Prep presentations to large groups, including conference panel presentations, the booth, and hands-on, off-site workshops, our travel budget is a major item to our successful dissemination efforts. Therefore, we will be requesting that travel costs be covered from a budget transfer from the Other Workshop Expenses fund to the Travel Expense fund to enable the Center to continue to provide the valuable training and information to areas away from the Mt. Hood Community College Consortium district.

SUMMATION

In summary, the Center is exceeding its dissemination objectives, as outlined in our project.

- This project is contributing to the educational reform of our local high schools as well as to the reforms taking place nationally through our dissemination efforts. This effort is being supported through a cooperative effort of Mt. Hood Community College faculty and other staff, members of the Mt. Hood Cooperative Consortium, the Multnomah County Educational Service District, Oregon State University, and our local business and industry representatives.
- The goal to increase articulation agreements has been met. We have increased articulation agreements from our 1992 figure of 65 to our current figure of 78, covering 17 different professional-technical area of the college and all six of the high school Certificate of Advanced Mastery (CAM) areas.
- The goals of providing a teleconferences and two workshop by sponsoring one fourstate applied mathematics teleconference (see Appendix F for advertising brochure prepared by Marcia Dier) and two workshops for dissemination and training in Tech. Prep and Applied Academics has been accomplished.
- The Center has exceeded its expectations in the number of visitations we have provided to date and are anticipating at least 15 more visitations through December 1994, including a group of 70 high school and community college administrators and instructors from Eastern Washington.
- Significant gains have been made in integrating applied academics into the six CAMs prescribed by the State of Oregon, as described in the enclosed Consortium Annual Report.
- Staff development has been supported by sending district instructors to conventions, such as AVA, and by providing the teleconference and workshops free to our Consortium's member schools.
- Providing information throughout our Consortium and to inquiring sites by way of our quarterly newsletters, which are included in our general dissemination packets has occurred.



- Dissemination materials that include course guidelines, sample articulation agreements, counseling materials, marketing guidelines, applied mathematics and communications packets, and many other extremely useful and popular dissemination materials have been developed.
- A booth that can be used at conventions that catches the attention of educators and administrators and enables us, along with the other eight Centers, to disseminate materials to a huge audience has been created. In fact, from the AVA convention alone, the Center created mailing labels of over 275 requesting sites and distributed a set to each of the other eight sites, thereby insuring that 275 sites across the nation received information from each of the nine demonstration sites. Added to the 200 sets of material that was provided within our booth on-site from each of the nine sites, and our efforts netted over 475 contacts in just one weekend.

We encourage you to review the enclosed materials to give you a more complete idea of our efforts in this valuable dissemination project.

Mt. Hood Community College deeply appreciates the rapport and recognition we have been able to maintain with the United States Department of Education through our participation in the National Tech Prep Demonstration Center grant. We commend the United States Department of Education for its foresight in planning, developing, and executing this vital national educational reform component.



Appendix A

OFF-SITE PRESENTATIONS

by

Dr. Jack Miller



PRESENTATIONS

by Dr. Jack Miller

January 1993

Tech Prep Model Programs Meeting, Dallas, Texas

February 1993

Washington Regional Consortium, Walla Walla, Washington

April 1993

School to Work Transition Meeting, Washington, D.C.

AACC Conference, Portland, Oregon

May 1993

National Tech Prep Conference, Anaheim, California

June 1993

Education Service Center, Region XIII, Austin, Texas

July 1993

Tech Prep Pre-Conference Workshop, Portland, Oregon

CIA Summer Meeting and Leadership Institute, Bend, Oregon

August 1993

Regional Coordinators of Professional-Technical Education Deans' Retreat, Coos Bay, Oregon

September 1993

Fall National Tech Prep Network Conference, Atlanta, Georgia

October 1993

COMBASE Programs, Colorado Springs, Colorado

November 1993

Work Now and In The Future Conference, Portland, Oregon

Applied Academics Workshop, Waco, Texas

December 1993

American Vocational Association Convention, Nashville, Texas

January 1994

League of Innovation Conference, New Orleans, Louisiana

Colin County Community College Regional

Consortium Workshop, Dallas, Texas

February 1994

International Conference for Community College Chairs and Deans, Phoenix, Arizona

Student Success Conference, Portland, Oregon

March 1994

Gulf Coast Community College National Post-

Secondary Alliance Conference, Mississippi

April 1994

AACC Convention, Washington, D.C.

National Tech Prep Network Convention, Baltimore, Maryland

Northwest Regional Tech Prep Conference, Seattle, Washington

First Annual Montana Tech Prep Conference, Great Falls, Montana

May 1994

Celebration of Teaching Excellent, Austin, Texas



Appendix B

PRESENTATIONS

by

Ms. Pamela Matthews, Associate Dean Mathematics Division

and by

Dr. Elaine Johnson, Associate Dean Literature and Composition Divisioin



PRESENTATIONS

Pamela Matthews, Associate Dean Mathematics Division

PAST

Tech Prep Video, Mt. Hood Community College

Presentation: Evergreen School District, Vancouver, Washington

Workshop/Presentation: National Tech Prep Conference, Atlanta, Georgia

Presentation: Northwest Math Conference, Portland, Oregon

Presentation: Central Valley High School, Spokane, Washington

Presenter/Workshop: MHCC Mathematics Teleconference and Workshop

Presentation: "Restructuring Education: Building a 21st Century Workforce" - Convention, Waco, Texas

Panel presentation at American Vocational Association, Nashville, Tennessee

Presentation: League of Innovation, New Orleans, Louisiana

Presentation: (with Dale Parnell) Oregon State University Telecourse, Salem, Oregon

Presentation: Teachers Teaching with Technology - Transit Conference - Fort Worth, Texas

Presentation: Western Regional NCTM Conference, San Francisco, California

Presentation: Sam Barlow High School, Gresham, Oregon

UPCOMING

Workshop: Tech Prep Connection, New Hampshire

Presentation/Workshop: College of Sequoias, Fresno, California

Presentation: MHCC Forum on Educational Reform, Gresham, Oregon

Presentation: NTPN Conference, Baltimore, Maryland

Presentation/Workshop/Keynote Speaker: State Tech Prep Conference, Arizona

Presentation: Northwest Regional Tech Prep Conference, Seattle, Washington

Workshop: Mojave Community College, Arizona



PRESENTATIONS

Dr. Elaine Johnson, Associate Dean Literature and Composition Division

PAST

Presentation: "Option for Change," New York Tech Prep Conference, Syracuse, New York

Presentation: Boeing Tech-Prep and Language Arts Conference, Mt. Hood Community College, Gresham, Oregon

Presentation: Central Valley High School, Spokane, Washington

Presentation: Washington Association of Occupational Educators' Fourth Annual Conference, Yakima Valley Community College, Yakima, Washington

Presentation: Systems Thinking Conference, Boston, Massachusetts

Presentation: Canadian Conference for Advanced Placement English Teachers, Edmonton, Alberta, Canada

Presentation: Chemeketa Community College Humanities Faculty, Salem, Oregon

Presentation/Workshop: Yakima School District Vocational-Technical Directors/Language Arts Faculty, Yakima, Washington

Presenter: "Tech ^orep Associate Degree," Telecourse by Dale Parnell, Chemeketa Community College, Salem, Oregon

Presenter: Student Success Strategies Conference, Portland, Oregon

Participant: Washington Conference on Collaborative Learning, Bellevue, Washington

Presenter/Workshop: Keynote speaker and Workshop presenter for K-12 and Community College Faculty and Administrators, Spokane Community College, Spokane, Washington

UPCOMING

Presenter: Barlow High School Faculty Inservice, Gresham, Oregon

Presenter: National Tech-Prep Network, Baltimore, Maryland

Presenter: Northwest Regional Tech Prep Conference, Seattle, Washington

Presenter: Montana State-wide Tech Prep Conference, Great Falls, Montana

Presenter: Demonstration Site Presentation for Tech-Prep, Capital Area Partners for Educational Reform, Richmond, Virginia, at Mt. Hood Community College, Gresham, Oregon



Appendix C

PACKET DISSEMINATIONS AND VISITATIONS from January 1, 1993 to February 28, 1994



PACKET DISSEMINATIONS and VISITATIONS FROM 6-1-93 TO 2-28-94

DISSEMINATIONS

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Appendix D

TECH PREP/APPLIED LEARNING WORKSHOP BROCHURE

sponsored and presented by

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ANNOUNCING ...



A TECH PREP/ APPLIED LEARNING WORKSHOP

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Regional Cooperative Consortium
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for Regional

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The Mt. Hood Regional Cooperative Consortium . . .

in cooperation with . . .

