PESC

Purdue Engineering Student Council

Spring Semester Issue

PULSE

Intern Expo 2004

...or What Goes Into a Job Fair?

Mike Kurrus - Treasurer

So the Intern Expo job fair has come and gone and hopefully you found summer employment. But have you ever wondered what goes on behind the scenes? Or what went on to put together a lil' ole job fair? It is actually quite a bit.

Planning of the job fair starts around a year in advance with the setting of the date and tentative agenda of the event. Then, all the room reservations are made and the event planning form is completed with the Student Organizations Office. Now comes the hard part: getting companies to recruit here at Purdue. The best thing we have going for us is that Purdue is among the pre-eminent engineering and technology colleges in the nation and companies realize this. We on PESC make a brochure promoting all of the great things about Purdue and information about the specific day of the job fair. We then mail this to all of the past companies that have attended our job fairs.

Then we open our registration, which is done entirely online at the ease of sitting in front of the computer. With the modern marvel of technology, company representatives can check their information, invoices, and special requests all by bringing up our web page. This makes the computer engineers on PESC invaluable!

Once we have a general number of how many companies and representatives are going to show up, we order all the food for breakfast and lunch. After registration is closed we make a wonderful guide book with a list of companies and what majors and classes they are interested in. We also begin the fun logistics of planning the company layout. This may not sound like a big deal, but can you imagine the lines in the Union Ballrooms if a bunch of historically, well established companies are all placed all in one corner? There would be a huddled mass of students that would rival *Jake's Roadhouse* on a Friday night. But we as engineers wouldn't know about that because we are stuck studying for classes we will never use and professional exams on a Friday night. The closest we get to *Jake's* is the very nice study rooms at Rawls Hall…but perhaps for those of you that are more chemically inclined, the packing factor of students in the Union ballrooms would be more than a face-centered cubic crystal.

Also, many other little things lead up to the job fair and we try to think of things that would benefit the students, because after all, we are students too. This past Expo we instituted free name tags to all Purdue students at the swipe of their student ID, as well as assigning a color or balloon to each major and tying the balloons to the corners of company tables. We did this in case a student didn't have time to look at our euphoric guidebook; they could just look at the group of balloons for their specific color/major.

Students wait outside the Purdue Memorial Union Ballrooms for the beginning of Intern Expo.

One thing to keep in mind is that PESC plans and runs all its job fairs with no outside support or funding! What does this mean to you, the normal Purdue engineer? This means that your tuition is not raised by having some office employed by the University plan and run the job fair. Unfortunately it also means I do not get paid for planning anything…but in ten years when I think back to my days at Purdue and my masochistic freshman professors and how I should have chosen anything other than mechanical engineering, I will remember the great team of five people who spent 10 – 20 extra hours a week planning the Intern Expo 2004. Elise, Nashley, Kelly, Steph, and Rahul definitely rock the Casbah!

Important Dates:

- March 27 — Sports Tournament
- April 3 — Elementary IDEAS
- April 17 — ENvision
- "Dead Week" — Student/Faculty Picnic

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PESC Sports Tourney

Beth Wall
Student Activities Committee Member

Its time for Sports Tourney and its bigger and better than ever!

Hosted by Purdue Engineering Student Council, Sports Tourney includes volleyball and basketball tournaments open to ALL Purdue students. It's a great way to take a *time-out* from school while *serving-up* great competition at an unbeatable price, FREE! Each participant receives a t-shirt and winning teams *score* prizes!

Sports Tourney will be held Saturday March 27th in Lambert Gymnasium from 2pm-10pm.

If you *got game*, register your team ASAP! Forms are available in Civil G216A or online at www.purdue.edu/PESC.

You'll *score big* at Sports Tourney!

The PESC basketball team gets into the spirit before the big game.

PESC Retreat

Shonda Ross
Vice President

On Friday, January 23, 2004 Purdue Engineering Student Council met in the Civil Engineering building for our annual Spring Retreat. After many slices of pizza we loaded up our vehicles and began the short drive to Camp Tecumseh. Soon after everyone arrived we all participated in mixer-type and team building games. With a few name games like "I love my neighbor" we were quickly able to get to know our eight new members.

After the planned part of the evening, the members stayed up late talking, eating snacks, playing Mafia and even board games (Lord of the Rings Trivial Pursuit was a favorite!) The next morning arrived quickly for those night owls and it was filled with learning important information. After breakfast and for some a cup of coffee, we were all ready to get down to business. To begin the morning, one of our advisors, Dr. Bob Montgomery greeted us and welcomed all the new members.

