

# Engineers Day Open House February 26, 2005



UNIVERSITY OF KENTUCKY  
College of Engineering

## Schedule of Events

### Welcome to the College of Engineering!

We're glad you're here to help us cap off a week-long celebration of the engineering profession, National Engineers Week. Engineers are the world's problem solvers, and today you'll be able to learn what engineers do and how they do it. While you're learning, you'll have fun participating in contests, winning prizes, watching experiments and demonstrations, and talking to engineers about their jobs.

The names of the main buildings where you'll find events are: **F. Paul Anderson Tower (FPAT)**, **The Advanced Science and Technology Commercialization Center (ASTeCC)**, **UK Center for Manufacturing (RMB)**, **The Ralph G. Anderson Building (RGAN)**, **The Oliver H. Raymond Building (Raymond)**. Other buildings in use include: Mining and Minerals Resources Building (**MMRB**), James F. Hardyman Building (**Hardyman**), and the Terrell Civil Engineering Building (**DVT**). Directional maps and floor plans are available at the registration tables. Look for signs that will tell you what building you are entering. The listings in the schedule are color-coded with the names of the buildings. There are three information tables. They are located in the lobby of **RMB**, first floor of **RGAN** and the first floor of the **Raymond** building. In the event of an **EMERGENCY**, go to room 161 in the **Raymond** building, or dial **257-4856**.

**Times for all activities are from 9 a.m. to 1 p.m., unless otherwise noted**

## Enter to win great prizes !!!!!

check at information tables and see entry boxes for rules and details

## General Activities

Department/Center/ Sponsor	Activity	Location
University of Kentucky	Office of Admissions	1 <sup>st</sup> Floor, Student Commons, RGAN
College of Engineering	E-Day Information Table Locations	1 <sup>st</sup> Floor, Student Commons, RGAN
College of Engineering	E-Day Information Table Locations	Lobby, RMB
College of Engineering	E-Day Information Table Locations	RGAN atrium
College of Engineering	E-Day Information Table Locations	1 <sup>st</sup> Floor, Raymond
College of Engineering	E-Day Headquarters & Emergency Center	161 Raymond
College of Engineering	Career Services	1 <sup>st</sup> Floor, RGAN
College of Engineering	Co-op	1 <sup>st</sup> Floor, RGAN
College of Engineering	Financial Aid	1 <sup>st</sup> Floor, RGAN
College of Engineering	Minority Engineering	1 <sup>st</sup> Floor, RGAN
College of Engineering	11:30-1:30 Minority Engineering Pizza lunch and Information for Minority High School Students	106 Classroom Building
College of Engineering	College of Engineering Information	1 <sup>st</sup> Floor, RGAN
College of Engineering	Zoom into Engineering	57 Raymond

## Departmental and Center Activities

Department/Center	Activity	Location
Biomedical Engineering	Blood Pressure and Blood Flow	253, FPAT
	Biomedical Materials and Implants	253, FPAT
	Adjustable Shunt for Cardiothoracic therapy	253, FPAT
	Cardiorhythms	253, FPAT
	NASA's Human Powered Centrifuge	253, FPAT
Biosystems and Agricultural Engineering	How is cotton candy made – an edible demonstration	263, FPAT
	What does foam have to do with it?	263, FPAT
	How do enzymes work? A great learning opportunity	263, FPAT
	How water flows underground	263, FPAT
	Balloon Giveaway	263, FPAT
	Pest control through environmental control	263, FPAT
	Feel the Rhythm of the heart!	263, FPAT
	It's a Toy, It's a Tool, It's a Remote Sensing Device	263, FPAT
¼ Scale Model Tractor	Courtyard	
Center for Manufacturing (UKCM)	Welding Research Laboratory	119, RMB
	Sustainability Applications in Product Design and Manufacture	9, RMB
	Injection Molding	9, RMB
	Machining Research – Poster presentation of Active Projects	9, RMB
	Rapid Prototyping	112, RMB
	High Speed Filming Analysis of Machining Processes	9, RMB
	Cutting Force and Temperature Measurement in Machining	9, RMB
	Near-Dry Machining Operation	9, RMB
	Web-based Machining Optimization	9, RMB
	Chester the Checker-Playing Robot	419, RMB
	Digital Photo Giveaway – Exciting Backgrounds	419, RMB
	Lean Manufacturing Boot Camp	320, RMB
	COE Balloons	2nd Floor Lobby, RMB
UK Center for Manufacturing Information Table	2 <sup>nd</sup> Floor Walkway, FPAT	
Computer simulation of manufacturing processes	220K, RMB	
Chemical and Materials Engineering	Fluid Flow	59A, FPAT
	Packed Column	59A, FPAT
	Distillation	59A, FPAT
	Membranes	59A, FPAT
	Building an Affordable Supercomputer at Home	59A, FPAT
	Chemical and Materials Engineering Departmental Information	1 <sup>st</sup> Floor, FPAT
	Electron Microscopy	8, ASTeCC
	Nanotubes in Polymer Composites	67, FPAT
	The World of Materials	67, FPAT

