SEATTLE PUBLIC SCHOOLS
Career & Technical Education
ANNUAL BOARD REPORT

Including: SPS Skills Center

2013 - 2014

Mary Davison, CTE Program Manager
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CAREER and TECHNICAL EDUCATION

Definition

Career and Technical Education (CTE) is a planned program of courses and learning experiences that begins with exploration of career options, supports academic and life skills, and enables achievement of high academic standards, leadership development, and preparation for career and college.

Mission

The Career and Technical Education Department broadens career choices for students, supports and promotes quality instruction, and ensures that every secondary school has a range of CTE offerings for every student, including skill center options.

Vision

Career and Technical Education: Where all students imagine, design, and craft their future.

Central CTE Staff

Manager ................................................................. Mary Davison
Administrative Assistant ............................................ Mark Daniels
Fiscal ........................................................................ Wendy Turner

Specialists:
Robert Austin ....................................................... Agriculture, Arts, Media, Science & Engineering
Michelle Chaney ..................................................... Business, Marketing, & Information Technology
Patsy Ethridge-Neal - .3 Part-time .................................. State and Federal Reporting
Myrna Muto – .6 shared with College & Career Director .......... Career & Guidance Services
Joanne Patrick .......................................................... Academies
Cathi Rodgveller - .5 part-time .................................. Non-traditional Counseling
Roxanne Trees ................. Health & Human Services, and Family & Consumer Science

Additional Seattle Public School Skills Center CTE Staff

Principal ................................................................. Shani Watkins
Registrar - .8 Part-time ................................................ Deanna Gallichan
ASSESSMENT OF CTE PROGRAM

Career and Technical Education (CTE) in Seattle Public Schools continues to offer students some of the finest CTE experiences in the nation. We have organized CTE around the following areas with Specialists to support current programs, research new programs and initiatives, and work with industry partners for advice in keeping our programs current and what industry is telling us it needs for now and in the future:

- Arts, Communications, and Media
- Business, Marketing, Information Technology and Computer Science
- Environmental Science and Agriculture
- Health & Human Services, and Family & Consumer Science
- Science, Engineering, and Industry

We have very strong programs in most pathways, and are moving to a Program of Study model for all course offerings. Programs of Study are detailed guides for students, mapping out specific course options for a chosen career path from high school through postsecondary education. Programs of Study show how to smoothly transition into postsecondary education from high school CTE.

Program and Teacher Quality

As we continue to offer our students some of the finest Career and Technical Education experiences in the nation, our research indicates we are delivering in ways that are aligned to industry standards and best practices. The 2011, Pathways to Prosperity report from the Harvard School of Education cited Career Academies and Project-Lead-the Way (PLTW) engineering programs as best practices and bellwethers of quality. Seattle Public Schools is one of the only Washington school districts to sustain Career Academies and we have done so since 1987. We were the first district in Washington State to implement Project Lead the Way (PLTW). Other high-quality, award-winning, and high-profile programs include: C89.5 our radio station at Nathan Hale; Film/Video at Ballard; ProStart culinary at Rainier Beach, Ingraham, Roosevelt, and West Seattle; Project Lead the Way (PLTW) Biomedical, and Engineering at Cleveland; Photography at Garfield; Automotive Tech at Ingraham, West Seattle, and City Campus; Marketing at Ballard, Garfield, Hale, Roosevelt, and West Seattle, and the Graduation, Reality And Dual-Role Skills (GRADS) Teen Parent Program at South Lake; Microsoft IT Academy at Sealth and Ingraham; and Video at Ballard, Center School, Cleveland, Hale, and Franklin; and Biotech at Ballard. We are using the Microsoft sponsored TEALS (Technology Education and Literacy in Schools) program for computer science at Ballard, Franklin, Hale, and Rainier Beach, and have been able to hire highly qualified computer science teachers at Cleveland, Garfield, and Roosevelt and sustain our International Baccalaureate computer science program at

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1 See Appendix #1 – Career Clusters Pathways – Course Offerings, Pages 16-18
2 See Appendix 1 - Career Clusters™- Pathways – Course Offerings – Pages 16-18
3 http://www.k12.wa.us/CareerTechEd/ProgramsofStudy.aspx
Ingraham. We are planning an agreement with code.org for additional computer science offerings in middle and high schools, and professional development opportunities for computer science teachers. Seattle’s CTE teachers and staff win recognition and awards and are consistent leaders at regional, state, and national levels. Students who concentrate their studies in CTE, which is taking four semesters in a program area, go to college at a greater rate, and complete their programs more often than other students who do not as evidenced in research from the National Academy Foundation and the Work Force Training Board of Washington State.  

Because of OSPI requirements and best practices for CTE, courses are up for reapprovals on a four-year cycle. Courses have been rewritten incorporating 21st Century Skill indicators, and the Common Core Standards for English Language Arts and Mathematics that apply to the course content. All of the Family and Consumer Science and Health and Human Services courses were rewritten and approved in 2013. The Business, Marketing, Information Technology including Computer Science, and Applied Math are due for reapproval in early 2014 for Seattle Public School courses. Skills Center courses due for reapproval in 2014 are: Fire Science, and Aerospace Science and Engineering.