Soon after breakfast, committees were chosen and each committee had the opportunity to discuss some of our upcoming events like Sports Tourney, Envision, Grand Prix and our next outreach event Elementary IDEAS. Not only did everyone learn about their particular committee but also the other responsibilities and advantages of being a PESC member.

Spring Retreat 2004 was definitely a success. New and old members were given the opportunity to get to know each other. Committees were formed and we were able to get some much needed work accomplished while having a great time.

To become a member of PESC you must attend our callout. Read the article called "How Can I Become a Member of PESC?" for more information

New Members

Aaron Al-mishwit

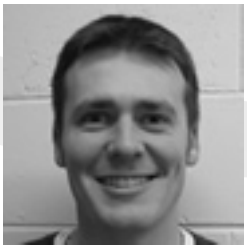
Lee Bush

Wendy Kerr

Amanda Miller

Megan Mauck

Jon Pendlum



Chris Statler

Eric Vaughan

PESC Elementary IDEAS

Sarah Cusick
Engineering Relations Committee Head

On Saturday, April 3, Fourth and Fifth grade students will be traveling to the West Lafayette campus to attend the annual Elementary IDEAS program sponsored by Purdue Engineering Student Council.

IDEAS (Inspiring the Development of Engineering Aspects in Students) is a program designed to spark the interests of grade school children in engineering. The students will spend the entire Saturday participating in hands-on experiments that inspire problem solving skills. They will learn about the different majors within engineering while having a lot fun. The participation of parents and teachers is encouraged, and those that attend will have the opportunity to tour the Purdue campus, hear from faculty members, and talk to some of the finest engineers Purdue has to offer. If the parents and teachers would like, they can even participate in some of the experiments with their child/students.

The fields introduced to the students include Aeronautical Engineering, Mechanical Engineering, Civil Engineering, as well as others. In the past, activities have included making a structure out of spaghetti and marshmallows and creating an edible car.

This year, IDEAS is expected to bring over 175 fourth and fifth graders from throughout Indiana to campus to participate in the one day event. The event is organized and staffed by the Purdue Engineering Student Council. The event is free and all the participants and volunteers will receive a free t-shirt and lunch. If you would like more information about the event or interested in volunteering, please stop by CIVIL G216A or contact the PESC office at 496-2660.

Trying to explain the "Parachute Activity", PESC members help show the students how to do basic problem solving along with creativity.

PESC ENvision

Jon Pendlum
Student Activities Committee Member

Spring Fest 2004 promises to bring some amazing fun and Purdue students can expect nothing less from this year's ENvision event. Forget about homework and engineering projects, Saturday April 17th from 9am to 4pm from Memorial Mall to the Bell tower, all of the engineering schools, faculty, and various student organizations will gather together to showcase engineering at Purdue. Show your parents what their greenbacks have paid for and let your Liberal Arts friends see the fun side of engineering.

This year will feature some of the most exciting events yet. We will have a Rube Goldberg design contest, Lego design contests, remote control cars to drive, and a specially designed multiplayer computer game to test. As well, tons of engineering organizations will participate to show off their great projects. Some include the solar car club, concrete canoe, and steel bridge design clubs. Last, but certainly not least, professors will give lab tours in several of the engineering schools.

With so many activities going on, what else could this event possibly offer? No one wants to eat dorm food on a Saturday, and we are providing free popcorn, snow cones, subs, and drinks to everyone while live bands play nearby. If these reasons are not enough to convince you, check out www.purdue.edu/PESC for more information.

So rustle up your friends and family to campus this April 17th for a day filled with good times.

ENVISION 2004

PURDUE ENGINEERING STUDENT COUNCIL

PESC members help organize the "Strongest Rope" activity. The children must construct a rope out of various materials that can hold different-size water bottles. The rope that withstands a certain weight, wins!

How Can I Become a Member of PESC?

Becoming a member of PESC couldn't be easier. All you have to do is be enrolled in an engineering discipline as well as attend our callout in December 2004.

At the callout, you'll learn about all the different activities that PESC runs throughout the year. You'll meet all the members of PESC and realize how cool all of them are. After the callout you'll have to fill out an application as well as attend an interview.