The Mt. MHCC National Tech Prep Demonstration Center

proudly presents

A Tech Prep/Applied Learning Workshop

WHEN?

Monday, April 18 8:30 a.m. to 3:30 p.m.

WHERE?

Mt. Hood Community College Town and Gown Room

ABOUT THE PRESENTERS

and their

PRESENTATIONS

Administrators' Workshop

Dr. James Marlett is the principal of Calvert County High School in Prince Frederick, Maryland. Dr. Marlett's topic will be "The High School Principal's Role in Implementing Tech Prep." This two-hour session will present a high school principal's perspective on successfully developing and implementing a comprehensive tech prep curriculum. A question and answer session will follow.

Instructors' Workshop

Ms. Suzanne Kistler, Chemistry Teacher at Calvert County High School, LaPlata Maryland, and Ms. Marion Steinbach, Mathematics Teacher at St. Mary's County Public Schools, will present the topic, "Integrated Learning - A Teacher's Perspective." In this workshop, these two excellent instructors will discuss how they made the transition from teaching theory to teaching hands-on, applied science and mathematics courses. A question and answer session will follow.

Counselors' Workshop

Mr. Pete Cevenini, Vocational Evaluator for Charles County Public Schools, LaPlata, Maryland, will present the topic, "Developing Comprehensive Support Services for All Tech Prep Students." This timely topic will discuss how a vocational evaluator can assist all students, including special needs students, in successfully completing a tech prep program. A question and answer session will follow.



WORKSHOP AGENDA

MORNING SESSION 8:30 a.m. to 11:30 a.m. TOWN AND GOWN

RECEPTION (with coffee and tea) 8:30 to 9:00 a.m.
WELCOME 9:00 to 9:15 a.m.
Dr. Gretchen Schuette, MHCC Executive Vice President
OVERVIEW of Mt. Hood National Tech Prep Demonstration Center 9:15 to 9:30 a.m. Dr. Jack Miller, Mt. Hood Community College
APPLIED COMMUNICATIONS
BREAK 10:00 to 10:15 a.m.
SINGLE-TRACK MATHEMATICS
OVERVIEW of Southern Maryland Consortium
* * *
BREAK (and lunch setup) 11:30 to 11:45 a.m.
LUNCH
* * *
AFTERNOON SESSIONS 1:30 to 3:30 p.m. (In Areas Designated)
ADMINISTRATORS' WORKSHOP
INSTRUCTORS' WORKSHOP
COUNSELORS' WORKSHOP Pete Cevenini, Vocational Evaluator, Charles County Career & Technology Center Charles County Public Schools, LaPlata, Maryland SUBJECT: "Developing Comprehensive Support Services for All Tech Prep Students"



REGISTRATION FORM

for Mt. Hood Community College

PLEASE USE ONE FORM ONLY FOR ALL ATTENDEES FROM YOUR DIVISION.

Please make check payable to Mt. Hood Community College and send check and this completed form by MARCH 31, 1994 to:

Marcia Dier, Coordinator
National Tech Prep Demonstration Center
c/o Instructional Services

All expenses (including workshop fees and lunch costs) will be paid for the first three instructors/counselors and first administrator from each division.

A \$25 payment for workshop fees and lunch for individuals exceeding the designated FREE maximums in EACH category will be the responsibility of the participating division.

Please note: SUBSTITUTIONS between categories are not allowed. (For example, if you have no administrators attending, you will still be allowed only THREE FREE INSTRUCTORS or COUNSELORS.)

DIVISION:	Contact Per	son:		Ext.:	
	ADMINIST	RATORS			
Name:	Title:			Cost:	FREE
Name:	Title:			Cost:	\$25.00
INS	TRUCTORS o	or COUNSELORS			
Name:	Subject:		<u> </u>	Cost:	FREE
Name:	Subject:			Cost:	FREE
Name:	Subject:			Cost:	FREE
Name:	Subject:			Cost:	\$25.00
Name:	Subject:			Cost:	\$25.00
Name:	Subject:		<u> </u>	Cost:	\$25.00
Name:	Subject:			Cost:	\$25.00
Name:	Subject:			Cost:	\$25.00
TOTAL NUMBER OF EXTRA, DIVISION-PAID times \$25 =	ATTENDEES	TOTAL COST:	\$		

Questions? Call Marcia (667-7394) or Becky (667-7312).



Enclosed is my check for \$

attendees from our Division.

to cover Workshop Costs for the designated extra. Division-paid

Mt. Hood Consortium High School Districts REGISTRATION FORM

Please make check payable to Mt. Hood Community College and send check and this completed form by MARCH 31, 1994 to:

by

Marcia Dier, Coordinator
National Tech Prep Demonstration Center
Mt. Hood Community College
26000 SE Stark Street
Gresham, OR. 97023

PLEASE USE ONE FORM ONLY FOR ALL ATTENDEES FROM YOUR SCHOOL.

All expenses (including workshop fees, lunch, and substitute costs) will be paid for the first three instructors, first two administrators, and first two counselors from each high school. A \$25 payment for workshop fees and substitute costs for individuals exceeding the designated FREE maximums in EACH category will be the responsibility of the participating schools. This fee includes workshop fees and lunch.

Please note: SUBSTITUTIONS between categories are not allowed. (For example, if you have only one administrator attending, you will still be allowed only THREE FREE INSTRUCTORS and TWO FREE COUNSELORS.)

SCHOOL:	Contact Pe	rson:		Phone No:	
	ADMINIS:	TRATORS			
Name:	Title:			Cost:	FREE
Name:	Title:			Cost:	FREE
Name:	Title:			Cost:	\$25.00
Name:	Title:			Cost:	\$25.00
	INSTRU	ICTORS			
Name:	Subject:		<u> </u>	Cost:	FREE
Name:	Subject:			Cost:	FREE
Name:	Subject:			Cost:	FREE
Name:	Subject:			Cost:	\$25.00
Name:	Subject:			Cost:	\$25.00
Name:	Subject:			Cost:	\$25.00
Name:	Subject:			Cost:	\$25.00
	COUNS	ELORS			
Name:	Subject:			Cost:	FREE
Name:	Subject:			Cost:	FREE
Name:	Subject:			Cost:	\$25.00
Name:	Subject:			Cost:	\$25.00
TOTAL NUMBER OF EXTRA, SCHOOL-PAID // times \$25 =	ATTENDEES	TOTAL COST:	\$		



Enclosed is my check for \$_

attendees from our school.

to cover Workshop Costs for the designated extra, school-paid

Appendix E

BENCHMARKS & MILESTONES

1993 Annual Report of the

Mt. Hood Regional Cooperative Consortium



Mt. Hood Regional Cooperative Consortium

BENCHMARKS & MILESTONES

A Statistical Summary of Regional

Tech Prep Activities

1993 Annual Report

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Mt. Hood Regional Cooperative Consortium

BENCHMARKS AND MILESTONES

INTRODUCTION

Now in its ninth year of operation, the Mt. Hood Regional Cooperative Consortium continues to maintain and further expand its strong, effective cooperative relationship involving faculty members, administrators, board members, and support staff in its District high schools, the Multnomah Education Service District, and Mt. Hood Community College (MHCC). To date, 78 written articulation agreements have been established between MHCC and the eight high schools: Centennial, Corbett, David Douglas, Gresham, Parkrose, Reynolds, Sam Barlow, and Sandy. These agreements cover 17 different professional-technical areas of the college and all six of the high school Certificate of Advanced Mastery (CAM) areas.

Except during the summer, the Consortium meets monthly to plan, coordinate, and implement professional-technical education opportunities for students in the District. So successful have these efforts been, that a VIP program has been established that enables students at one high school to take a course or courses at another District high school when such a course is offered only at the other high school. To date, a total of 955 students have participated in this program at no additional cost either to the student, the parent, or the schools involved. This represents an estimated savings of \$72,840 to students, parents, and taxpayers.

In their efforts to meet the requirements of Oregon House Bill 3565 by the year 2000, Consortium member schools have been deeply involved in education reform. The "SCANS Report" and the curriculum revisions prescribed for meeting National Council of Teachers of Mathematics (NCTM) standards in mathematics have provided further momentum for implementing change. To supplement curriculum materials and course content, local businesses and industries, such as Boeing of Portland, Fujitsu, and Fred Meyer Corporation, frequently send representatives to Consortium meetings to provide "real world" input to education reform activities. In addition, two strong leaders in mathematics and English curriculum reform—Pamela Matthews and Elaine Johnson, respectively—continue to provide hands-on workshops and training as well as assistance in writing curriculum and developing materials. A result of these efforts is an integrated, single-track, problem-solving mathematics program at MHCC and participating District high schools, as well as a new ninth grade applied communications course that was pilot-tested at three District high schools this past year.