Department/Center	Activity	Location
Civil Engineering	Hydro Lab Demonstration Surveying Civil Engineering Exhibits Computer Graphics Demo	16, Raymond 16, Raymond 120, Raymond 211, RGAN
Computer Science	Demos and Presentations <i>(The following activities are by prior arrangement. Contact Dr. Jerzy Jaromczyk at jurek@cs.uky.edu)</i> 9:30 - 10:30 Tours of Research Computer Labs for High School Groups 10:45 a.m. - 1:45 p.m. Freshman Day Program 10:45 a.m. - 1:45 p.m. UPE/ACM Programming/Web Challenge Awards	215E, RMB  Hardymon Hardymon Hardymon
Electrical & Computer Engineering	<i>Information on Exhibits and Free Short Courses</i> Sign Up for Short Courses Learning to Fly with Big Blue (Joint Project with Mech. Eng. Department) Electromagnetic Simulation Dependable Embedded Computing Supercomputers R Us Excimer Laser Micromachining - Free Laser Marked Pennies Digital Design Lab KAOS Software Development Lab IEEE Robots Holodeck Many Needles in a Haystack: Searching and Understanding Video Data The "Wave" of the Future - Wireless Communications Palace of Power CeNSE - Center for Nanoscale Science & Engineering Time of Flight Range Sensing Video EDRL - Electronic Devices Research Lab Computer Architecture Lab Distribution Power Lines Safety Demo Welding Research Laboratory	<a href="http://aggregate.org/Lobby">http://aggregate.org/Lobby</a> , FPAT 1 <sup>st</sup> Floor, RGAN 682, FPAT 675, FPAT 672, FPAT 659, FPAT 581, FPAT 577, FPAT 567, FPAT 455, FPAT 453, FPAT 465, FPAT 462, FPAT 369, ASTeCC 368, ASTeCC 361, ASTeCC 521, RMB Loading Dock, ASTeCC 119, RMB
Kentucky Transportation Center	Interactive Highway Safety ArcView Display of Kentucky Crash Sites and Statistics Intelligent Transportation Systems Accelerated Testing of Coatings Composite Materials Display - plastic bridges and more KTC Library - Information and resources about engineering	1 <sup>st</sup> Floor, Raymond 1 <sup>st</sup> Floor, Raymond 1 <sup>st</sup> Floor, Raymond 1 <sup>st</sup> Floor, Raymond 1 <sup>st</sup> Floor, Raymond 1 <sup>st</sup> Floor, Raymond
Mechanical Engineering	Acoustics Lab Anechoic Test Cell Learning to Fly with BIG BLUE (Joint Project with ECE Department) Wind Tunnel Dynamic Structures and Control Lab Precision Laser Pointing System Magnetically Levitated Vibration Absorber Optical Profilometry Demonstration Fluid Mechanics Lab Departmental and Accelerated Undergraduate ME Program Information Painting Technology Research Energy Efficiency Research Flame Synthesis of Carbon Nanotubes Combustion and Fire Computational Fluid Dynamics and Portable CP Cluster Advanced CFD Group Poster 3-D Immersive Visualization Demo Intelligent Defect Detection on Smooth, Specular Surfaces Ultra-Rapid and Uniform Heating Using Microwave Artificial Kidney Freezing of Living Cells and Tissues for Transplantations Freeze-Drying of Blood Cells Radiation Transfer Lab	6, RGAN 6, RGAN 1 <sup>st</sup> Floor, RGAN 8, RGAN 010, 010A, RGAN 14, RGAN 14, RGAN 14, RGAN 18, RGAN 202, RGAN 202, RGAN 202, RGAN 202, RGAN 202, RGAN 202, RGAN 202, RGAN 202, RGAN 210, RGAN 202, RGAN 202, RGAN 202, RGAN 202, RGAN 202, RGAN 202, RGAN
Mining Engineering	Gold Ore – a UK Gold Rush Demonstration of Mine Roof Support Concepts Hydrocyclone Demonstration Measuring Strain Mine Ventilation Laboratory Mine Design Laboratory	255, FPAT 255, FPAT 255, FPAT 255, FPAT 111, MMRB 248, MMRB