When you become a member of PESC you are part of a student organization that organizes the largest student-run job fair in the entire country! Besides that, you get to make a positive impact that affects not only Purdue campus, but the greater Lafayette area, the state of Indiana, and beyond.

Be sure to keep your eyes and calendars open for next December!

Interview with Professor Michael Capano, Ph.D.

Professor Capano is an Associate Professor in Electrical and Computer Engineering at Purdue. His current research interests involve experimental investigation of Silicon Carbide epitaxy, materials characterization, processing and devices.
He completed his Ph.D. at MIT in 1989 before joining the ECE faculty at Purdue in 2000. He is also teaching ECE201 this Spring.

Why did you become a faculty member for the Purdue University Electrical Engineering program?

Purdue has a great reputation. They're the leaders in the research area that I'm working in which is Wideband Gap Semiconductors. So it was a very nice chance to have the opportunity to become a faculty member at Purdue.

So after you finished your Ph.D. at MIT, you went straight into research?

I finished my degree at MIT in 1989 and was in industry working for a government lab for quite some period of time between graduating and becoming a professor. After graduation I worked in England at the University of Warrick for six months on a post doctorate assignment and then I became a research scientist with the Air Force at Wright-Patterson Air Force Base before joining the faculty at Purdue.

What interests you most in the field of Electrical Engineering?

Microelectronics and nanotechnology. Being able to make something, to get in the laboratory and take a piece of virgin semiconductor material and fabricate a working device and understanding how that device works and understanding the materials technology that's necessary to fabricate that device is very exciting. That is certainly my favorite aspect of electrical engineering; device processing and the material sciences associated with building electronic devices.

And by virgin semiconductors, you mean something that is pure and free of defects?

I mean a wafer that has not been processed before. It consists only of silicon and carbon atoms in a triply periodic array and the defect densities are very low. There's been nothing done to that wafer other than cutting it, polishing it, and making it ready for subsequent device fabrication.

And you make those in your lab?

Yes.

Can you explain some of the research you do outside of the classroom?

There are two of us working in the area of silicon carbide. Professor Cooper is more of a true device physicist in the fact that he's interested in designing new devices and seeing how they operate. My expertise is in the area of the materials necessary to make devices. The materials aspects involve growing single crystalline epitaxial layers; it involves developing unit processes or device fabrication. In order to test these materials, we do fundamental studies on the properties of silicon carbide electronic materials and also build simple devices.

So you kind of get things started to become the core components of your research?

Think of the materials research leading into device research which leads into circuit research which finally leads into system-level development. The materials research really start things off.

What advice would you give any undergraduate engineering major to help them succeed in both their academic and business career?

What's really important for engineering students to understand is that it's not a 40-hour per week job. If they're here to do the minimum to get to the degree, I think they will ultimately be unsuccessful. They may get the degree but they won't be satisfied in their jobs after graduation. You have to look at this as a lifestyle; this is what you're choosing for the rest of your life. To come in here and do the minimum, I think is really putting yourself in a losing position. You need to put in extra effort, you need to understand where you want your career to go, you need to do research in terms of exploring possible directions that you would like your career to go. Then, you need to put in the extra effort to make sure that you do well in your classes. The classes you choose to take set you up for the career you want to have.

For more information on the Wideband Gap Semiconductors Research team, visit: www.ecn.purdue.edu/WBG/

"What's really important for engineering students to understand is that it's not a 40-hour per week job."

For an electrical engineer, specifically, what advice would you give them to help with their plan of study or overall academic career?

You want to know as soon as you can what you want to do with your career. Now that will take some students longer to decide than others, but you want to know where you want your career to go as quickly as possible. The reason for that is you want to choose elective courses that set you along your chosen career path. Also, you must understand that you have to take responsibility for your career. You have to do that in your freshmen year and throughout your undergraduate years at Purdue, rather than waiting until your senior year to decide what you want to do. So I would suggest that if you're an ECE you really need to start setting your mind as to which direction you want to go. Do you want to go into Computer Engineering? Do you want to do VLSI? Do you want to do microelectronics and nanotechnology, power systems, controls, etc.? You need to decide and then choose courses appropriately. You also want to make sure that if your grade point average is below 3.0, that you get it above 3.0. In terms of future employment, 3.0 is a psychological threshold that many recruiters have. If you can get your GPA above 3.0, you're really helping yourself a lot.

Outside of school, what advice you would give a student to help them get the most out of their years in college?