As a capstone to the efforts of the Consortium, Mt. Hood Community College is now embarking on its second year of operation as a National Tech Prep Demonstration Center, one of only nine in the nation. Operating with a \$307,920 grant over a two-year period, MHCC works with the Consortium members to provide materials and visitations to out-of-area teachers and administrators. To date, the Center has hosted over 40 groups and disseminated materials to over 200 individuals and/or groups from 42 different states as well as seven foreign countries. Members of the Consortium have also presented at many different national, regional, state, and local conferences.

In response to the Mt. Hood Tech Prep National Review Panel, our Consortium has broken out the Tech Prep areas into six career pathways for the Certificate of Advanced Mastery (CAM), as recommended by the Oregon Department of Education and described on page 3. According to these recommendations, all students in the state of Oregon must have access to at least one or more programs in each CAM. To earn a Certificate of Advanced Mastery, students must meet high performance outcome standards that emphasize the application of knowledge and skills in varied, realistic environments.



PARTICIPATING SCHOOL DISTRICTS and MEMBERS

The following school districts and other organizations are responsible for the continuing success of the Mt. Hood Regional Cooperative Consortium.

Chief Executive Officers	School Districts	Consortium Members
Mark Sherman, Principal	Alpha School	Wally Cole, Employer Liaison
Dr. Zeno Katterie, Superintendent	Barlow/Gresham	Rich Dills, Instructor Keith Eisele, Business Sherrie Scheinman, Counselor Bobbi Thomas, Coodinator, School/Business Partnership Kay Weaver, Director, Grade Schools
Dr. George Benson, Superintendent	Centénnial	Joanne Bishop, Associate Principal Dr. Marvin Hempel, Director of Instruction Deanna Sawtelle, Pro-Tech Chair
Larry McClellan, Superintendent	Corbett	Roger Swenson, Instructor
Dr. Anthony Palermini, Superintendent	David Douglas	Dr. Jim Dixon, Assocociate Principal Kathy Lillis, Vocational Coordinator Jim Schoelkopf, Technology Director
Dr. Jim Jacobson, Superintendent	Multnomah ESD	Dr. Vernon Halcromb, Regional Coordinator Barbara Jorgensen, Director/Instruction Dr. Jerry Shiveley, Deputy Superintendent
Dr. Paul Kreider, President	Mt. Hood Community College	Dr. Gil Albello, Science Division Michael Dillon, The Center Michael Durrer, Engineering Division Dr. Elaine Johnson, Communications Division Karen Knight, Grants Development Pamela Matthews, Mathematics Division Dr. Jack Miller, Professional Technical Development Ted Scheinman, Economics Dr. Gretchen Schuette, Vice President Dave Shields, Career Placement Kathleen Waldron, Counseling
Dr. John Bierwirth, Superintendent	Portland	Roger Schoenborn, Occupational Specialist
Dr. Jacki Cottingim, Sup⊜rintendent	Parkrose	Barbara Ritt, Assistant Principal
Dr. Hudson Lasher, Superintendent	R e ynolds ·	Dave Barger, Career/Curriculum Specialist Jim Rogers, Assistant Principal
Dr. Dennis Crow, Superintendent	Sandy Union	Len Eaton, Business Tech Director Linda Grant-Barger, Career/Curriculum Specialist

Community Representatives

Janet Adrian, Oregon Apprenticeship/Training Glenna Borg, Oregon Department of Human Resources Nita Crimins, Oregon Department of Education

Philip Dean, Project YESS, JTPA Maureen Dooney, Oregon Dept. of Human Resources



CAREER PATHWAYS FOR CAM PROGRAMS

The Oregon Department of Education has prescribed the following career pathways for the Certificate of Advanced Mastery (CAM) programs*:

Arts and Communications

Programs related to the humanities and to the performing, visual, literary, and media arts. These may include, but need not be limited to, architecture, creative writing, film and cinema studies, fine arts, graphic design and production, journalism, foreign languages, radio and television broadcasting, advertising, and public relations.

Business and Management

Programs related to the business environment. These may include, but need not be limited to, entrepreneurship, sales, marketing, hospitality and tourism, computer/information systems, finance, accounting, personnel, economics, and management.

Health Services

Programs related to the promotion of health as well as the treatment of injuries, conditions, and disease. These may include, but need not be limited to, medicine, dentistry, nursing, therapy and rehabilitation, nutrition, fitness, and hygiene.

Human Resources

Programs related to economic, political, and social systems. These may include, but need not be limited to, education, law and legal studies, law enforcement, public administration, child and family services, religion, and social services.

Industrial and Engineering Systems

Programs related to the technologies necessary to design, develop, install, or maintain physical systems. These may include, but need not be limited to, engineering and related technologies, mechanics and repair, manufacturing technology, precision production, and construction.

Natural Resource Systems

Programs related to the environment and natural resources. These may include, but need not be limited to, agriculture, earth sciences, environmental sciences, fisheries management, forestry, horticulture, and wildlife management.



^{*} Taken from the Oregon Department of Education Oregon 21st Century Schools brochures, Normal Paulus, State Superintendent of Public Instruction.

TECH PREP ARTICULATION AGREEMENTS

(Total Agreements: 78)

CAM: ARTS and COMMUNICATIONS

PROGRAM	NUMBER OF AGREEMENTS	HIGH SC	HOOLS
Cable and Community Television	4	David Douglas Gresham	Reynolds Sam Barlow
Graphics Technology	1	Reynolds	
Journalism	, 4	Corbett David Douglas	Gresham Reynolds

CAM: BUSINESS and MANAGEMENT

PROGRAM	NUMBER OF AGREEMENTS	HIGH SCH	HOOLS
Accounting	7	Centennial David Douglas Gresham Parkrose	Reynolds Sam Barlow Sandy
Computer Applications	1	Sandy	
Entrepreneurship/Small Business Management	3	Centennial Sam Barlow	Sandy
Hospitality/Tourism	8	Centennial David Douglas Gresham Parkrose	Reynolds Roosevelt Sam Barlow Sandy
Marketing/DECA	5	Centennial Corbett Gresham	Sam Barlow Sandy
Office Occupations	8	Centennial Corbett David Douglas Gresham	Parkrose Reynolds Sam Barlow Sandy



Mt. Hood Regional Cooperative Consortium

BENCHMARKS AND MILESTONES

CAM: HUMAN RESOURCES

PROGRAM	NUMBER OF AGREEMENTS	нідн sc	HOOLS
Early Childhood Education	6	David Douglas Gresham Parkrose	Reynolds Sam Barlow Sandy

CAM: INDUSTRIAL and ENGINEERING SYSTEMS

PROGRAM	NUMBER OF AGREEMENTS	нідн ѕсі	HOOLS
Automotive	6	Centennial David Douglas Gresham	Reynolds Sam Barlow Sandy
Electronics	4	Centennial David Douglas	Gresham Sam Barlow
Engineering Technology (Drafting)	8	Centennial Corbett David Douglas Gresham	Parkrose Reynolds Sam Barlow Sandy
Manufacturing Technology	6	Centennial Gresham Parkrose	Reynolds Sam Barlow Sandy
Welding Technology	4	Centennial Gresham	Parkrose Sam Barlow

CAM: NATURAL RESOURCES SYSTEMS

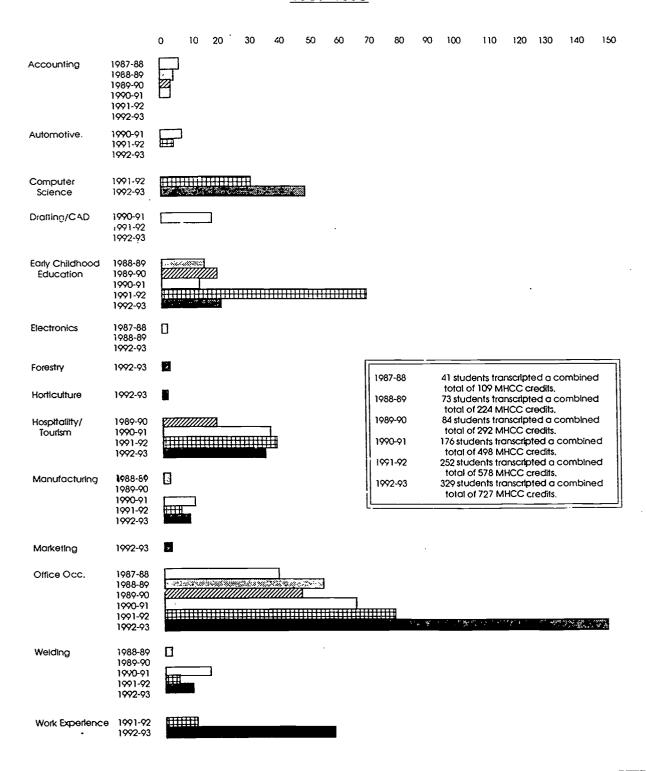
PROGRAM	NUMBER OF AGREEMENTS	HIGH SCHOOLS	
Agriculture/Horticulture	3	David Douglas Sam Barlow	Sandy

NOTE: For the **HEALTH SERVICES CAM**, currently all agreements are set up through the VIP program in cooperation with other Portland-area high schools that offer courses in the CAM.



