Puget Sound Consortium for Manufacturing Excellence

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PSCME

Grant Targets
(What we Promised to NSF)

Target #1
By end of the 3-year program, enrollment of post-secondary students and incumbent workers in community college programs will increase by 30%, with minority and female student enrollment increasing by 40%.
Target #2

Over 50% of Puget Sound regional community colleges will adopt and integrate at least 2 modules in their program.
Target #3

75% of curriculum modules will have at least 4 high schools and 2 community colleges as major sites for implementation.
How We Proceeded.

In November 2001, we decided to identify Classification of Instructional Program (CIP) codes for WA State Community and Technical Colleges that would match PSCME program activities. Working closely with the SBCTC, we investigated programs, colleges and enrollment data.
What We Learned. . .

CIP 470495
“Computer Integrated Manufacturing”
Green River, Renton & Spokane.

Green River and Renton had no students enrolled from 1993-2001.
CIP 150805

“Mechanical Engineering Technology”

The CIP definition does not match PSCME Program. This program trains assistants to support engineers.
CIP 480506 & 480592

“Computerized Numerical Control Manufacturing”

480506 does not match PSCME program. It trains sheet metal workers only.

480592 is at Bates, Lower Columbia, Renton and Shoreline, but only Renton had students over the past 5 years.

Bates had 3 students for 1 year.
“Manufacturing Engineering Technology”

150603 does not match the PSCME Program. It trains assistants to support engineers.

150694 is a possibility and would add Wenatchee Valley to the PSCME program.
CIP 480501

Program Titles

• Machinist/Machine Technology
• Machine Shop
• Computerized Numerical Control Machining
CIP 480501 Results

If the PSCME program targets colleges and programs with this CIP, fifteen of the thirty-three Washington State Community and Technical Colleges would be included.

These colleges are located across the state and include twenty-five counties.
CIP 480501 Results
Community and Technical Colleges

TOTAL = 15

Bates
Bellingham
Clark
Clover Park
Columbia Basin
Grays Harbor
Green River
Lower Columbia
Lake Washington
Renton
Seattle -South
Shoreline
Spokane
Walla Walla
Yakima Valley/Perry
<table>
<thead>
<tr>
<th>Community/Technical College</th>
<th>Counties Served</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grays Harbor</td>
<td>Grays Harbor, Pacific</td>
</tr>
<tr>
<td>Seattle South</td>
<td>King</td>
</tr>
<tr>
<td>Shoreline</td>
<td>King, Snohomish</td>
</tr>
<tr>
<td>Green River</td>
<td>King</td>
</tr>
<tr>
<td>Lower Columbia</td>
<td>Cowlitz, Wahkiakum</td>
</tr>
<tr>
<td>Clark</td>
<td>Clark, Skamania, Klickitat</td>
</tr>
<tr>
<td>Yakima Valley</td>
<td>Kittitas, Klickitat, Yakima</td>
</tr>
<tr>
<td>Spokane</td>
<td>Ferry, Lincoln, Pend Oreille, Spokane, Stevens, Whitman</td>
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<tr>
<td>Columbia Basin</td>
<td>Benton, Franklin</td>
</tr>
<tr>
<td>Walla Walla</td>
<td>Asotin, Columbia, Garfield, Walla Walla</td>
</tr>
<tr>
<td>Bellingham</td>
<td>Whatcom</td>
</tr>
<tr>
<td>Lake Washington</td>
<td>King, Snohomish</td>
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<tr>
<td>Renton</td>
<td>King</td>
</tr>
<tr>
<td>Bates</td>
<td>Pierce</td>
</tr>
<tr>
<td>Clover Park</td>
<td>Pierce</td>
</tr>
</tbody>
</table>
Colleges that offer CIP 480501 programs include those with both certificate and AA programs.
<table>
<thead>
<tr>
<th>College</th>
<th>Hours/Credits</th>
<th>Certificate (C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bates</td>
<td>2061/2160 clock hours</td>
<td>C</td>
</tr>
<tr>
<td>Bellingham</td>
<td>2160 clock hrs</td>
<td>D</td>
</tr>
<tr>
<td>Clark</td>
<td>33/115 credits or 1848/1650 clock hrs</td>
<td>D or C</td>
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<tr>
<td>Clover Park</td>
<td>108 credits or 2107 clock hrs</td>
<td>C</td>
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<tr>
<td>Columbia Basin</td>
<td>112 credits</td>
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<tr>
<td>Grays Harbor</td>
<td>90 credits</td>
<td>D</td>
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<tr>
<td>Green River</td>
<td>108-111/44 credits or 677 clock hrs</td>
<td>D or C</td>
</tr>
<tr>
<td>Lower Columbia</td>
<td>114/88/14 credits or 220 clock hrs</td>
<td>D or C</td>
</tr>
<tr>
<td>College</td>
<td>Hours/Credits</td>
<td>Certificate (C)</td>
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<tr>
<td>------------------</td>
<td>-------------------------------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>Renton</td>
<td>2720/2520 clock hours</td>
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<tr>
<td>Seattle South</td>
<td>114-116/70 credits or 1067 clock hrs</td>
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<tr>
<td>Shoreline</td>
<td>128/65–73 credits or 180/650-730 clock hrs</td>
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</tr>
<tr>
<td>Spokane</td>
<td>120/112/61/61 credits or 990 clock hrs</td>
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<tr>
<td>Walla Walla</td>
<td>90/72 credits or 875 clock hrs</td>
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<tr>
<td>Yakima Valley Perry</td>
<td>27 credits or 270 clock hours</td>
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</tr>
<tr>
<td>Lake Washington</td>
<td>120/80 credits or 1980/1320 clock hrs</td>
<td></td>
</tr>
</tbody>
</table>
CIP 480501 Results