Too many students fail to realize that they're here for two reasons. One is to succeed academically but the second is to start to learn how to interact with people. There's a social aspect in coming to college. There's a social aspect in being an undergraduate student and some students don't understand the balance between academic success and developing themselves personally and socially. That is very important. Academics must come first and if there are personal sacrifices that have to be made in order to ensure academic success, those sacrifices have to be made, whether or not its skipping a party, or a sporting event, or a cultural event to make sure you have your work completed. But having said that, you also need to realize that it's important to have personal time, social time, getting to know other people, and getting to become comfortable in social settings because your career will depend on that as much as it depends on your ability to book-learn. You need to balance those two things in order to be successful.

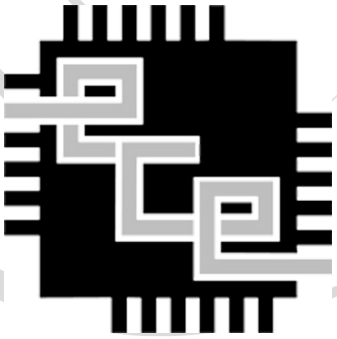
What were some memorable moments from your undergraduate years?

My undergraduate days were spent working. I did make many sacrifices when I was at the University of Cincinnati as an undergraduate to make sure that I got into a good graduate school. Oftentimes there were sacrifices that had to be made, but there were also some really good times. One thing that sticks out in my undergraduate education is the fact that I had a very good relationship with a number of faculty; good enough to feel comfortable going out to lunch with them or going out and having a beer with them. We were certainly not friends, I mean there was a student-professor relationship there and that was never breached. But still we got to know each other as human beings and I think that makes the educational experience much richer for a student than if they don't do that. I don't see enough of that at Purdue; students feel that they're so distant from their faculty. So I look back on some of the social interactions that I had with the faculty at Cincinnati as a very pleasurable moment.

Another one is some of the team experiences I had with other students on senior-level project courses. We had a good time; there were a group of eight of us that got together and worked on some of our senior design projects, and those were very good times.

And finally the most memorable times were my senior year when I was getting ready to go off to graduate school; you're just looking forward to the career and the life you have ahead of you and that was a lot of fun. There's nothing like walking in commencement: when you know that you have successfully finished college and the sun shines in your face and you have the diploma…its one of the best experiences I've ever felt.