NUMBER OF STUDENTS TRANSCRIPTING CREDIT by 2+2 Tech Prep Program

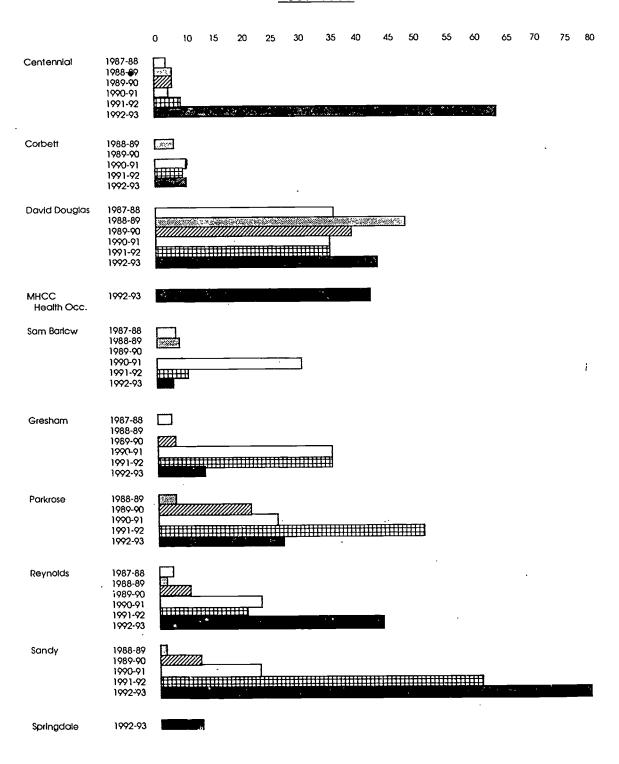
1987-1993





NUMBER OF STUDENTS TRANSCRIPTING 2+2 CREDIT by High School

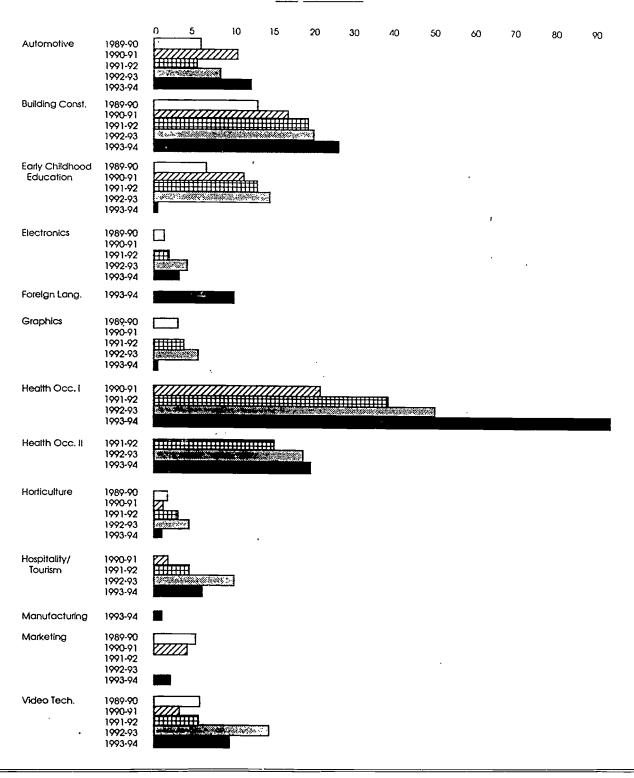
1987-1993





NUMBER OF V.I.P. CHOICE STUDENT APPLICATIONS by Course

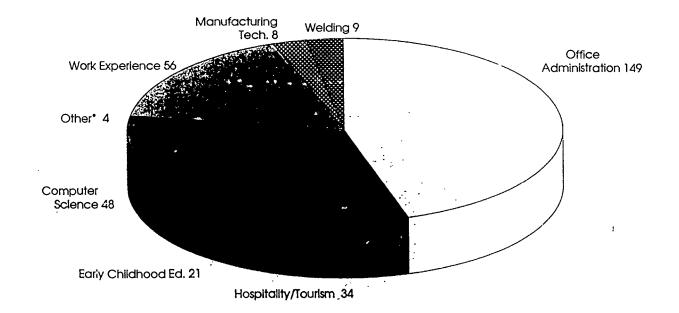
1989 to 1993







2+2 TECH PREP STUDENT TRANSCRIPTING BY PROGRAM 1992 to 1993



Total: 329 students

Other:

Marketing 1

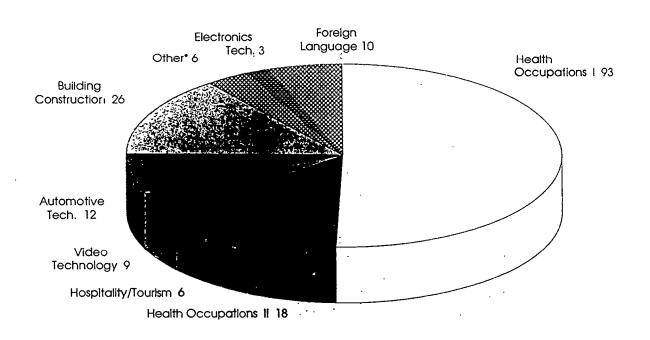
Forestry 2

Horticulture 1



PROFESSIONAL-TECHNICAL INTER-DISTRICT PROGRAM APPLICATIONS

1993 to 1994

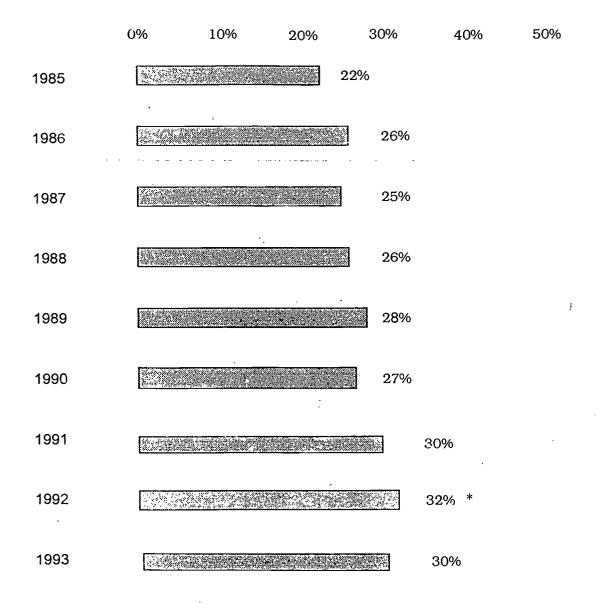


Total: 183 applications

Other:
Early Childhood Ed.
Graphics
Horticulture
Manufacturing
Marketing
2



MARKET SHARE PERCENT OF MATRICULATING FALL HIGH SCHOOL GRADUATES 1985 to 1993



30% represents 589 of the 1,952 district high school graduates. Mt. Hood enjoyed a 36% market share of Reynolds High School graduates.

