

# SAO Partners with Business Education Compact on National Engineers Month



By Mary Beth Horton

Each February, hundreds of engineers pour into elementary, middle and high school classrooms to bring engineering to life for the young minds they encounter. Through interactive presentations, hands-on experiments and discussions, students get a real-world glimpse of engineering and are awakened to the exciting possibilities of careers in engineering.



The National Engineers Month (NEM) program of the Business Education Compact (BEC) is a local extension of a 55-year old nationwide initiative to raise public awareness of the opportunities and rewards of being an engineer. Since it launched its NEM service in 1995, the BEC estimates it has sent 4,000 engineers to 6,000 classrooms, reaching 180,000 students. NEM 2005 business partners included Intel, IBM, Mentor Graphics, Xerox, Northwest Natural, WebTrends, InFocus, First Tech Credit Union and Industrial Design and Construction (a CH2M Hill business).

## **The need to stimulate K-12 interest in math and science**

The indicators are a call to action. Consider that in Oregon 77% of third-grade students meet math standards, dropping to 56% for eighth graders and 44% for tenth graders. Proficiency in these subjects, of course, is essential to post-secondary and graduate studies in engineering fields. Intel relates that of the 441 doctorates hired in engineering and computer science from 2000 to 2004, seven came from Oregon universities and only 11% of Intel hires with master's degrees were educated in Oregon. Moreover, the lack of women entering the field further reduces a potential labor supply. Most women drop out of advanced math courses after the sixth grade. Nationwide, women account for 20% of enrollment in undergraduate engineering programs and only 11% of engineering jobs.

## **Importance of the SAO-BEC partnership**

By aligning with the BEC for National Engineers Month, the SAO is leveraging its efforts to achieve organizational and cluster goals. **A recent survey of SAO members** clearly identified the importance of promoting targeted workforce development, as well as the critical need for quality K-12 education. These areas are primary to the BEC, a non-profit with 21 years experience in establishing working partnerships between business and education to accomplish these same goals.

The annual infusion of engineers into K-12 classrooms during National Engineers Month supports the primary directives of workforce development and quality education. By consistently generating excitement for the expansive career opportunities available in engineering fields, students are led to understand and appreciate the relevance of classroom learning in math and science—a message reinforced from kindergarten through high school. Well-prepared high school graduates are then more likely to pursue post-secondary degrees in related fields, create increased demand for university programs, and offer employers a capable talent pool to satisfy workforce needs.

## National Engineering Month works!



Over the years, BEC's NEM program has received overwhelmingly positive feedback from teachers, students and engineers. A participating teacher shared this comment: "Excellent opportunity to plant the seeds for students to focus on math and sciences." An engineer that has participated in the program for more than eight years reflected: "The best part about presenting to classes during NEM is seeing the enthusiasm in the students. It is important to get the kids involved and engaged . . ." Another engineer tells of his visit to his son's second-grade class. "In the beginning, I asked how many wanted to be engineers. Maybe 25% raised their hands. At the end of the class I asked how many wanted to be engineers—they all raised their hands." The power of connecting education with real-world examples is further exemplified in a story related by Morgan Anderson of Intel about an OSU engineering student. The student's interest was sparked many years earlier when, during National Engineers Month, an engineer visited his middle school classroom and generated a desire that persisted through high school and beyond.

## NEM participation made easy

Employers participate in NEM as providers of engineers or as sponsors, paying a service fee to the BEC to coordinate their involvement in the event. BEC's turnkey services are designed to facilitate the involvement of companies and engineers and include:

- Community awareness and publicity. **For companies signed on by December 31**, participation will be announced with logos in publications that include *The Oregonian*, *Hillsboro Argus*, *Commerce* magazine and community newspapers.
- A simple online registration tool that allows engineers to request specific classrooms.
- Matching of volunteer engineers with teachers.
- Online resources that include age-appropriate curriculum and tools for classroom presentations as well as online information about state math and science standards.
- Post-event follow-up with surveys of teachers and participants and individualized company reports.

## The time is NOW!

For the sake of a well-prepared workforce and quality K-12 education, SAO members are encouraged to participate in National Engineers Month. To learn more about NEM and how you can make a difference, please contact Stephanie Lambert at the BEC (503.646.0242 x23 or [slambert@becpdx.org](mailto:slambert@becpdx.org)).

## About the Business Education Compact

"Make learning real" sums up the BEC mission. For more than 20 years, the local nonprofit organization has been doing just that by connecting the classroom and workplace with hands-on, innovative learning experiences for students and teachers; by creating and leading working partnerships with business and education; and by advocating for quality education in Oregon. BEC serves Oregon and SW Washington. Learn more about the BEC at [www.becpdx.org](http://www.becpdx.org) or call 503.646.0242 x23.

## About the author

Mary Beth Horton is Deputy Director for the Business Education Compact, responsible for the organization's operations. Through her volunteer work as Marketing Director for Intel ISEF 2004, Mary Beth discovered a zeal for education, economic development and workforce development that she is able to vigorously pursue with the BEC. Her previous career in the data communications industry, much of it with AT&T, included managerial roles in sales, marketing, quality management, as well as training and development. She can be reached at [mbhorton@becpdx.org](mailto:mbhorton@becpdx.org).