- Student population data are accessible
- Declining enrollment since 1997 - 1998
- Lowest enrollment in areas of ethnic diversity
CIP 480501 -- Total Students

Number of Students


Number of Students: 361 453 591 627 571 430 454 446
**2000-2001**

5 High = Renton, Lake Washington, Shoreline, Clark, Spokane

5 Low = Grays Harbor, Bates, Walla Walla, Green River, Seattle-South/Columbia Basin

**1999-2000**

5 High = Renton, Shoreline, Lake Washington, Spokane, Green River

5 Low = Bates, Columbia Basin, Grays Harbor, Walla Walla, Lower Columbia
1998-1999

5 High = Shoreline, Renton, Lake Washington, Spokane, Clark

5 Low = Bates, Columbia Basin, Grays Harbor, Walla Walla, Lower Columbia

1997-1998 (highest year of total enrollment)

5 High = Shoreline, Renton, Spokane, Lake Washington, Clark

5 Low = Bates, Columbia Basin, Grays Harbor, Walla Walla, Lower Columbia
CIP 480501 Results

- 5 colleges with the highest enrollment are:
  - Renton
  - Lake Washington
  - Shoreline
  - Clark
  - Spokane

- 3 colleges with the lowest enrollment are:
  - Bates
  - Grays Harbor
  - Columbia Basin
Focusing on CIP 480501

If we focus on the highest and lowest student enrollment, PSCME can impact colleges across the state.

Colleges that have the lowest student enrollment are located in ethnically and economically diverse areas of the state, which would create an opportunity for the program to meet the target of increasing the enrollment of minorities and women.
Collaboration

The Washington MESA program provides enrichment opportunities in mathematics, engineering and science for underrepresented students in grades K-12. MESA has programs at Tacoma, Seattle, Yakima Valley, and Spokane. PSCME could collaborate at the high school level.
The Accreditation board for Engineering and Technology (ABET) encourages outreach programs for two and four year degree granting institutions.
• Represents 15 out of 33 community colleges in the state
• Colleges are located across the state in 25 counties
• Includes both certificate and AA programs
• Student population data are accessible
• Declining enrollment since 1997 - 1998
• Lowest enrollment in areas of ethnic diversity
Current Thinking

CIP 480501 seems to be the best fit with the PSCME program and will allow us to focus the evaluation of the program.