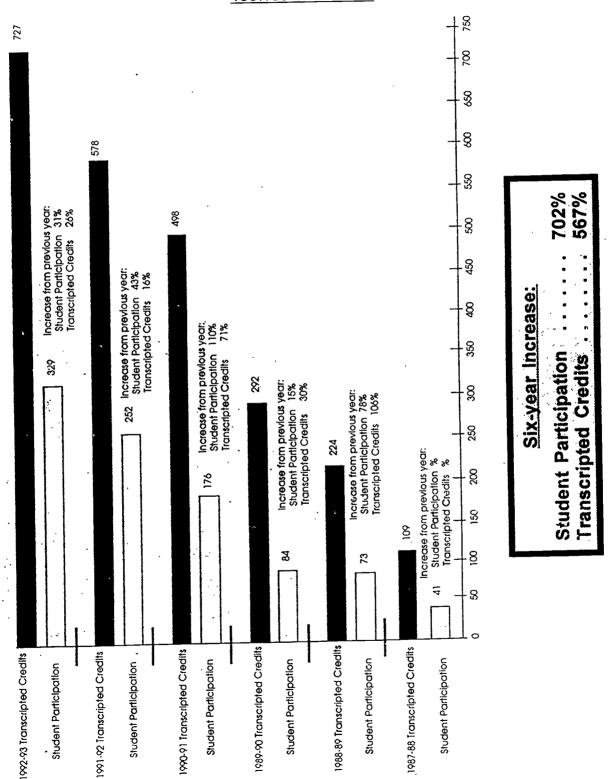




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STUDENT PARTICIPATION CREDIT TRANSCRIPTION

1987/88 to 1992/93



VISIONS FOR THE FUTURE



VISIONS FOR THE FUTURE

A dynamic local, state, and national movement to develop Tech Prep programs and to reform education is taking place. These changes in education, both in Oregon as well as in the nation, mandated by the legislature, have inspired a clear vision of the next two decades. This vision places an increasing emphasis, in all phases of learning, on real-world skills and on contextual learning.

Oregon's vision, as expressed in *Oregon Shines* and in *Oregon Benchmarks*, is to have the best educated work force in the nation by the year 2000 and the best educated work force in the world by the year 2010. Oregon House Bill 3565, passed in June 1991 by the Oregon Legislature, mandates educational reform consistent with many of the recommendations expressed in the national report *America's Choice*. Other major factors influencing education reform include the new recommendations and standards approved by the National Council of Teachers of Mathematics (NCTM) and the recently approved standards recommended by the American Association for the Advancement of Science. Both of these complement the reform of education that is reflected in the Tech Prep movement.

Because of its leadership and accomplishments in Tech Prep education and in Oregon's reform movement, the Mt. Hood Regional Cooperative Consortium was selected by the United States Department of Education in 1992 to serve as one of nine National Tech Prep Demonstration Centers to disseminate information and to evaluate Tech Prep activities. In its role as a national demonstration center, Mt. Hood Community College and the District high schools have hosted visitors from 42 states and have disseminated information on all aspects of their Tech Prep efforts in response to over 200 inquiries from across the nation as well as from seven foreign countries.

The Mt. Hood Regional Cooperative Consortium will continue to focus on Tech Prep and education reform well into the year 2010. The Consortium will focus especially on developing integrated curriculums, teamwork, and real-life applications for mastering academic skills. They will also provide school-to-work opportunities through cooperation with local business and industry.

In May 1993, the Mt. Hood Regional Cooperative Consortium held its annual one-day retreat and planning session to evaluate progress and to develop a program of work for 1993-1994 to address these challenges and opportunities. At the regularly scheduled fall meeting in September 1993, the Consortium finalized its priorities and established responsibilities. The 1993-94 Program of Work, presented on the following pages, is a result of these efforts.



PROGRAM OF WORK

1993 to 1994

APPLIED ACADEMICS

	1.	Continue and finalize implementation of Applied Academics, including Mathematics, Communications, and Economics; supplement with workshops in these disciplines.
		Person(s) Responsible
		Target Date Ongoing
	2.	Expand applied academics to include science education.
		Person(s) Responsible
		ARTICULATION
	3.	Develop a Bridge Program for community college students.
		Person(s) Responsible
		Target Date May 1994
	4.	Expand Articulation of 2+2 Computer Applications.
	•	Person(s) Responsible
		Target Date Ongoing
	5.	Expand articulation agreements for drafting/CAD.
		Person(s) Responsible
		Target Date Ongoing
		CURRICULUM DEVELOPMENT
	6.	Update 2 + 2 agreements, and prepare 2+2 course outlines for each area for developing standard, designated outcomes. Set up at least two meetings a year for each curriculum.
9		Person(s) Responsible Vern Halcromb Target Date Ongoing



CURRICULUM DEVELOPMENT (cont.)

7.	Establish six coordinators for the six CAMS at MHCC and one for each strand at each high school.
	Person(s) Responsible
	Target Date Spring 1994
8.	Establish electronics/computer program, technician training, and maintenance agreements within Consortium for high school students.
	Person(s) Responsible
	•
9,	Have CPT correlated with HS math, WR, RD classes so that minimum levels can be built into CIM competencies. (All students with a CIM should be able to enter any of our P.T. programs.)
	Person(s) Responsible
	Target Date January 1994
	GUIDANCE AND COUNSELING
10.	Support with Consortium resources the development and implementation of the Next Generation
10.	Career Planner and Tech Prep Planner with CIS.
10.	Career Planner and Tech Prep Planner with CIS. Person(s) Responsible
10.	Career Planner and Tech Prep Planner with CIS. Person(s) Responsible
11.	Career Planner and Tech Prep Planner with CIS. Person(s) Responsible Vaveen Carver, Vern Halcromb, Jim Schoelkopf, Kathleen Waldron November 1994 Provide leadership and information to high school and college guidance and counseling personnel on tech prep through a minimum of one workshop for faculty, counseling, and administrative personnel.
	Career Planner and Tech Prep Planner with CIS. Person(s) Responsible Vaveen Carver, Vern Halcromb, Jim Schoelkopf, Kathleen Waldron Target Date Provide leadership and information to high school and college guidance and counseling personnel on tech prep through a minimum of one workshop for faculty, counseling, and administrative personnel. Person(s) Responsible Vaveen Carver, Vern Halcromb, Jim Schoelkopf, Kathleen Waldron November 1994 Provide leadership and information to high school and college guidance and counseling personnel on tech prep through a minimum of one workshop for faculty, counseling, and administrative personnel. Vern Halcromb, Kathleen Waldron
	Career Planner and Tech Prep Planner with CIS. Person(s) Responsible Vaveen Carver, Vern Halcromb, Jim Schoelkopf, Kathleen Waldron Target Date Provide leadership and information to high school and college guidance and counseling personnel on tech prep through a minimum of one workshop for faculty, counseling, and administrative personnel. Vern Halcromb,
	Career Planner and Tech Prep Planner with CIS. Person(s) Responsible Vaveen Carver, Vern Halcromb, Jim Schoelkopf, Kathleen Waldron November 1994 Provide leadership and information to high school and college guidance and counseling personnel on tech prep through a minimum of one workshop for faculty, counseling, and administrative personnel. Person(s) Responsible Kathy Lillis, Johnnie Stokes, Kathleen Waldron Target Date Explore ways the Consortium members can work together to support Career Development in (1) Communication, (2) CIS - Career Information System, (3) K-14 Plan, (4) Personal Counseling.
11.	Career Planner and Tech Prep Planner with CIS. Person(s) Responsible Vaveen Carver, Vern Halcromb, Jim Schoelkopf, Kathleen Waldron Target Date Provide leadership and information to high school and college guidance and counseling personnel on tech prep through a minimum of one workshop for faculty, counseling, and administrative personnel. Person(s) Responsible Kathy Lillis, Johnnie Stokes, Kathleen Waldron Target Date Target Date Target Date Target Date Target Career Time members can work together to support Career Development in



GUIDANCE AND COUNSELING (cont.)

13.	Investigate ways that high schools can work together to support Choice and V.I.P. programs by coordinating, forecasting, and having classes first or last so that students from other schools can join them.
	Person(s) Responsible
	Target Date Marilyn Kennedy Ongoing
14.	Have CIS provide staff orientation to consortium members.
	Person(s) Responsible
	Target Date February 1994
15.	Provide a system for continual update for all counselors on Tech Prep and Consortium activities.
	Person(s) Responsible Michael Dillon, Vern Halcromb, Jim Schoelkopf, Kathleen Waldron
	Target Date Ongoing
)	MARKETING
16.	Develop metro area Tech Prep guide for all three metro area community colleges.
	Person(s) Responsible
	Target Date
17.	Develop marketing program of Tech Prep and Consortium activities for students, parents, and the business community: video and brochures.
	Persca(s) Responsible
	Target Date January 1994
	PROFESSIONAL STAFF DEVELOPMENT
18.	Provide a one-day workshop for Tech Prep faculty to work on updated agreements and outcome based education (Integrated Curriculum).
	Person(s) Responsible
	Target Date February 199-



PROFESSIONAL STAFF DEVELOPMENT (cont.)