Current Skills Center Initiatives

Launching the Seattle Public Schools Skills Center has been a major focus and consumed much time and energy over the last three years. Programs have been proposed; locations sought; skill panels designed by industry partners; facilities provided support; courses and frameworks were written and approved for OSPI and Seattle Public School course catalogs; instructors were hired; school partners approved locations and sites; and programs are actually up and running. Skill Center programs are half-day programs for students over 16. Students attend their assigned high school and then travel to the Skill Center for 2½ hour sessions of their school day. This can occur during the regular school day or after the regular school day. The following are current Seattle Skills Center programs:

- Academy of Interactive Entertainment (AIE) Animation and Gaming – Armory at the Seattle Center - 2 sessions
- Aerospace Science and Engineering – Rainier Beach – 1 session
- Culinary Arts – Rainier Beach – 1 session
- Fire Science – Franklin – 1 session
- IT CISCO Networking – Rainier Beach – 1 session
- Medical Careers – West Seattle – 2 sessions
- Medical Services – Wilson Pacific – 2 sessions

Planning for next year is taking place and these are the additional programs that we are planning to offer:

- Multimedia Broadcasting – KNHC, Nathan Hale – 1 session
- Microsoft Technology Associate (MTA) – Ingraham – 1 session
- Maritime Science and Engineering – Ballard – 1 session
- Auto – Shop behind Washington Middle School – 2 sessions

### Enrollment and Staffing

High School and Middle School CTE have seen increases in offerings of Computer Science, Engineering, Material Science, Pro Start Food Production, Visual Communication, AP Psychology, and Microsoft IT Academy courses. Our overall trends are increasing from 10.8% in 2010-11 to 11.19% in 2011-2012 to 11.99% in 2013-14 of all high school teachers. We added 7 additional CTE sections in middle schools. We hired an excellent Skills Center Principal in Shani Watkins. She is managing day-to-day operations, promoting the programs, and driving future initiatives of the Skills Center. There were no program cuts in the 2013-2014 school-year. Because of reductions in the Carl Perkins grant we had to reduce our non-traditional counselor to half time. We were able to hire a new Skills Center principal full-time and a new CTE specialist for Business/Marketing/IT to replace the position left vacant when Mary Davison took the CTE Manager position. We were able to increase our Skills Center registrar from a .6 to a .8 position to handle more students and the City Campus data issues.

We were able to offer a Skills Center Summer School Program for the first time in the summer of 2013. These programs are open to rising 9th graders through 12th graders and are funded by OSPI as if a student was in a regular Skills Center program. We offered five subjects last summer and plan to double that in summer 2014.

### CTE Full-time Equivalent (FTE) Student Numbers are Averaging:

<table>
<thead>
<tr>
<th>YEAR</th>
<th>FTE HS</th>
<th>FTE MS</th>
<th>SKILLS CTR</th>
<th>TOTAL FTE</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007-08</td>
<td>1582.84</td>
<td>60.54</td>
<td></td>
<td>1643.38</td>
</tr>
<tr>
<td>2008-09</td>
<td>1538.43</td>
<td>73.63</td>
<td></td>
<td>1612.06</td>
</tr>
<tr>
<td>2009-10</td>
<td>1501.63</td>
<td>18.37</td>
<td></td>
<td>1520.00</td>
</tr>
<tr>
<td>2010-11</td>
<td>1464.49</td>
<td>26.78</td>
<td></td>
<td>1491.27</td>
</tr>
<tr>
<td>2011-12</td>
<td>1464.99</td>
<td>50.67</td>
<td></td>
<td>1515.66</td>
</tr>
<tr>
<td>2012-13</td>
<td>1485.54</td>
<td>72.41</td>
<td>50.5</td>
<td>1608.45</td>
</tr>
<tr>
<td>2013-14</td>
<td>1556.49</td>
<td>102.55</td>
<td>65.27</td>
<td>1724.31</td>
</tr>
</tbody>
</table>

While CTE FTE totals are increasing, compared to total High School and Middle School enrollment, the increases are slight as shown in the following table:
Our Skills Center enrollment has increased a little over 29% this year and we were able to add three additional programs: Culinary Arts, Fire Science, and Medical Assisting.

**CTE FTE Total is charted from 2007-2014:**

In comparison to the above numbers, in 2000-2001, CTE averaged a high of 1767 FTE.

For the 2012-2013 school-year staffing there was a 1.3 FTE in cuts, and 3.4 in additions plus the 2.0 Skill Center positions. For 2013-2014 there were no reductions in staffing. Additions in 2013-2014, were an additional 2.0 Skills Center positions, which included updating and converting Medical Assisting from a City Campus program; and half-time positions in Culinary Arts, and Fire Science. Other additions were in middle schools specifically: three classes of computer science at Broadview Thomson, an additional video offering at McClure, and additional classes in technology education at McClure and Washington Middle School.
Seattle Public Schools Skills Center FTE Average is 65.27 up from 50.50 last school year. We are enrolling additional students for second semester, February 2014, which will stabilize enrollment over the school year.

**Student FTE Comparison with other large Washington State Districts**

Districts were chosen for comparison based on proximity to Seattle and their reputations for quality educational experiences for their students as well as the largest districts in the state.

### DATA for 2012-2013 SCHOOL YEAR

<table>
<thead>
<tr>
<th>District</th>
<th>7-8 CTE FTE</th>
<th>% of Total</th>
<th>9-12 FTE</th>
<th>% of Total</th>
<th>Skills Center</th>
<th>Total CTE Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bellevue</td>
<td>48.47</td>
<td>1.75%</td>
<td>698.09</td>
<td>11.55%</td>
<td>94.02</td>
<td>$4,866,490.19</td>
</tr>
<tr>
<td>Federal Way</td>
<td>33.88</td>
<td>1.00%</td>
<td>1125.71</td>
<td>17.77%</td>
<td>0</td>
<td>$6,613,837.92</td>
</tr>
<tr>
<td>Issaquah</td>
<td>35.56</td>
<td>1.28%</td>
<td>680.16</td>
<td>13.37%</td>
<td>26.34</td>
<td>$4,256,475.88</td>
</tr>
<tr>
<td>Highline</td>
<td>78.33</td>
<td>3.01%</td>
<td>857.87</td>
<td>15.50%</td>
<td>424.27</td>
<td>$8,328,362.72</td>
</tr>
<tr>
<td>Evergreen</td>
<td>107.15</td>
<td>2.55%</td>
<td>1559.2</td>
<td>18.08%</td>
<td>615.76</td>
<td>$13,879,299.62</td>
</tr>
<tr>
<td>Spokane</td>
<td>431.8</td>
<td>9.92%</td>
<td>1855.48</td>
<td>22.57%</td>
<td>375.23</td>
<td>$16,361,161.22</td>
</tr>
<tr>
<td>Tacoma</td>
<td>165.34</td>
<td>4.09%</td>
<td>1796.59</td>
<td>23.03%</td>
<td>0</td>
<td>$11,524,850.62</td>
</tr>
<tr>
<td>Seattle</td>
<td>72.41</td>
<td>1.09%</td>
<td>1485.54</td>
<td>11.48%</td>
<td>50.5</td>
<td>$9,468,359.79</td>
</tr>
</tbody>
</table>

