



<http://www.foundationcoalition.org>

**From Jeff Froyd, Project Director:** Although the tenth year of the Coalition does not begin until 1 Oct 2002, the long-range planning (LRP) team has already begun discussing possible projects for Year 10. LRP team members are Don Evans (ASU), Paul Fortier (UMD), Jeff Froyd (PD), Cesar Malave (TAMU), Jay Martin (UW), Dan Moore (RHIT), and Joey Parker (UA). Some Year-10 projects may be direct descendents of Year-9 projects. The ultimate goal of all will be to create systemic improvement across engineering education and to provide a legacy that future projects may build on. If you would like to provide input to planning for Year 10 or if you have questions about what is happening, please contact one or more members of the LRP team.

**The Engineering Education Grantees Conference sponsored by NSF scheduled for September was cancelled due to the terrorist attacks.**

2001-2002  
2002-2003  
2003-2004  
2004-2005  
2005-2006  
2006-2007  
2007-2008  
2008-2009  
2009-2010  
2010-2011

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| 4–5 Oct 2001   | <b>Change in Higher Education:</b> Seminar and workshop presented by Jeff Froyd West Point, NY: Department of Mathematics, United States Military Academy  |
| 10–13 Oct 2001 | <b>Frontiers in Education Conference:</b> The Future—Impact on Engineering and Science Education<br>Reno NV: John Ascuaga’s Nugget Casino Resort <a href="http://coeweb.engr.unr.edu/~fie/">http://coeweb.engr.unr.edu/~fie/</a> |
| 19–20 Oct 2001 | <b>Implementing Curricular Change in Engineering Education</b><br>Schenectady NY: Union College <a href="http://doc.union.edu/iccee/">http://doc.union.edu/iccee/</a>  |
| 26–27 Oct 2001 | <b>Foundation Coalition Workshops</b><br>Southern Illinois University–Edwardsville   |
| 3–5 Mar 2002   | <b>Cross-Coalition Conference:</b> Share the Future III, Gainesville FL: Univ. of FL.<br>No web site yet.  |
| March 2002     | <b>Classroom Assessment Workshop</b> by the Assessment and Evaluation Team<br>Louisiana Tech   |
| 16–19 Jun 2002 | <b>American Society for Engineering Education Annual Conference and Exposition</b><br>Montreal, Quebec, Canada   |

Please e-mail us your suggestions for books and articles relevant to engineering education. Donald Richards suggests ***How People Learn (The Expanded Edition)***: <http://www.nap.edu/catalog/9853.html>

## Books and articles

He says, “John Bransford was an ERM speaker at the 2001 ASEE Conference. This is an interesting and very practical work with a good combination of theory and practice. (I’ve even thought of trying to evaluate our sophomore engineering curriculum at Rose-Hulman against the HPL suggestions to see how it comes out. The FC goals match well.) The book also includes good references for further study.”

Russ Pimmel’s “**Cooperative Learning Instructional Activities in a Capstone Design Course**” appears in the July 2001 *Journal of Engineering Education*. Russ offers a workshop on this topic, too.

## Year-8 progress report . . .

FC faculty members at the University of Alabama have developed instructional material for 15 modules on skills described in EC 2000 Criterion 3a–k. Over the summer they ran a pilot offering of each module with faculty members other than the developer as the instructors and as observers. About 10 engineering students attended each module. Students and faculty evaluated each session and the modules. These data are being used to improve the instructional material. As they are completed, new versions of the material are posted on the web at [http://ece.ua.edu/faculty/rpimmel/public\\_html/ec2000-modules/](http://ece.ua.edu/faculty/rpimmel/public_html/ec2000-modules/).

# Faculty feature: Jim Richardson



**Jim Richardson, a Foundation Coalition faculty member, continues to search for keys to improving the first-year curriculum program at Alabama.**

## **Civil Engineering, University of Alabama**

One of the most rewarding teaching experiences of my career was teaching a prototype freshman-engineering program supported by the FC. I worked with a team of seven math, science, and engineering faculty during the 1995–96 academic year to teach a very team-oriented freshman engineering program. The students worked in the same four-person teams for math lecture and recitation, physics lecture and lab, chemistry lecture and lab, and engineering design. The faculty met frequently the summer before to plan the integrated curriculum and then met weekly during the school year.

Assessment data does not begin to capture what happened that year. For the Sergeant Fridays of you (“Just the facts, ma’am”), the students in the new program had a 12% better graduation rate than comparable students and GPAs that were not significantly different. Teachers in follow-on courses rated the team skills of the students from the new program considerably higher than students going through the traditional freshman year.

These are the reasons that I know that year was special. Whenever I bump into a student or especially a teacher from that year, I’m drawn to them. I always stop and exchange a few sentences, all the while watching their faces to see if they remember too. When the students returned to school following the summer after their freshman year, they had missed each other. They started a list of addresses and phone numbers, which led to a flurry of e-mails, which led to the Student Coalition Team.

This student organization sprang to life without an ounce of faculty intervention. Modeling their structure on the organization of the Foundation Coalition, they had a professional skills team, a web-page team, a social team (of course), and an academic excellence team. The chairs of these teams formed the management team. We didn’t realize it at the time, but the students were paying us the highest compliment—they emulated us.

So what had happened that year to leave such an impression on the students and the faculty? I believe we faculty experienced a paradigm shift. In the beginning of the year, we spent our weekly faculty meetings discussing the technical content of each of our courses in an effort to coordinate and integrate topics. But, as the year progressed, our discussion shifted to the one thing we had in common—the students. We shared our frustration with the inattentive students, our amusement with the humorous students, and our amazement with the smart students. Our focus shifted from content and how to cover the material to students and what they needed.

Our faculty team started the year lined up along an assembly line. We each poured the technical knowledge of our subject into the heads of the students as they passed by. By the end of the year, the faculty were circled around the students. We worked in unison to mold our students into young professionals. We responded to student complaints as a team, sometimes telling the students, “That’s just the way it is” and other times making small modifications. The students learned that a well-thought-out suggestion supported by the entire class was more effective than an individual complaint. And, as their sense of control over their education grew, the students shouldered more of the responsibility for learning.

I’ve never been able to repeat the experience of the 1995–96 freshman program, though not from not trying. Whether it was less team-oriented faculty, less curriculum integration and therefore block scheduling, or less team-oriented students—whatever the reason, we’ve never had a year like 1995–96. But, when I pass one of my faculty teammates from that year, I remember, and I think, “Maybe if we tried ....”