19.	Set up outcome-based education staff development for Tech Prep areas on CIM, CAM, etc.
	Person(s) Responsible
	Target Date November 1994
	SCHOOL-TO-WORK TRANSITION
20.	Establish a mentoring program for Tech Prep students with 100 students and 100 mentors in 1993-94.
	Person(s) Responsible
	Target Date May 1994
21.	Develop a funding proposal for youth apprenticeship funding for submission to U.S. Department of Education and U.S. Department of Labor.
	Person(s) Responsible
	Target Date January 1994
22.	Set up structured, work-based learning work experience.
	Person(s) Responsible
	Target Date Ongoing
23.	Establish agreement of business education compact for teacher internships.
	Person(s) Responsible
	Target Date Ongoing
24.	Implement school-to-work transition program with work-based learning with a minimum of 15 student in ten business/industries.
	Person(s) Responsible
	Target Date Ongoing
25.	Finalize area-wide structured work experience program.
	Person(s) Responsible
	Target Date



SCHOOL-TO-WORK TRANSITION (cont.)

26.	Create agreement with business education compact to underwrite fringe costs of program.
	Person(s) Responsible
	Target Date
	TDAD ISSULTSTATION
	TPAD IMPLEMENTATION
27.	Implement metro area TPAD program development activities within three metro consortiums for each of the six strands or endorsement areas of HB 3565.
	Person(s) Responsible
	Target Date January 1994
28.	Investigate what Chemeketa Community College has done to create a TPAD.
	Person(s) Responsible
)	Target Date December 1993
	TECH PREP CURRICULUM DEVELOPMENT
29.	Establish Tech Prep funding for Automotive Technology.
20.	Person(s) Responsible Mike Durrer,
	Dennis Mattoon
	Target Date October 1994
30.	Promote and maintain Health Occupations program continuation.
	Person(s) Responsible
	Person(s) Responsible
31.	Lisa Puma
31.	Target Date
31.	Target Date September 1993 Update 2+2 manufacturing and mechanical engineering as part of Boeing project.
31. 32.	Target Date
	Target Date September 1993 Update 2+2 manufacturing and mechanical engineering as part of Boeing project. Person(s) Responsible Mike Durrer, Consortium, High Schools Target Date January 1994



FOR FURTHER INFORMATION, CONTACT:

Dr. Jack Miller, Dean
The Office of Professional Technical Development

or

Marcia Dier, Coordinator
National Tech Prep Demonstration Center

Mt. Hood Community College 26000 SE Stark Street Gresham, OR 97030

(503) 667-7313 (Miller) / 667-7394 (Dier) (503) 667-7679 (FAX)

Dr. Vern Halcromb
The Mt. Hood Regional Consortium Coordinator

Multnomah Education Service District 11611 NE Ainsworth Circle Portland, OR 97220

> (503) 257-1618 (503) 257-1519 (FAX)



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Appendix F

"TEACHING MATHEMATICS IN A 21ST CENTURY SCHOOL"

Mathematics Workshop

sponsored by

The MHCC National Tech Prep Demonstration Center





MT. HOOD COMMUNITY COLLEGE

with

MULTNOMAH COMMUNITY TELEVISION

present

The Third MATHEMATICS TEACHING ENHANCEMENT WORKSHOP

"TEACHING MATHEMATICS IN A 21ST CENTURY SCHOOL"

A Teleconference via ED NET, NETWORK I

Thursday, October 28, 1993.....1 to 4 p.m.

and

Friday, October 29, 1993......9 a.m. to 12 noon

(Registration Form Included)



MT. HOOD COMMUNITY COLLEGE TELECONFERENCE DESCRIPTION

Teaching mathematics in today's schools and colleges is radically changing. These changes are a direct result of the impact of:



The National Council of Teachers of Mathematics' (NCTM) documents: "Curriculum and Evaluation Standards" (1989) and "Professional Standards for Teaching Mathematics" (1991)



The United States Department of Labor Secretary's "Commission on Achieving Necessary Skills"



The National Tech Prep Movement

BERT WAITS, an internationally recognized expert in the instructional use of graphing calculators in mathematics, and a member of the NCTM 9-12 curriculum standards working group, returns to Mt. Hood Community College as the featured speaker of this interactive teleconference. As a participant, you will...

- **Learn** how you can use the TI 82 graphing calculator to teach mathematics, from prealgebra through calculus.
- Participate in interactive problem solving, assisted by Bert Waits' excellent presentation.
- View first hand MHCC's interactive, technology-based mathematics program. MHCC has a
 one-track, entry-level mathematics sequence for ALL students, whether tech prep or college
 prep.
- Talk with MHCC mathematics faculty about the MHCC mathematics program.
- See the Interactive Mathematics Program (IMP)* in action at Grant High School in Portland, Oregon, and talk with their instructors.

* ABOUT THE INTERACTIVE MATHEMATICS PROGRAM (MP)

IMP is a new high school mathematics curriculum, centered around problem solving and group learning; IMP's approach to mathematics education mirrors current recommendations specified in NCTM's Standards. This 4-year core curriculum was developed in response to the inadequate preparation of U.S. high school students in mathematics and is part of a current national reform effort that will make substantive changes in the teaching of mathematics. These changes include:

- Shifting from a skill-centered to a problem-solving curriculum
- **Broadening** the scope of the secondary curriculum to include areas such as statistics, probability, and discrete mathematics
- Developing communication and writing skills
- Expanding student groups studying "secondary core" mathematics
- Basing teaching techniques on new instructional strategies that incorporate small group and whole class discussion in the classroom to promote student understanding



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MT. HOOD COMMUNITY COLLEGE TELECONFERENCE SCHEDULE

Thursday, October 28, 1993

1:00 - 1:30 p.m.	Grant High School video tape followed by an interactive panel discussion, presented by teachers, students, and parents from Grant High School
1:30 - 2:00 p.m.	WAITS' PRESENTATION: "Pre-algebra, algebra, and data analysis; classroom illustrations and applications using the TI 82 graphing calculator"
2:00 - 2:15 p.m.	10-minute interactive activity with calculator exercises and 5-minute break
2:15 - 2:45 p.m.	Interactive activity discussion and Waits' presentation
2:45 - 3:00 p.m.	10-minute interactive activity with calculator exercises and 5-minute break
3:00 - 3:30 p.m.	Interactive activity discussion and Waits' presentation
3:30 - 3:45 p.m.	10-minute interactive activity with calculator exercises and 5-minute break
3:45 - 4:00 p.m.	Interactive wrap-up by Bert Waits

Friday, October 29, 1993

9:00 - 9:30 a.m.	MHCC video tape followed by an interactive panel discussion, presented by MHCC faculty
9:30 - 10:00 a.m.	WAITS' PRESENTATION: "Pre-calculus and Calculus; classroom illustrations and applications with the Ti 82 graphing calculator"
10:00 - 10:15 a.m.	10-minute interactive activity with calculator exercises and 5-minute break
10:15 - 10:45 a.m.	Interactive activity discussion and Waits' presentation
10:45 - 11:00 a.m.	10-minute interactive activity with calculator exercises and 5-minute break
11:00 - 11:30 a.m.	Interactive activity discussion and Waits' presentation
11:30 - 11:45 a.m.	10-minute interactive activity with calculator exercises and 5-minute break
11:45 - 12 noon	Interactive Wrap-up by Bert Walts

BRING YOUR GRAPHING CALCULATOR ALONG

WORK along with Bert Walts on Interactive exercises. Although the presentation features the TI 82 graphing calculator, activities can be done with the TI 81.

YOU DON'T NEED TO KNOW HOW TO USE A GRAPHING CALCULATOR

SEE the benefits of using a graphing calculator in today's mathematics classes, even if you don't know how to use one yet

ANYONE CAN BENEFIT FROM THIS TELECONFERENCE!

If you teach mathematics, science, and/or tech prep classes at a middle school, high school, or community college or university, you can benefit from this event. Future teachers, school administrators, and parents are also encouraged to participate.



MT. HOOD COMMUNITY COLLEGE TELECONFERENCE ACKNOWLEDGEMENTS and CREDITS

Mt. Hood Community College and Multnomah Community Television proudly present a teleconference with

Professor of Mathematics, The Ohio State University Ph.D., The Ohio State University

Featured Presenter, Bert K. Waits, has been teaching in the Ohio State University Mathematics Department since 1962. He received his Ph.D. from Ohio State in 1969. In 1976-77, he was a Visiting Associate Professor of Mathematics at Oregon State University.

Waits has spent 20 years engaged in mathematics curriculum development and related activity, at both the college and the high school level. Responsible for many innovations in teaching, Waits Is one of three nationally recognized experts in the instructional use of computer graphing and graphing calculators. His work with improving the mathematics preparation of college-bound high school students through the Ohio Early College Mathematics Placement Testing Program (EMPT) has received national acclaim.