### DATA COMPARISON by DISTRICT for the 2012-2013 SCHOOL YEAR
STRENGTHS AND QUALITY INDICATORS

When principals are asked about exemplary programs or have outside visitors to the schools, you will often see that they point out their Career and Technical Education (CTE) programs and that these CTE programs are a point of pride for the school and community. Recent media articles that come to mind are Biotech, Maritime, and Project Lead the Way at Ballard, Mobile Apps at Rainier Beach, Culinary Arts at West Seattle, Construction and apprenticeship at Chief Sealth, Radio at Nathan Hale, and Video at Ballard. Our strengths and quality indicators are characterized by:

Strengths

- Strong programs in each of the pathways\(^6\)
- Curriculum, instruction, and assessment aligned with standards
- Teachers who are leaders in instruction and in their schools
- The SPS Skills Center startup, running, and addition of programs
- Consolidated Program Review (CPR) OSPI Audit for CTE was completed in March 2013. There were no findings for CTE - suggestion for proportionally more CTE classes compared with other large districts
- Advanced Placement programs up and running in each pathway except Agriculture
- Tech Prep Articulations – dual credit with the Seattle Community Colleges are up and running and gaining strength
- Academies that are long-lived and strong\(^7\)
- Community engagement and strong advisory boards\(^8\)
- Clear and Shared Focus
- High Standards and Expectations – new frameworks (program standards) on 4 year cycle for review and approval, common core standards and 21st Century Skills incorporated into all frameworks with specific objectives
- Learning environments that focus on meeting industry and program design standards
- High levels of communication and collaboration

Quality Indicators

- Middle School offerings in Career and Technical Education starting to gain steam
- Monitoring of teaching/learning and professional development provided
- IGNITE – Inspiring Girls Now in Technology Evolution offers girls and now boys opportunities to job shadow, find mentors, and connect with companies that represent

\(^6\) See Appendix #2 – Exemplars in Each Pathway – Page 19
\(^7\) See Appendix #3- Academies – Page 20
\(^8\) See Appendix #4 – Advisory Boards – Pages 21-26
• Students qualifying and winning state and national Career and Technical Student Organizations (CTSO) awards and state and national awards in particular fields such as computer science, family and consumer sciences, and video, non-traditional fields especially in the Science, Technology, Engineering, and Math (STEM) areas.

Community Engagement

Advisory boards are required for all program areas in CTE through our standards and by OSPI. We are very fortunate to have community and industry partners participating on our strong advisory boards for each of our program areas. Advisory boards and pathway specialists meet between three and nine times each school year to review, evaluate, and discuss current and planned programs. The advisory board members and other volunteers serve roles as speakers, judges for Career and Technical Education Student Organizations (CTSOs), and informal advisors. These community partners allow us to keep our programs current with industry requirements and standards, and also, know about and take advantage of numerous opportunities for our students and staff.

CHALLENGES

Our challenges focus on three main areas: access for all students, sustainability of programs, and funding. These challenges represent areas that need to be negotiated with high school and middle school administration especially around sustainability and new program placement, and with central office staff around priorities. Among those items needing focused attention are:

• Scheduling conflicts – each high school has different schedules which makes it harder to enroll Skills Center students
• Impact of additional math and reading support classes on elective programs making it difficult for students to enroll in Skills Center programs and additional CTE courses
• Perception challenge to see CTE as a core part of program of study for all students
• Equity and accessibility of course offerings across district
• Sustainability of programs that are expensive to operate such as auto, woods, and video
• Locating space for Skills Center programs in the North End
• Finding funding for certification exams for students to earn industry certifications
• Funding for Tech Prep initiative – the Carl Perkins federal grant still college credit articulations with community colleges as a requirement but funding dissolved at end of 2010-2011 school year
• Students may fulfill Occupational Education (Oc Ed) graduation requirement with non-CTE courses and there are a large percentage of students that do not take any CTE course in their high school program and fulfill the graduation requirement through non-CTE Oc Ed.

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9 See Appendix #4 – Advisory Boards – Pages 21-26
OPPORTUNITIES

Expanding and Strengthening CTE Programs

There are many initiatives and programs we are researching and examining to expand and strengthen our offerings especially in the Green Technology, and Science, Technology, and Engineering (STEM) fields. Our Skills Center Aerospace Engineering Core + program was initiated and developed by our advisory boards because of industry need and advisory board interest. We were named as one of 19 programs in the state for our Aerospace Engineering Skills Center program using the Core + model. Maritime Science and Engineering Skills Center program slated for the start of 2014 school year will also adopt the Core + model. Most of our new programs are currently involved in Skills Centers but we are also looking at all program areas for opportunities and meeting with other CTE Directors in King County and the state to find best practices for our students. We are initiating an agreement with code.org that will include professional development for teachers and result in additional computer science offerings in the middle and high schools.

Career Clusters

Career Clusters™ are an organizing tool for curriculum design and instruction. They provide students with relevant contexts for studying and learning and are organized nationally into 16 areas that support over 79 distinct career pathways. In Seattle Public Schools (SPS), we’ve organized and consolidated these 16 areas into 15 pathways with 3 Specialists, that link coursework with the knowledge and skills required for success in the workplace, career exploration, and for preparation for college and career. They also function as a guide in developing programs of study (POS) bridging secondary and postsecondary curriculum, and for aiding students in development of their high school and beyond plans. CTE helps students discover their interests, their passions, and empowers them to choose a pathway that will aid their success in high school, college, and a career.

