

**Pathways Workgroup #6**  
**February 15, 2007 – Wilsonville Training Center, Clackamas Community College**

**Attendees:** Gary Naseth (OIT), Jay Bockelman (OIT), Susan Boyanovsky (CCWD), Scott Giltz (Clackamas CC), Pat Kraft (PCC) Fred Haynes (LBCC), Bruce Schafer (OUS/ETIC), Jo Oshiro (OUS/OPAS), Sam Tupou (Eugene School District), Beau Dickey (OUS/Communications – by phone for about 45 minutes), Ron Jantzi (Chemeketa CC), Scott Huff (PCC)

*Italics indicate work in progress and questions.*

### **Summary**

The workgroup welcomed new members Pat Kraft (who may share attendance with Jeff Triplett of PCC) and Fred Haynes, and dived right in to the continuing work of determining how best to make information about the Manufacturing Engineering Technology career pathway easily accessible and attractive to students and counselors. The group wants a deliverable for the OACTE conference in April – <http://www.oregonacte.org/>.

Discussion began around the four prototypes presented by Beau Dickey and Jo Oshiro. The original vision behind the creation of these prototypes was for a poster, no smaller than 11” x 17”, for presentation to legislators and the OACTE conference, to showcase the articulation and pathways work already in progress across the state. We had settled on the poster format because we were uncertain of obtaining the necessary resources, commitment, and leadtime for a portal website for this information, although we all agree a website would be a much more useful presentation of information for students and counselors.

Our best-case scenario for a repository for career pathways information is an interactive website with a permanent home and maintenance plan:

- Covers all the career areas, not just engineering (Sam)
- Covers all levels, including certificates (Sam)
- Has at least one layer of fun/sexy/flashy interaction/graphics/video targeted at students
  - Communicates flexibility
  - Emphasizes how to keep options open
  - Some game models were discussed – “Life”, “Oregon Trail”
- Has enough detail to be useful for detailed research
  - Institutions
    - Programs/ degrees
    - Departments
    - Financial aid
  - Occupational data
    - Job titles and descriptions
    - Outlook (new jobs and replacement openings)
    - Current jobs by region
    - Starting wage data
    - Average or median wage data

- Links the knowledge and skills earned in school to the corresponding occupational level

After discussion of the prototypes, and what is really needed and what is really possible, Bruce Schafer committed OPAS to supporting a focus on the CCWD presentation at the April OACTE (Oregon Association of Career and Technical Educators) conference session where the primary audience is administrators and counselors. The session description is available at Susan Boyanovsky will present Powerpoint slides and handouts; OPAS will help in the development of those materials and keeping softcopy on a website, which Jo has stubbed out at [http://opas.ous.edu//Workgroups2007/Pathways/OACTE\\_Presentation\\_Apr07.html](http://opas.ous.edu//Workgroups2007/Pathways/OACTE_Presentation_Apr07.html). The main message of this presentation is that the Manufacturing Engineering Technology Pathway is documented and working in Oregon. In general, the more tools and resources we can present or link to from a single location, the more useful it will be for all of our target audiences: students, counselors, teachers and parents.

We identified materials for that website/presentation in no particular order:

- Crosswalk matrix documenting articulations (*Before publication, we must be sure this has the OIT Registrar's (Marla) approval; Gary will confirm when Marla signs off and tell Jo*)
- Brower's descriptions of levels of educational/occupational attainment knowledge and skills - [http://opas.ous.edu//Committees/Resources/NonOPAS\\_Working\\_Papers/OIT\\_%20ASB\\_%20MS\\_MfgET\\_Degrees.pdf](http://opas.ous.edu//Committees/Resources/NonOPAS_Working_Papers/OIT_%20ASB_%20MS_MfgET_Degrees.pdf)
- Satellite View Career Pathways Flyover for High School Students
  - Edits discussed: refer to community colleges for taking courses not available at one's high school; refer to YouTube with Google and Facebook; break out Chemical Engineering
    - *Skip Rochefort of OSU has agreed to provide input to Jo on the Chemical Engineering piece.*
- Occupational Outlook data
  - Occupation names and SOC codes
  - Links to OLMIS (has average/median salary data)
  - starting wages
- Project Lead the Way (PLTW) connection
  - Schools in Oregon that have PLTW for 2006-2007
    - *Jo has asked Barbara Metcalf of OIT for 2007-2008 data, which should be available after April 1, 2007.*
  - *Is there additional material to link PLTW classes into the articulations?*
- Tech Prep connection
  - Scott Giltz has provided several engineering student planners in softcopy.
    - Canby CAD Pathway Planner - [http://opas.ous.edu//Workgroups2007/Pathways/Canby\\_CAD\\_Pathway\\_Planner.pdf](http://opas.ous.edu//Workgroups2007/Pathways/Canby_CAD_Pathway_Planner.pdf)
    - Canby EGR Pathway Planner - [http://opas.ous.edu//Workgroups2007/Pathways/Canby\\_EGR\\_Pathway\\_Planner.pdf](http://opas.ous.edu//Workgroups2007/Pathways/Canby_EGR_Pathway_Planner.pdf)