Interviewed by Jeremiah Monk
Publications Committee



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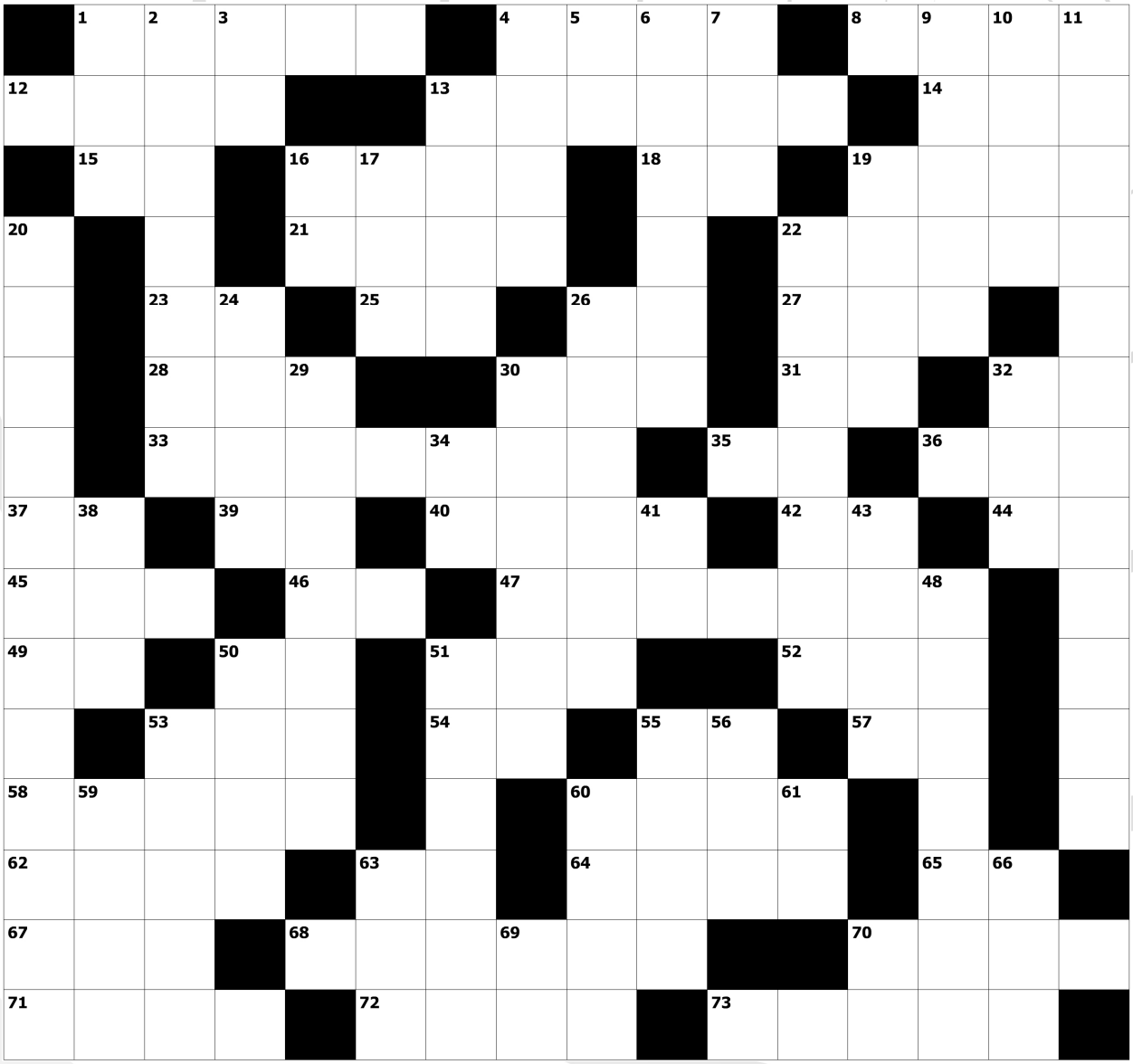
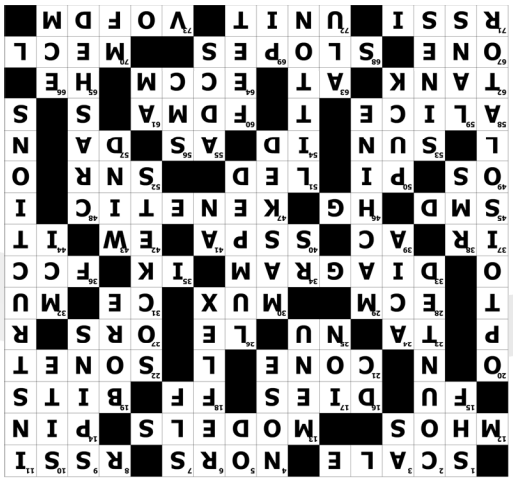
PULSE



Original location: http://www.rfcafe.com/miscellany/crosswords/crossword_3-1-2004.htm

Answer



Courtesy:
Kirt Blattenberger
www.rfcafe.com

Be sure to visit www.rfcafe.com for more engineering-related crossword puzzles as well as jokes, facts, etc.

CROSSWORD PUZZLE

ACROSS

1 Graph axis feature
4 Logic gates
8 Receiver power level circuitry, abbr.
12 Reciprocals of resistance units
13 Creates software versions of circuits
14 RF switching diode
15 Upper frequency, abbr.
16 Thread cutting tools
18 Category of model aviation, abbr.
19 1s and 0s
21 Triangular solid of revolution
22 Type of optical network, abbr.
23 Professor's student instructor, abbr.
25 Greek letter
26 Front edge of a wing, abbr.
27 Logic gates
28 Electronic warfare defense, abbr.
30 Multiplexer, abbr.
31 European equivalent to the U.L.
32 Greek letter
33 Block _____ or signal flow _____
35 Type of flip flop, abbr.
36 U.S. Spectrum allocation agency
37 Infrared
39 Type of current flow, abbr.
40 Solid state PA
42 Modern battlefield technique, abbr.
44 Network department, abbr.
45 Surface Mount Device
46 Chemical symbol for mercury
47 Energy in motion
49 Unix, Linux or Windows
50 Ratio of circumference to diameter
51 Semiconductor lamp
52 Signal-to-Noise Ratio
53 Hub of the solar system
54 Opposite of O.D.
55 Chemical symbol for arsenic
57 Government lawyer, abbr.
58 Dilbert's female co-worker
60 Akin to CDMA
62 L-C resonating circuit
63 PC follower
64 ECM response
65 Symbol for helium
67 Exponent that returns the original number
68 dv/dt, pl.
70 Motorola Emitter Coupled Logic
71 Receiver Strength Sensitivity Indication
72 Dimension associated with a number
73 Vector Offset Frequency Shift Keying