In Seattle Public Schools, as previously mentioned, we consolidate these 15 pathways into 5 areas:

- Arts, Communications, and Media
- Business, Marketing, Information Technology and Computer Science
- Environmental Science and Agriculture
- Health & Human Services, and Family & Consumer Science
- Science, Engineering, and Industry

These 5 areas are overseen by three Specialists and give us a focus for how to organize new initiatives and assess our strengths and gaps.

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10 See Appendix #1 – Career Clusters Pathways – Course Offerings, Pages 16-18
STEM – CTE Programs

We have many strong course and program offerings in the STEM areas including our offerings at the Skills Center: Aerospace Science and Engineering, Medical Careers, and Medical Assisting, Animation and Gaming, and Cisco/IT Academy. The Project Lead the Way (PLTW) Biomedical at Cleveland, and PLTW Engineering at Cleveland, Ballard, Franklin, Garfield, and Roosevelt. Other STEM courses include: Woods, C-West Construction and Apprenticeship, BioTech, Computer Science at seven high schools, and Middle-School STEM courses in computer science, technology, video, and PLTW Gateways to Engineering. ACE (Architecture, Construction, and Engineering) Mentors is an additional STEM after school program open to all Seattle Public School high school students. The mission of ACE is to engage, excite and enlighten high school students to pursue careers in architecture, engineering and construction through mentoring. We currently have about 66 students taking advantage of this opportunity CTE teachers are also the mentors for most of the First Robotics teams in the schools as after school activities.

We are continually investigating new programs and integrated models of delivery in the STEM areas and consider this an area to look to for CTE growth.

CROSS-CREDIT, DUAL CREDIT, and INDUSTRY CERTIFICATION OPPORTUNITIES

The CTE Department participates in extensive interdisciplinary collaboration, in particular with science, math, and visual performing arts. Cross-crediting of CTE courses with core academics continues, and entails a rigorous application process that has been piloted this year between CTE and visual performing arts. Most Skills Center courses are cross-credited with either third-year math, lab science, or visual arts. We continue to pursue Advanced Placement (AP) and International Baccalaureate (IB) CTE courses and currently have courses in Computer Science, Psychology, Arts Portfolio, Economics, and IB Business Management.

Third-year math options

Financial Algebra and Applied Math options are approved to fulfill the third-year math graduation requirement if they are part of a student’s high-school and beyond plan.

Double Credit – Dual Credit – Tech Prep

There are new state initiatives for meeting two graduation requirements with one course – called double credit:

WAC 180-51-067 provides for students’ ability to check off two graduation requirements, so called – double credit – for CTE courses starting with the graduating class of 2015 – 2016 (current 9th and 10th graders). The language is as follows:

a) Students who earn a graduation requirement credit through a CTE course locally determined to be equivalent to a non-CTE course will not be required to earn a second credit in the non-CTE course subject; the single CTE course meets two graduation requirements.
Students can now earn **dual credit** with the Seattle Community Colleges through Tech Prep. This is dual credit for a college and a high school course much like Running Start but students and the FTE stays in the schools. Because the funding for Tech Prep was eliminated from the 2010-2011 Carl Perkins Grant, we made a decision to partner with the Seattle Community Colleges and CTE pays for half the funding for the Seattle Community College work-force liaison to continue this initiative.\(^{11}\) Students in CTE programs in Seattle Public Schools earned a total of 2422 credits through the three Seattle Community Colleges for the 2012-2013 school year. This translates to a savings for families of $258766.50 at the current cost of $106.84 a credit at the Seattle Community Colleges. A list of our current Tech Prep courses can be found with a link from the SPS CTE page or at: [http://www.techprepseattle.org/](http://www.techprepseattle.org/). We are currently working on additional courses for second semester and next year and will have those articulated sometime in March with the Community College and SPS CTE teachers.

<table>
<thead>
<tr>
<th>Year</th>
<th>Registered Students</th>
<th>Transcribed Students</th>
<th>Percent Completed</th>
<th>Credits Earned</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012-2013</td>
<td>1,175</td>
<td>849</td>
<td>72.26%</td>
<td>2,422.00</td>
</tr>
<tr>
<td>2011-2013</td>
<td>1,074</td>
<td>853</td>
<td>79.42%</td>
<td>3,456.50</td>
</tr>
</tbody>
</table>

Our numbers were down slightly because of the perception that we hadn’t been able to keep the program going and there are some classes that the community colleges deemed not available for Tech Prep.

We have also been able to initiate the University of Washington College in the High School (UW in HS) model for computer science at Cleveland, Garfield, and Roosevelt. Students at these schools can choose to pay for credit through the University of Washington’s partnership with the high school teachers.

**Industry Certification**

Students have the option to earn Industry Certifications in most of our programs and pathways. We are investigating making the testing in all areas more available to students that it has been in the past. The state is also investigating making certifications available in many areas at a no or low cost ($2.50 per test). We have testing available now in the following classes:

\(^{11}\) [http://www.techprepseattle.org/downloads/Master%20list%20articulations%202012.pdf](http://www.techprepseattle.org/downloads/Master%20list%20articulations%202012.pdf) – Tech Prep
<table>
<thead>
<tr>
<th>Courses</th>
<th>Certification/State/National Recognition</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACE and C-West</td>
<td>Direct entry in Apprenticeships</td>
</tr>
<tr>
<td>AIE Animation &amp; Gaming</td>
<td>Direct entry into AIE Technical College</td>
</tr>
<tr>
<td>American Sign Language (ASL)</td>
<td>Transfer credit with Seattle Community Colleges</td>
</tr>
<tr>
<td>AP Art</td>
<td>AP 2-D and AP 3-D</td>
</tr>
<tr>
<td>AP Economics</td>
<td>AP Economics at Garfield</td>
</tr>
<tr>
<td>AP Psychology</td>
<td>AP Psychology</td>
</tr>
<tr>
<td>Automotive</td>
<td>Automotive YES –ASE exit exam</td>
</tr>
<tr>
<td>Cisco 1-4</td>
<td>CCNA</td>
</tr>
<tr>
<td>Computer Science</td>
<td>AP Computer Science and UW in the High School</td>
</tr>
<tr>
<td>Human Development; Child/Parenting</td>
<td>First Aid/CPR/Merit Certification for Learning</td>
</tr>
<tr>
<td>IB Psychology</td>
<td>IB Psychology</td>
</tr>
<tr>
<td>IT Essentials</td>
<td>A+ and Net+</td>
</tr>
<tr>
<td>Marketing</td>
<td>National Professional Certification in Customer Service</td>
</tr>
<tr>
<td>Medical Careers in Skills Center</td>
<td>NAC – Certified Nurse Assistant, HIPPA, First Aid/CPR</td>
</tr>
<tr>
<td>Microsoft Office Specialist</td>
<td>MOS Core; MOS Expert</td>
</tr>
<tr>
<td>NAF Academies</td>
<td>End of Course Exams</td>
</tr>
<tr>
<td>Project Lead the Way</td>
<td>End of Course Exams</td>
</tr>
<tr>
<td>Pro Start Food Production</td>
<td>Certificate of Recognition and Achievement</td>
</tr>
</tbody>
</table>

**SKILLS CENTER**

Along with schools, industry partners, and advisors, CTE has been working with our new Skills Center instructors and programs to make sure they are as strong as our regular CTE course offerings. Locating facilities north of the ship canal has been our major challenge. Our goal is to determine offerings that afford access and equity across the district for all interested students. Planning for future expansion includes program quality, industry projection needs now and in the future, and facility availability.

**City Campus**

Our City Campus programs were originally designed before Seattle Public Schools was approved for Skills Center programs, they are based on a Skills Center model of delivery in that students
attend for half of their school day. The SPS City Campus programs have strong support and we are investigating moving their standards and directions to Skills Center programs to reflect their outcomes and take advantage of enhanced funding. This year, we were able to make this change with Medical Assisting, and are looking for a north end location to relocate to in 2014-2015 when Wilson Pacific is repurposed at the end of this school year. The instructor at our Automotive program located behind Washington Middle School will be gaining a certification that he needs to move the program to a Skills Center model for the 2014-2015 school year. We will investigate Auto Body next year as a Skills Center model for the 2015-16 school year. Our C-West apprenticeship program at Rainier Beach, and the XIP program, that we operate cooperatively with Special Education, will remain as City Campus programs.

CONCLUSION

A strong JSCEE CTE staff works to ensure quality instruction occurs in CTE courses across the District. The CTE program is committed to keeping course offerings and programs up-to-date with cutting edge practices, approaches and content. The successful launch of our SPS Skills Center and our work to engage our communities is second to none. These commitments highlight CTE’s strengths in Seattle Public Schools. Equitable access for all students, sustainability of program offerings, and funding for current and future programs are challenges that we are addressing. Other challenges for the Skills Center are the disparate schedules of each high school, facilities with room in the north end of the city, and the demands for increased graduation requirements. By working with the opportunities we are creating and the new partnerships we are forging, some of these challenges can be addressed. Growth areas are in middle school STEM offerings, cross-crediting initiatives, and a renewed focus on CTE in the district. As in the Pathways to Prosperity report from the Harvard School of Education, and United States Secretary of Education, Arne Duncan affirming CTE as a delivery model for college and career readiness12, we are feeling renewed energy for CTE initiatives, courses, and programs in Seattle Public Schools.

Appendix #1 – Career Clusters™- Pathways – Course Offerings

Each Career Cluster™ represents a distinct grouping of occupations and industries based on the knowledge and skills they require. The 16 Career Clusters™ and related Career Pathways provide an important organizing tool for schools to develop more effective programs of study (POS) and curriculum.

- **Agriculture, Food & Natural Resources**
  The production, processing, marketing, distribution, financing, and development of agricultural commodities and resources including food, fiber, wood products, natural resources, horticulture, and other plant and animal products/resources.

  **Offerings in SPS:** Horticulture, Food Science, Nutrition and Wellness, Environmental Science

- **Architecture & Construction**
  Careers in designing, planning, managing, building and maintaining the built environment.

  **Courses in SPS:** Woods, C-West and opportunity for an ACE Mentor

- **Arts, A/V Technology & Communications**
  Designing, producing, exhibiting, performing, writing, and publishing multimedia content including visual and performing arts and design, journalism, and entertainment services.

  **Courses in SPS:** Video, Radio, Multimedia, Graphic Design, Yearbook, Animation, Photography, Technical Theatre

- **Business Management & Administration**
  Careers in planning, organizing, directing and evaluating business functions essential to efficient and productive business operations.

  **Courses in SPS:** Introduction to Business, Project Management, IB Business Management, AP Economics

- **Education & Training**
  Planning, managing and providing education and training services, and related learning support services such as administration, teaching/training, administrative support, and professional support services.

  **Currently no courses in SPS**

- **Finance**
  Planning and related services for financial and investment planning, banking, insurance, and business financial management.