Waits has served on two national panels of the Mathematics Association of America (MAA), charged with designing calculator-based placement tests and high school prognostic tests. Waits was recently appointed to MAA's Committee on Testing (COT). From 1986 to 1988, he served as a member of the 9-12 Working Group, which authored NCTM's Curriculum and Evaluation Standards for School Mathematics. Implementing the Standards has been described as the principal activity of NCTM for the 1990s. Many mathematics educators throughout the country have requested Waits to talk about his computer graphing software and/or graphing calculators and how they are used to enhance the teaching and learning of algebra, precalculus, and calculus.

Recently Waits has been the co-director of many summer institutes for high school teachers designed to provide intensive training on appropriate use of technology in the teaching and learning of high school mathematics. He was a co-organizer of the 21st National Actuarial Research Conference in 1986, is a member of the Advisory Panel of the Ford Foundation's Urban Mathematics Collaboratives Project, and is a member of the AP Calculus Development Committee. Waits is also a reviewer for *The Mathematics Teacher, Journal of Research in Mathematics Education*, and the *College Mathematics Journal*. A member of the National Faculty Mathematics Advisory Board and Pi Mu Epsilon, Waits is also a consultant for The College Board, school districts, state departments of education, boards of higher education, and Texas Instruments, Inc. Waits assisted in the design and development of the TI 81, TI 82, and TI 85 graphing calculators.

CREDITS

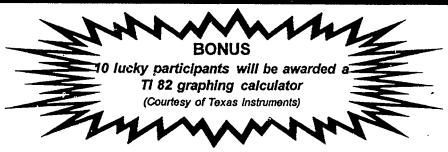
Ann Mitchell, Multnomah Community Television....PRODUCER
Jackie McCrady, MHCC Library Resource Center....ED NET COORDINATOR
Pamela Matthews, Associate Dean, Mathematics, MHCC....PROGRAM DIRECTOR
Marcia Dier, Coordinator, MHCC National Tech Prep Center....PROGRAM PREPARATION

And Special THANKS to our SPONSORS:

Richard Howell, Texas Instruments
Mt. Hood Cooperative Consortium
TRANSIT Project



MT. HOOD COMMUNITY COLLEGE TELECONFERENCE REGISTRATION INFORMATION



TELECONFERENCE SITES

Check your selection of the site where you wish to participate in the teleconference. Please contact MHCC (503-667-7286) for information on additional sites.

Check One	SITE NAME	COUNTY	CITY
	Chemeketa Community College	Marion	Salem
	Clackamas Community College	Clackamas	Oregon City
	Crook County High School	Crook	Prineville
	Linn Benton ESD	Linn	Albany
	Malheur County ESD	Malheur	Vale
	Mapleton School District	Lane	Mapleton
	Mt. Hood Community College	Multnomah	Gresham
	Phoenix High School	Jackson	Phoenix
	Portland Community College	Washington/Multnomah	Portland
	Union County ESD	Union	Island City/La Grande
	Yamhili ESD	Yamhill	McMinnville

REGISTRATION FEES*** (Same price for ONE or BOTH broadcasts)

- GROUP Registration, 2 to 4 participants from SAME school, one or both broadcasts \$30 (For every four participants from one school, ONE ADMINISTRATOR may attend free of charge)

PLEASE RETURN REGISTRATION FORM BY OCTOBER 18, 1993, TO:

Pamela Matthews
Associate Dean, Mathematics Division
"Teaching Mathematics in a 21st Century School"
Mt. Hood Community College
26000 SE Stark Street

BEST COPY AVAILABLE

ADDED BONUS!

Gresham, OR 97030

ALL PARTICIPANTS receive a bonus coupon good for 10 percent off the purchase of a Texas Instrument Graphing Calculator, so save your registration receipt!



^{***} REGISTRATION FEES COVER PACKET—<u>TWO</u> FOR <u>EACH</u> GROUP REGISTRATION—INTERACTIVE ACTIVITIES, <u>AND</u> A CHANCE TO WIN A TI 82 GRAPHING CALCULATOR.

MT. HOOD COMMUNITY COLLEGE TELECONFERENCE REGISTRATION FORM

School Name			
School Address			
Contact Person		Telephone Number	
	SCHOOL O	N-SITE PARTICIPANTS	
(All par	ticipants from ONE school,	please register by school, NOT individually.)	
	1 p.m. to 4 p.m.	Friday, 9 a.m. to 12 noon	
1.		1.	
2.		2.	
3.		3.	
4.		4.	
1 Administrator (FREE)		1 Administrator (FREE)	
5.		5.	
6.		6.	
7.		7.	
8.		8.	
1 Administrator (FREE)		1 Administrator (FREE)	
9.		9.	
10.		10.	
11		11.	
12.		12.	
1 Administrator (FREE)		1 Administrator (FREE)	
Teleconference Site Selected	rom List on Reverse Side of Form		
lease check one payme	nt ontion below:		
Enclosed is my che	•	ed is my school purchase order #	
		my Visa Mastercard	
Account #	Exp. Date	Signature	
		al amount of registration fees paid as designated	above:
One individual re	gistration, one or both bro ration (2 to 4 participants)	padcasts	\$ 1 5
Two group regist	rations (6 to 8 participants	s)**	\$ 30 \$ 60
Three group regi	strations (10 to 12 particip	pants)**	\$ 90 \$ 90
TOTAL AN	NOUNT OF REGISTRATION FEE	S** s	

(** NOTE: To qualify for the group rate on the next level, you must register a MINIMUM of TWO additional participants; otherwise, the additional participant must be registered under the INDIVIDUAL registration fee: \$15. For Instance, for 5 people, the fee would be \$30 for the first four participants plus \$15 for the fifth person for a total of \$45.)



Appendix G

WINTER NEWSLETTER OF THE

MT. HOOD NATIONAL TECH PREP DEMONSTRATION CENTER



NATIONAL TECH PREP

DEMONSTRATION CENTER

NEWSLETTER

Dr. Jack Miller, Center Director Marcia Dier, Writer/Editor (503) 667-7394; FAX (503) 667-7679 Mt. Hood Community College
INSTRUCTIONAL SERVICES
26000 SE Stark Street
Gresham, Oregon 97030



BOEING PILOT PROJECT IS RESULTS ORIENTED

IN A FIRST for the State of Oregon, Boeing of Portland and MHCC have established an agreement, funded by Boeing, in which 2 + 2 articulation agreements for engineering and manufacturing have been established. Supplemented with youth apprenticeships and teacher internships in the summers of 1994 and 1995, this promising program stresses development of a course entitled "Principles of Technology" and a Computer Assisted Drafting (CAD) workbook to satisfy a stated common need of drafting, mechanical engineering, and CAD instructors.

In October, the preliminary advisory committee met to set the directions for a continuing complementary relationship between the Engineering/Industrial Division at MHCC, the eight District high schools, Multnomah Education School District, and the Boeing Company. Boeing is preparing a lecture/lab facility that will be used for the summer internship/apprenticeship program. Additionally, Boeing contributed \$35,000 to fund implementation of this exciting program, the goal of which is to educate youth and teachers in the technology of today's high-tech industries.

In addition to Engineering and Manufacturing Technology instructors at our feeder high schools, the following individuals are major activists in this promising partnership: Michael Durrer, Associate Dean, MHCC Engineering/Industrial Technology; Lynne Wolters, MHCC 2 + 2 Project Coordinator; Vern Halcromb, MHCC Regional Consortium Coordinator; Dave Shields, MHCC Career Placement/Cooperative Education Director; Liz Warman, Boeing Public Affairs Manager; Tom Boeing Manufacturing Apprenticeship Coordinator; and Jim Thompson, Boeing Union The ties between the high schools, MHCC, and Industry have been strengthened.

MHCC MATHEMATICS DIVISION LEADS NATION IN EDUCATION REFORM

PAMELA MATTHEWS, Associate Dean of the MHCC Mathematics Division, and her faculty are transforming traditional mathematics into mathematics for the real world. Nationally recognized as "trail blazers" in mathematics reform, the Mathematics Division has transformed its classes into interactive, team-oriented learning environments where instructors facilitate, rather than lecture behind the traditional lectern.

From day one, students are arbitrarily set up in teams that interact and work with problem-solving situations. This supportive environment encourages solutions derived from different perspectives and learning styles. Results are then reported, through both oral and written presentations, to complete the real-world orientation.

The classroom materials and curriculum are being created by the instructors, because traditional textbooks, which emphasize "drill and skill," simply do not provide real-world problems or encourage teamwork.

Since technology is part of life in the work world, calculators (regular and graphing) and computers are used as a regular part of the classroom environment. This enables students to concentrate on the problem-solving process rather than waste valuable time on hand-calculations, which have no place in the time-driven, accuracy-dependent work world.