- Canby MFG Pathway Planner - [http://opas.ous.edu//Workgroups2007/Pathways/Canby\\_MFG\\_Pathway\\_Planner.pdf](http://opas.ous.edu//Workgroups2007/Pathways/Canby_MFG_Pathway_Planner.pdf)
- Colton MFG Pathway Planner - [http://opas.ous.edu//Workgroups2007/Pathways/Colton\\_MFG\\_Pathway\\_Planner.pdf](http://opas.ous.edu//Workgroups2007/Pathways/Colton_MFG_Pathway_Planner.pdf)
- Sabin CAD Pathway Planner - [http://opas.ous.edu//Workgroups2007/Pathways/Sabin\\_CAD\\_Pathway\\_Planner.pdf](http://opas.ous.edu//Workgroups2007/Pathways/Sabin_CAD_Pathway_Planner.pdf)
- Sabin EGR Pathway Planner - [http://opas.ous.edu//Workgroups2007/Pathways/Sabin\\_EGR\\_Pathway\\_Planner.pdf](http://opas.ous.edu//Workgroups2007/Pathways/Sabin_EGR_Pathway_Planner.pdf)
- Sabin MFG Pathway Planner - [http://opas.ous.edu//Workgroups2007/Pathways/Sabin\\_MFG\\_Pathway\\_Planner.pdf](http://opas.ous.edu//Workgroups2007/Pathways/Sabin_MFG_Pathway_Planner.pdf)
  - *Sam will review these and comment and perhaps add more data.*
- New HS graduation requirements connection (*We need to document.*)
- There are a few examples of articulation agreements between HS and tech prep courses. (*We need to document these and/or get references to Jo.*)
- One pager what students can do to be ready for an engineering pathway. (*We need to develop this? Or does the Satellite Flyover fulfill this need?*)
- A workskills and/or interest inventory, simplified for engineering -- helping a counselor understand who might be good as a manufacturing engineer, and helping a counselor diagnose what manufacturing engineers are like. (*Jo has taken the first cut at this and emailed it to Pat Kraft for comment.*)
  - [http://opas.ous.edu//Workgroups2007/Pathways/Pathways\\_Interest\\_Inventory\\_Jo.pdf](http://opas.ous.edu//Workgroups2007/Pathways/Pathways_Interest_Inventory_Jo.pdf)

How many meetings do we need to accomplish gathering and polishing these items for the presentation?

In general, the workgroup members are concerned that the articulations and cooperation between institutions, especially community colleges, outlive the personal relationships that currently nurture that cooperation. The current articulation crosswalk, if formally approved by OIT, will be a huge step in that direction. Additional connections made in this meeting may extend some of that articulation.

Other community college concerns discussed were AS (employability after 2 years of study) vs. AAS degrees (seamless transfer into BS programs), and content designations for degrees. Issues include priority and communication with employers.

**Additional resources discussed, for circulation, posted on the OACTE Draft Presentation webpage:**

- Bay of Opportunity – Growing Oregon’s Engineering and Technology Innovators and Workforce - [http://opas.ous.edu/Committees/Resources/Staff\\_papers/River\\_STEM7a\\_022107.pdf](http://opas.ous.edu/Committees/Resources/Staff_papers/River_STEM7a_022107.pdf)

- OPAS Stairsteps of Opportunity - [http://opas.ous.edu/Committees/Resources/Staff\\_papers/OPAS\\_Stairsteps\\_Workshop.pdf](http://opas.ous.edu/Committees/Resources/Staff_papers/OPAS_Stairsteps_Workshop.pdf)
- Idaho Career Cluster Website - <http://www.webpages.uidaho.edu/~pathways/> (not posted because Jo likes others better, particularly IEEE, ASEE, and the National Career Clusters)
- National Career Clusters website - <http://www.careerclusters.org/>
- Institute of Electrical and Electronics Engineers (IEEE) websites
  - National - <http://www.ieee.org/portal/site>
  - Oregon - <http://www.ieee-or.org/home>
  - Student Outreach - <http://www.tryengineering.org/home.php>
- American Society for Engineering Education (ASEE)
  - National - <http://www.asee.org/>
  - Student Outreach - <http://www.engineeringk12.org/students/default.htm>
- Oregon Labor Market Information System (OLMIS) website - <http://www.qualityinfo.org/olmis/OlmisZine>
- Career Information System - <http://oregoncis.uoregon.edu/>
- GetReal – Computer Science in Oregon for students - <http://getreal.ous.edu/>

**Next Meeting:** Thursday March 15, 2:00 – 4:00. Wilsonville.  
 Scott will get the room. Jo will get a PSU telephone bridge (no toll-free lines).