  **Courses in SPS:** Academy of Finance Program, Accounting
• **Government & Public Administration**  
*Planning and executing government functions at the local, state and federal levels, including governance, national security, foreign service, planning, revenue and taxation, and regulations.*

Currently no courses in SPS

• **Health Science**  
*Planning, managing, and providing therapeutic services, diagnostic services, health informatics, support services, and biotechnology research and development.*

PLTW Bio Medical, Medical Assisting, Medical Careers, Family Health, Sports Medicine, Nutrition and Wellness

• **Hospitality & Tourism**  
*Preparing individuals for employment in career pathways that relate to families and human needs such as restaurant and food/beverage services, lodging, travel and tourism, recreation, amusement and attractions.*

Courses in SPS: Academy of Hospitality and Tourism Program

• **Human Services**  
*Preparing individuals for employment in career pathways that relate to families and human needs such as counseling and mental health services, family and community services, personal care, and consumer services.*

Courses in SPS: IB Psychology, AP Psychology, Teen Grads Program

• **Information Technology**  
*Building linkages in IT occupations for entry level, technical, and professional careers related to the design, development, support and management of hardware, software, multimedia and systems integration services.*

Courses in SPS: Cisco Networking, Microsoft IT Academy, Computer Applications, Web Design, Computer Science, Phone Application Programming, AP Computer Science, UW in the High School Computer Science, Middle School Computer Science, Skills Center Animation & Game Programming

• **Law, Public Safety, Corrections & Security**  
*Planning, managing, and providing legal, public safety, protective services and homeland security, including professional and technical support services.*

Courses in SPS: Fire Science

• **Manufacturing**  
*Planning, managing and performing the processing of materials into intermediate or final*
products and related professional and technical support activities such as production planning and control, maintenance and manufacturing/process engineering.

Courses in SPS: Skills Center Aerospace, Auto, Auto Body, C-West, Metals

- **Marketing**
  Planning, managing, and performing marketing activities to reach organizational objectives such as brand management, professional sales, merchandising, marketing communications and market research.

Courses in SPS: Marketing 1-4, Store, Advertising

- **Science, Technology, Engineering & Mathematics**
  Planning, managing, and providing scientific research and professional and technical services (e.g., physical science, social science, engineering) including laboratory and testing services, and research and development services.


- **Transportation, Distribution & Logistics**
  The planning, management, and movement of people, materials, and goods by road, pipeline, air, rail and water and related professional and technical support services such as transportation infrastructure planning and management, logistics services, mobile equipment and facility maintenance.

Courses in SPS: Maritime Academy Program, Auto
Appendix #2 – Exemplars in Each Pathway

Arts, Communications, and Media
  Video Program at Ballard
  KNHC Radio Station at Hale
  Animation and Game Programming in Skills Center at AIE
  Technical Theatre at Roosevelt

Business, Marketing, Information Technology and Computer Science
  Academy of Finance Programs at Chief Sealth, Franklin, and Ballard
  Academy of Hospitality and Tourism at Chief Sealth
  AP Computer Science at Rainier Beach, Cleveland, Hale, Roosevelt, & Garfield
  Marketing at Ballard, Hale, Garfield, Roosevelt, and West Seattle
  Skills Center Cisco Networking Academy at Rainier Beach

Environmental Science and Agriculture
  Biotech at Ballard

Health & Human Services, and Family & Consumer Science
  GRADS Program at South Lake
  IB Psychology at Ingraham
  AP Psychology at Roosevelt
  Award winning Family & Consumer Sciences Programs across district
  PLTW Biomedical at Cleveland
  Medical Careers at Interagency
  Skills Center Medical Assisting at West Seattle

Science, Engineering, and Industry
  PLTW Engineering across district
  City Campus Auto Tech
  Skills Center Aerospace/Aviation at Rainier Beach
SEATTLE PUBLIC SCHOOLS ACADEMIES

National Academy Foundation (NAF)

NAF Academies are in 490 schools, 41 states and the District of Columbia plus the US Virgin Islands. The NAF Academies established in 1982; have been a part of Seattle Public Schools since 1987.

- Academy of Finance
- Academy of Hospitality & Tourism

Career Academies

- Ballard Maritime Academy
- Biotechnology Academy at Ballard
- CREATE Academy at Franklin
- John Stanford Public Service Academy at Franklin

Cleveland High School STEM Career Academies

Cleveland STEM stands for Science, Technology, Engineering and Mathematics, fields that are the underpinnings of modern life. The STEM Program at Cleveland High School will give students the opportunity for rigorous and advanced study in these subjects. The two academies that students can choose from are:

- School of Life Sciences which includes PLTW Biomedical
- Engineering and Design which includes Computer Science and PLTW Engineering

Seattle Academies Foundation

The Mission ~
The Seattle Academies Foundation ~ Academy of Finance, Academy of Hospitality and Tourism, and Academy of Information Technology promotes academic excellence and provides real-world experiences in a Finance, Hospitality and Tourism, and Information Technology environment and provides personal involvement with local business and industry leaders for qualified high school students.

The SAF Focus Statement ~
Our children are worthy of our Investment!
Appendix #4 – CTE Advisory Boards

Career and Technical Education Advisory Committees
Career and Technical Education (CTE) advisory committees advise, assist and provide support and advocacy for quality CTE programs. Advisory committee volunteers have the opportunity to learn more about the CTE program, and the instructor’s are able to increase their understanding of the job market, employers' needs and community opportunities. Advisory boards are required for all CTE programs in the CTE standards through OSPI.