John Dier, a Business Math instructor in Business & Computer Technology, notes a change in his students' attitudes. They come into his classroom from the Mathematics Division classes with less fear of math and with more empathy. No longer do "faster" students show disdain when questions are asked in class--now they often help out.

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TI-82 GRAPHING CALCULATOR WORKSHOP A SUCCESS!

TWENTY-FIVE high schools, eight community colleges, four middle schools, and two universities were linked via ED NET I for a two-day workshop entitled, "Teaching Mathematics in a 21st Century School." Bert Waits, recognized internationally for his work in helping to design and develop the TI-81, TI-82, and TI-85 graphing calculator, was the featured presenter.

This four-hour workshop involved hands-on interactive problem-solving techniques using the TI-82 graphing calculator to teach mathematics. Sixteen sites in Oregon, Washington, and Montana interacted via a satellite, which enabled the MHCC Mathematics faculty team to discuss their methods and materials with participating mathematics educators. Many of the participants were also interested in learning more about the one-track, entry-level mathematics program that the MHCC Mathematics Division has implemented for all students, in which the TI-82 graphing calculator is an integral part.

Penny Slingerland, an MHCC Mathematics instructor, told the teleconference participants, "We get a lot of returning students who have never been very comfortable with mathematics and never got past fractions and decimals. Introducing the calculator frees them from having to worry so much about computational rules and lets them see that they really can think mathematically."

This teleconference was coordinated and produced by Pamela Matthews, associate dean of mathematics, Ann Mitchell of Multnomah Community Television, Jackie McCrady, director of MHCC's Library Resource Center, and Marcia Dier of MHCC's National Tech Prep Demonstration Center.

In addition to helping sponsor this two-day teleconference, the Mt. Hood National Tech Prep Demonstration Center helped sponsor a one-day hands-on TI-82 workshop. Bert Waits instructed approximately 50 high school and community college instructors from the Portland area in how to operate the TI-82. Texas Instruments furnished the TI-82 calculators for this excellent workshop and provided the services of Bert Waits.

The evaluations completed by the participants of the teleconference and the workshop have been full of praise and gratitude.



CONSORTIUM'S ANNUAL PLANNING MEETING TARGETS GOALS

In an effort to meet the educational goals set by the State of Oregon and by the Consortium member schools, the Consortium set the following goals for 1994:

- 1. Establish stronger communications between members, parents, students, and the community.
- 2. Establish a broader base of education reform issues.
- 3. Market education reform and tech prep efforts in the community.
- 4. Integrate more fully throughout the District academic and vocational courses.
- 5. Set up instructor internships with community businesses to enable them to see how their subjects fit into real life.
- 6. Encourage participation by decision makers to enable faster incorporation and implementation of tech prep education.
- Coordinate with universities to encourage teacher training programs that incorporate new techniques of teaching for the real world, including in-service training in businesses.
- 8. Tighten communications between MHCC and District high schools.
- 9. Establish consortium-led coordination efforts with business to provide internships and job training.
- Develop coordinated school-to-work programs to coordinate with community businesses to provide cooperation between schools, not competition.
- 11. Set up an InterNet communication system District-wide.
- 12. Establish a career development transcript program throughout the District.

The Tech Prep Philosophy: Tell me how to do it, and I will remember it for a day; show me how to do it, and I will remember it for a week; have me do it, and I will take it with me forever.



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CONSORTIUM HIGH SCHOOLS ACTIVE IN EDUCATION REFORM

THE MT. HOOD Consortium high schools are an important link in Oregon's education reform movement.

Sam Barlow High School and its two middle schools are now on modular scheduling. Classes are blocked in two-hour increments, which provides students and teachers more time for in-depth coverage of subjects and for hands-on projects that involve researching and developing a project and then reporting the results.

Sandy High School has fully implemented its "Rivers of Success" program that involves a coordinated effort from all district instructors-grade schools through grade twelve. The goal of this program is to introduce students to the vast array of career choices early and to provide additional input to them as they progress through the grades. Hopefully, this will enable students to close in on their ultimate career paths earlier.

Centennial High School is establishing an experiential program aimed at helping students determine their career goals. For one week each year, starting in the tenth grade, high school students will take a careers class. The ultimate goal will be for students to complete this careers education by entering into a work experience tied directly to their career goals. In four years, Centennial students will also be able to take advantage of a total on-line system, complete with computer labs where students can do their assignments and develop mastery of a variety of computer skills.

Reynolds High School's complete blocking program is in its second year of operation. The instructional units have been integrated to show the interrelationship between school studies and life skills. Everyone is involved with this outcome-based program--teachers, administrators, students, and the community.

Parkrose High School's curriculum is divided into the six prescribed certificate of mastery programs mandated by the State of Oregon. Students also learn about the different roles they will assume after graduating from high school: 9th-grade stucents learn about the work world; 10th-graders learn about the world; 11th-graders learn about life roles; and 12th-graders learn community participation and citizenship. Parkrose also established a

four-period block for 120 freshman that integrates math, science, English, and technology into an outcomes-based program that enables students to explore three CAM areas: Business, Arts & Communication, and Industrial/ Engineering. Barbara Ritt, Assistant Principal, was instrumental in arranging the logistics of this program so that all the pieces fit smoothly. Parkrose's goal is to become a single-track school where curriculum is integrated to provide students with a comprehensive understanding of the world and their place in it. Parkrose has received funding assistance from the Mt. Hood Consortium, Boeing, and McDonald's.

Corbett High School is teaching Computer-Assisted Drafting with a 20-station IBM Office Systems program. Many 2+2 and VIP students are now taking advantage of this state-of-the-art classroom.

Gresham-Barlow High Schools held a celebration involving 100 people to honor special needs students and their community employers, as well as their families. Sherry Scheinman and Vern Halcromb headed up the activities that culminated with this event. A slide presentation showed students at community work sites and provided parents with methods they can use to prepare their special needs children for the "world of work" and to build their children's self-esteem.

MT. HOOD NTPD CENTER GOES TO AVA

AS A RESULT of co-hosting a booth shared by all nine National Tech Prep Demonstration Centers, the Mt. Hood National Tech Prep Demonstration Center disseminated information to an additional 500 sites across the nation, bringing its dissemination efforts to almost 800 sites to date.

The NTPD Centers have determined that this is one of the most effective methods of disseminating materials. For this reason, the Centers will be co-hosting two more booths in 1994: one at the AACC Convention in Washington D.C. and one at the AVA Convention in Dallas, Texas.

Another successful dissemination direction has been the presentations and workshops provided to institutions by the NTPD Centers' representatives.



FEDERAL EXPECTATIONS FOR TECH PREP

(Excerpts from a speech by Attorney Michael Brustein of Brustein & Manasevit, Washington, D.C., presented at the 1993 AVA Convention.)

THE UNITED STATES Department of Education is mandating closer controls of grant monies, including Tech Prep grants and Carl Perkins grants. Annual formal audits must be performed, and these audits must be valid or else the Federal Government will not accept the audit, according to Michael Brustein, a Washington, D.C., lawyer.

Brustein addressed some common concerns regarding expenditure of funds. Of particular concern was, "If fund expenditures are combined under two grant programs, which guidelines are followed from which grant?" The answer is that ALL guidelines in BOTH grants must be adhered to in such cases. Brustein added that it is usually best to keep entirely separate the funding streams of separate grants so that flexibility can be maintained under both grants.

A second major concern involved setting fiscal policies of consortiums which involve relationships between community colleges and high schools. The federal government is now mandating that the fiscal agent of the consortium DOES NOT and SHOULD NOT set fiscal policies any more. Such policies, including salaries, must now be set by an Ad Hoc Tech Prep Board, on which there is joint representation by both the secondary schools and the community colleges. In addition, for a post-secondary institution to be able to participate separately, they must have at least \$50,000 in Perkins Grant funds allocated to them.

Seven elements of a Tech Prep program (under Title III, Part) must ALL be met, according to Brustein. These include:

- 1. Articulation agreements must be made and followed.
- An appropriate curriculum design with a common core of math, science, communication, and humanities must be included.
- 3. Curriculum must be non-duplicative and involve an educational sequence that leads to occupational/academic competencies.
- 4. In-service teacher training needs to be the SAME for high school and community colleges and needs to be done at the same time as curriculum development.
- 5. Counselors must be trained for student recruitment, training, and employment.
- Equal access for special populations must be provided to enable these students to ENTER the program. No special services need to be provided to ENSURE success, however.
- 7. Preparatory services must be provided to students who are not yet in the program (such as to students in grades ten and under).

Brustein's observations and comments are derived from his having dealt with the U.S. Department of Education for a long time. His firm can provide expertise on other USDE issues.



NATIONAL TECH PREP

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