DOWN

1 3 GHz to 30 GHz
2 Added
3 Chemical symbol for arsenic
4 Airplane front
5 Opposite of I.D.
6 Angle having more than 180 degrees but less than 360
7 Below ELF
9 Quantum electron properties
10 Antenna farm
11 Software commands
13 Software function selection mechanism
16 Type of current, abbr.
17 Charged particle
19 Drill a hole
20 IC to totally eliminate interaction between circuit parts
22 Tools for tightening nuts & bolts
24 Asynchronous Communication Interface Adapter
26 Not distributed
29 Apparatus for doing work
30 Disabled an interrput
32 Micro-channel architecture type, abbr.
34 Type of flip-flop, abbr.
38 Type of average, abbr.
41 Army-Navy spec
43 Tighten a spring
48 Hung the program
50 Isolator or circulator ferrous component
51 Now "L3 Electron Devices"
53 Trigonometric functions
55 Data conversion devices, abbr.
56 Miniature RF connector, abbr.
59 Computer communication schemes, abbr.
60 Units of length
61 Modulation type, not FM
63 Arithmetic Logic Unit
66 Electronic warfare defense, abbr.
69 Ratio of circumference to diameter
70 300 kHz to 3 MHz

Purdue Engineering Student Council

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The Purdue Engineering Student Council was founded in 1975 and reorganized under its present constitution in 1980. With its mission statement of "serving students, serving faculty, serving industry," PESC built upon its early foundations to become one of the most active and productive organizations on campus. Its membership includes the most motivated and enthusiastic leaders on campus.

The purpose of Purdue Engineering Student Council is:

- To promote communication and cooperation among the students of the Schools of Engineering

- To serve Purdue Engineering Students at the campus, regional, and national levels.

- To promote professional growth among engineers

PESC

Serving students, faculty, and industry...

Visit www.purdue.edu/PESC

Three Engineers and Three Accountants

http://www.rfcafe.com/miscellany/humor/another_engineer_joke.htm

Three engineers and three accountants are traveling by train to a conference. At the station, the three accountants each buy tickets and watch as the three engineers buy only a single ticket. "How are three people going to travel on only one ticket?" asks an accountant. "Watch and you'll see," answers an engineer.

They all board the train. The accountants take their respective seats but all Three engineers cram into a restroom and close the door behind them. Shortly after the train has departed, the conductor comes around collecting tickets.

He knocks on the restroom door and says, "Ticket, please." The door opens just a crack and a single arm emerges with a ticket in hand. The conductor takes it and moves on.

The accountants saw this and agreed it was quite a clever idea. So after the conference, the accountants decide to copy the engineers on the return trip and save some money.

When they get to the station, they buy a single ticket for the return trip. To their astonishment, the engineers buy no tickets at all.

"How are you going to travel without a ticket?" says one perplexed accountant. "Watch and you'll see," answers an engineer.

When they board the train the three accountants cram into a restroom and the three engineers cram into another one nearby. The train departs. Shortly afterward, one of the engineers leaves his restroom and walks over to the restroom where the accountants are hiding. He knocks on the door and says, "ticket please."

Courtesy:
Kirt Blattenberger
www.rfcafe.com

Be sure to visit www.rfcafe.com for more engineering-related crossword puzzles as well as jokes, facts, etc.

HUMOR

Top 10 Things Not Taught In Engineering School

http://www.rfcafe.com/miscellany/humor/top_10_things_not_taught.htm

10. There are about 10 types of capacitors.

9. Theory tells you how a circuit works, not why it doesn't work.

8. Not everything works according to the specs in the databook.

7. Anything practical you learn will be obsolete before you use it, except the complex math, which you will never use.

6. Always try to fix the hardware with the software.

5. Engineering is like having an 8 a.m. class and a late afternoon lab every day for the rest of your life.

4. Overtime pay? What overtime pay?

3. Engineers rule the world until the next revision.

2. If you like junk food, caffeine, and all-nighters, then you should go into software.

1. Dilbert is a documentary.