http://www.k12.wa.us/CareerTechEd/Forms/AdvisoryBrochure.pdf

GENERAL ADVISORY COUNCIL AND SKILLS CENTER ADVISORY BOARD

<table>
<thead>
<tr>
<th>First</th>
<th>Last</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jay</td>
<td>Abram</td>
<td>Professional Solutions for Personal Computers</td>
</tr>
<tr>
<td>Robert</td>
<td>Austin</td>
<td>Career &amp; Tech Ed Dept, SPS</td>
</tr>
<tr>
<td>Bridgett</td>
<td>Bascomb</td>
<td>Seattle City Light</td>
</tr>
<tr>
<td>Peter</td>
<td>Cavanaugh</td>
<td>Workforce Development Council of Seattle-King County</td>
</tr>
<tr>
<td>John</td>
<td>Lederer</td>
<td>North Seattle Community College</td>
</tr>
<tr>
<td>Mary</td>
<td>Davison</td>
<td>CTE Program Manager</td>
</tr>
<tr>
<td>Patsy</td>
<td>Neal</td>
<td>Seattle Public Schools</td>
</tr>
<tr>
<td>Renée</td>
<td>Florio</td>
<td>SSCC, CTE Teacher Cert Prep Program</td>
</tr>
<tr>
<td>Taylor</td>
<td>Gauusoin</td>
<td>Media Design &amp; Production</td>
</tr>
<tr>
<td>David</td>
<td>Gering</td>
<td>Manufacturing Industrial Council (MIC)</td>
</tr>
<tr>
<td>Alfred</td>
<td>Griswold</td>
<td>Seattle Central Community College</td>
</tr>
<tr>
<td>Melda</td>
<td>Hickman</td>
<td>Port of Seattle</td>
</tr>
<tr>
<td>John</td>
<td>Hughes</td>
<td>SPS, School &amp; Community Partnerships</td>
</tr>
<tr>
<td>Darren</td>
<td>Linker</td>
<td>Dept of Environmental Health and Safety, UW</td>
</tr>
<tr>
<td>Gary</td>
<td>Fasso</td>
<td>PNW Regional Council of Carpenters</td>
</tr>
<tr>
<td>Karen</td>
<td>Mattson</td>
<td>WSECU Community Relations</td>
</tr>
<tr>
<td>Mike</td>
<td>McBee</td>
<td>IUOE Local 609</td>
</tr>
<tr>
<td>Annika</td>
<td>Mertz</td>
<td>Seattle Central Community College</td>
</tr>
<tr>
<td>Andrea</td>
<td>Samuels</td>
<td>Seattle Community Colleges</td>
</tr>
<tr>
<td>Kathleen</td>
<td>Moriarty</td>
<td>Port of Seattle</td>
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<tr>
<td>Myrna</td>
<td>Muto</td>
<td>Career &amp; Tech Ed</td>
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<tr>
<td>Myra</td>
<td>Myra</td>
<td>Seattle Community College District</td>
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<tr>
<td>Jim</td>
<td>Nicholson</td>
<td>Oppenheimer &amp; Co Inc.</td>
</tr>
<tr>
<td>Joanne</td>
<td>Patrick</td>
<td>Career &amp; Tech Ed, SPS</td>
</tr>
<tr>
<td>Mickey</td>
<td>Pierce</td>
<td>Community Activist - Contract – Microsoft</td>
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<tr>
<td>Lindsay</td>
<td>Pulsifer</td>
<td>Port of Seattle</td>
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<tr>
<td>Will</td>
<td>Rance</td>
<td>WSECU</td>
</tr>
<tr>
<td>Michael</td>
<td>Ryan</td>
<td>South Seattle Community College</td>
</tr>
<tr>
<td>Shepherd</td>
<td>Siegel</td>
<td>Project Lead the Way</td>
</tr>
<tr>
<td>Gary</td>
<td>Stauffer</td>
<td>Youth Maritime Association (YMTA)</td>
</tr>
</tbody>
</table>
Neal Storme       Music Production
Michael Tolley     Seattle Public Schools
Roxanne Trees      Career & Tech Ed, SPS
Dana Twight        Twilight Financial Education, LLC

BALLARD BIOTECH ADVISORY

Distribution List Name: Biotech Steering Committee

Members:

Bob Visenor        BobV@sabarch.com
Bruce Busby        bbusby@fhcrc.org
David Warren       warren@atmos.washington.edu
Lynn Onstad        lonstad@fhcrc.org
Randy Howard       rhoward@idri.org
Reitha Weeks       rweeks@nwabr.org
Rick Ridgway       rridgway@spu.edu
Tracy Wrey         correlations@earthlink.net
Victoria Sangrey    Victoria.Sangrey@bms.com

BALLARD MARITIME ADVISORY BOARD

Active participation – meetings monthly – can provide names if requested

BUSINESS/MARKETING/IT Advisory Board

Andrew Davidson    UW
Benton Melbourne   Web Design & Voice Overs
Dartanyon Race     Independent Business Owner
Helene Martin      UW
Joni Blakeslee    Cisco Systems
Kelly Boodell      FAA
Kevin Wang         Microsoft
Margaux Eng        Amazon
Pete Mazza         Financial Planner
Gabriella Smith    Boeing
FAMILY & CONSUMER SCIENCE and HEALTH & HUMAN SERVICES ADVISORY BOARD

Meet five times per year

<table>
<thead>
<tr>
<th>Advisory Board Member</th>
<th>Representing Industry/ Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crickmore, Suzi *</td>
<td>Northwest AED/ American Heart Ass’n.</td>
</tr>
<tr>
<td>Marsha Brown</td>
<td>South Seattle Community College</td>
</tr>
<tr>
<td>Annika Merz</td>
<td>Seattle Community College - Tech Prep</td>
</tr>
<tr>
<td>Trez Buckland</td>
<td>University of WA – Dept. of Nursing/ Health</td>
</tr>
<tr>
<td>Bob Tidwell</td>
<td>Education Volunteer</td>
</tr>
<tr>
<td>Aileen Gagney</td>
<td>American Lung Association</td>
</tr>
<tr>
<td>Nancy Bush</td>
<td>Seattle University; BA programs</td>
</tr>
<tr>
<td>Joanne Card</td>
<td>Hearthstone – Executive Chef</td>
</tr>
<tr>
<td>Darren Linker</td>
<td>University of WA – Environmental Health</td>
</tr>
<tr>
<td>Victoria Wentz</td>
<td>Education Consultant</td>
</tr>
<tr>
<td>Adrianna Tossini</td>
<td>WA Dept. of Voc Rehabilitation</td>
</tr>
</tbody>
</table>

SCIENCE, ENGINEERING, & INDUSTRY ADVISORY

Project Lead the Way Advisory

2012-13 NATIONAL ACADEMY FOUNDATION BUSINESS & COMMUNITY PARTNERS

Note: Members prefer their company names be used instead of person names but personal names could be provided. Meetings are monthly – September through June with a Summer fundraiser