### **Discussion details:**

Discussion of 4 prototypes:

- remember primary audience
- make the background look manufacturing
- don't hope for too much from static graphic (Bruce)
- can go from employment 1 to Bachelor's – need a line
- kill the arrows – some of these are two way (Gary likes the arrows)
- kill the translation table for \$
- Master's Job is missing
- Building pictures must be better
- More immediate communication of progression (size of icons?)
- Boxes on top
- Employment should be represented by photos of typical jobholder? Office building? (NOT smokestacks)

Students have two questions

- what's in it for me – PUT THE SALARY NUMBERS RIGHT ON THERE
- why would I want to do it

Jo - Get from Scott brochure “Why manufacturing matters”? (email sent 2/27/07)

Everybody likes a website better than a poster than a brochure.

- interactive game ala Oregon Trail?!?
- “Life” was previously suggested

Focus on manufacturing engineering technology (algebra-based) and manufacturing science (calculus-based).

OIT has been requested by Boeing to reinstate Associate of Science in Mfg Eng Tech and will put it in place at Boeing. (Employability after 2 years)

Scott: That is different than AAS.

AAS is seamless transfer into Bachelor's of Science, not employability after 2 years. Some employability but limited.

Development of an Applied Science Degree (AS) must react to employer needs.

Community College's (CC) AS are individualized, but they are in place. Statewide articulation agreement. Do we want to keep this matrix in place? May be a CC by CC work. Some tied to OSU only.

If we wanted statewide AAS degree we would need to redo the matrix and articulation agreements. Might not be the best use of everybody's time (Scott)

Ron: The AS is the only way to go on this individual school by school. Somewhat less rigorous than traditional .

- Need to include that matrix on the website. Susan will get Jo an electronic copy of the matrix.
- Is there any life left in the possibility of getting designations on AAS degrees? (ScottH – not top priority). Designation makes a content specification. Right now they are generic transfer degree.
- Susan: putting some marketing materials around that matrix. We can still do some valuable work around telling students what they need to do.

RonJ leaves us for a bit for a curriculum meeting and will return.

Sam – PTE courses now a buffet with no direct link or articulation with anything else. [In Eugene schools]

Susan B – marketing information with 3 pieces for OACTE

- Brower's job descriptions
- Occupational data
- Matrix
- Say we are working on a website – maybe even stub it out
- OACTE (hs and cc teachers and counselors)

ScottG: must be cautious about the appearance of promise. Doesn't want that misconstrued by PPS, for example.

Next Steps:

- (Scott) minimum, take the matrix, change the title to Crosswalk, put it on a poster.

Jay's experience – two levels of articulation – school and then the departments for more technical courses. Transfer guide between two schools CS departments, not official doesn't have to be signed off on by all presidents.

Marla Edge, registrar at OIT – will be the final blesser of the articulation agreements and the matrix. She will sign off on the matrix and deliver a signed agreement to all the participating CC on the matrix.

Fred: Can OIT confer the AS on the CC campuses? Gary: Possibly. OIT would have to deliver some of the content. A dual-enrollment model.

Pat: is there a central repository for all the Career Pathways info that HS students and counselors use?

Sam: not really – CIS is more piles of info. What about lodging this info with OACTE?

Mimi has a website. She has no resources for design or maintenance.

We want a website – information portal:

- Who should design it? (Confirm with Beau timing by April 18, then confirm with Di) Design differs with primary audience – for students sexiness factor costs time. For teachers and counselors, can get most of the functionality with simple links.
- Who should host it and maintain it.?
- How do we get all the HS, CC, etc to connect to this repository?

Sam:

- lane community college
- Lane ESD

Content gathering:

- potential employers
- what they need to do in high school – must be done cautiously.

Send Scott Bay of Opportunity and Stairsteps, connect to meeting notes.

Pat will take a stab at a draft of workskills inventory – helping a counselor understand who might be good as a manufacturing engineer, and helping a counselor diagnose what manufacturing engineers are like. Jo will collate. Jo will try to find some web resources. Will revisit later for biases.