**Academy of Finance**

- Ballard, Chief Sealth International & Franklin High Schools

**Academy of Hospitality and Tourism**

- Absolutely Northwest
- Argosy Cruises
- Boeing
- Bolt Bus
- buuteeq, Inc
- Career Path Services
- Central Washington University
- Cognizant
- Conover Capital Management
- Courtyard by Marriott Downtown Seattle Lake Union
- Deloitte & Touche LLP
- Donna Longwell & Associates
- Eagle Strategies/ New York Life
- Highline Community College
- Holland America
- Holland America Princess
- ITT-Technical Everett
- Johnson Scannell & Associates
### KNHC – RADIO ADVISORY

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charlie Nordstrom</td>
<td>Owner, Recording Studio</td>
</tr>
<tr>
<td>Dan Magden</td>
<td>Remote Engineer, KOMO</td>
</tr>
<tr>
<td>David Shield</td>
<td>Engineer, Solar Energy Systems</td>
</tr>
<tr>
<td>Don Iverson</td>
<td>Principal Engineer, Coffman Engineering</td>
</tr>
<tr>
<td>Gregg Neilson</td>
<td>General Manager, KNHC</td>
</tr>
<tr>
<td>Jai Jaisimha</td>
<td>VP of Development, AOL</td>
</tr>
<tr>
<td>Jamie Hammond</td>
<td>Television Executive Producer</td>
</tr>
<tr>
<td>Jill Hudson</td>
<td></td>
</tr>
<tr>
<td>Lisa Hechtman</td>
<td>Principal, Nathan Hale</td>
</tr>
<tr>
<td>Jim McKenna</td>
<td>Owner, McKenna Gottlieb</td>
</tr>
<tr>
<td>Mary Davison</td>
<td>CTE Director, SPS</td>
</tr>
<tr>
<td>Michael Dever</td>
<td>Supply Analyst, Boeing</td>
</tr>
<tr>
<td>Myron Partman</td>
<td>TV/Film freelance producer</td>
</tr>
<tr>
<td>Shani Watkins</td>
<td>Director, SPS Skill Center</td>
</tr>
<tr>
<td>Shepherd Siegel</td>
<td>Director, Project Lead the Way School</td>
</tr>
<tr>
<td>Simon Thwaits</td>
<td>Station Supervisor, KNHC</td>
</tr>
<tr>
<td>Stacy Walters</td>
<td>Vandeberg, Johnson &amp; Gandara</td>
</tr>
<tr>
<td>Susan Harmon</td>
<td>Public Radio Capital, Emitus</td>
</tr>
<tr>
<td>Vince Lerner</td>
<td>Radio Voicework Personality</td>
</tr>
<tr>
<td>Mary Davison</td>
<td>CTE Program Manager</td>
</tr>
</tbody>
</table>

### HORTICULTURE ADVISORY BOARD

<table>
<thead>
<tr>
<th>Name</th>
<th>Organization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cyle Eldred</td>
<td>O’Laughlin Shows, NW Flower and Garden</td>
</tr>
<tr>
<td>Terri Benson</td>
<td>Little Creek Nursery</td>
</tr>
<tr>
<td>India Carlson</td>
<td>Ballard CTE</td>
</tr>
<tr>
<td>Jessica Torvik</td>
<td>Hale CTE</td>
</tr>
<tr>
<td>Maggie Rose</td>
<td>Ingraham CTE</td>
</tr>
</tbody>
</table>
Leif Herald  XIP Landscaping/Horticulture
Robert Austin  SPS CTE

IGNITE – Inspiring Girls Now in Technology Evolution Advisory Board

Roger Myers- Aerojet
Lynn Kepl- Microsoft
Jeanne Knutzen- Pace Staffing Network
Mary Jane Pioli- MJ Pioli and Company
Lisa Sandoval- Seattle Central Community College
Manisha Patel- Microsoft
Erika Harnett- University of Washington
Shigeko Calos-Nakano - Clarity Health Services
Harini Gurusami- Nokia
**TERMS and LINKS**

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACE Mentors</td>
<td>Architecture, Construction, and Engineering Mentors – Open district wide</td>
</tr>
<tr>
<td>AOF</td>
<td>Academy of Finance – Franklin, Ballard, and Chief Sealth part of the NAF Academies</td>
</tr>
<tr>
<td>AOHT</td>
<td>Academy of Hospitality and Tourism – Chief Sealth</td>
</tr>
<tr>
<td>CPR</td>
<td>Consolidated Program Review – Audits that OSPI conducts</td>
</tr>
<tr>
<td>CREATE</td>
<td>Construction Related, Engineering, Architectural, Technical Experience - Franklin</td>
</tr>
<tr>
<td>CTE</td>
<td>Career and Technical Education</td>
</tr>
<tr>
<td>CTSO</td>
<td>Career and Technical Student Organizations. These include DECA, FBLA, TSA, Skills USA, HOSA, and FCCLA. Please refer to CTE SPS website for explanations of each.</td>
</tr>
<tr>
<td>FTE</td>
<td>Full-time Equivalent – can be used for explanation of teacher workload or student enrollment</td>
</tr>
<tr>
<td>GRADS</td>
<td>Graduation, Reality And Dual-Role Skills (GRADS) are programs for pregnant teens and/or young parents that focus on work and family foundation skills of significance to these students. GRADS programs include student demonstration of skills leading to high school graduation and economic independence.</td>
</tr>
<tr>
<td>IGNITE</td>
<td>Inspiring Girls Now in Technology Evolution – one of our Nontraditional programs</td>
</tr>
<tr>
<td>NAF</td>
<td>National Academy Foundation</td>
</tr>
<tr>
<td>Non-Trad</td>
<td>Nontraditional occupations – occupations that employ 25% or less of one sex</td>
</tr>
<tr>
<td>OSPI</td>
<td>Office of Superintendent of Public Instruction</td>
</tr>
<tr>
<td>PLTW</td>
<td>Project Lead the Way</td>
</tr>
<tr>
<td>POS</td>
<td>Programs of Study are detailed guides for students, mapping out specific course options for a chosen career path from high school through postsecondary education.</td>
</tr>
<tr>
<td>STEM</td>
<td>Science, Technology, Engineering, and Math</td>
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