# Student Organization Exhibits and Demonstrations

Engineering Student Council	Information Table	1 <sup>st</sup> Floor Lobby, FPAT
AIAA	Information Table	1 <sup>st</sup> Floor Lobby, RGAN
ACM/UPE	Information Table	1 <sup>st</sup> Floor Lobby, RMB
ASAE	Information Table	263 FPAT
ASAE	Tractor Model	Courtyard
ASCE	Information Table	1 <sup>st</sup> Floor, Raymond
ASCE-Concrete	Concrete Canoe Exhibit	16, Raymond
ASCE-Steel Bridge	Steel Bridge Exhibit	Basement, Raymond
ASME	Information Table	202, RGAN
Blanding III	Information Table	1 <sup>st</sup> Floor, Raymond
BMES	Information Table	253, FPAT
AICHE	Information Table	1 <sup>st</sup> Floor, FPAT
CHEGSA	Information Table	1 <sup>st</sup> Floor, FPAT
Chi Epsilon	Information Table	2 <sup>nd</sup> Floor, Raymond
IEEE	Robot Demonstration / Battling Robots	567, FPAT
IMAPS	Information Table	10, RMB
KSPE	Information Table	Basement, Raymond
NSBE	Information Table	1 <sup>st</sup> Floor Student Commons, RGAN
Phi Sigma Rho	Information Table	1 <sup>st</sup> Floor, Raymond
Pi Tau Sigma	Information Table	202, RGAN
SAE	Information Table and Mini Baja and Formula Cars	Basement, ASTeCC
SME (Mining)	Information Table	255, FPAT
SME (Manufacturing)	Information Table	Basement, ASTeCC
SME (Manufacturing)	Solar Car	Courtyard
SWE	Information Table	1 <sup>st</sup> Floor Student Commons, RGAN
Tau Beta Pi	Information Table	1 <sup>st</sup> Floor, RGAN
Triangle	Information Table & Assistance (throughout event)	1 <sup>st</sup> Floor, Raymond
Food – Chi Epsilon	Pizza & Soda	Basement, Raymond

## Exhibitors

Company/Organization	Location	Company/Organization	Location
Air Force ROTC	2 <sup>nd</sup> Floor Lobby, RMB	H. W. Lockner, Inc.	2 <sup>nd</sup> Floor, Raymond
Arch Coal	255, FPAT	IEEE	2 <sup>nd</sup> Floor, Raymond
ASHRAE	203, RGAN	Kaba Mas Corp.	203, RGAN
Asphalt Institute	2 <sup>nd</sup> Floor Raymond	Kentucky Transportation Cabinet	265/267, FPAT
Association for Computing Machinery	1 <sup>st</sup> Floor Lobby, RMB	KU/LG&E Power Lines Safety Demo	Basement, ASTeCC
Association of State Dam Safety Officials	2 <sup>nd</sup> Floor, Raymond	Lexmark	257, FPAT
Belcan	203, RGAN	Link-Belt Construction Equipment Company	263, FPAT
Burgess & Niple, LTD	2 <sup>nd</sup> Floor, Raymond	Martek Biosciences Corporation	2 <sup>nd</sup> Floor, RMB
Community Transport Solutions	2 <sup>nd</sup> Floor, Raymond	Mason & Hanger	2 <sup>nd</sup> Floor, Raymond
Cummins, Inc.	Basement, ASTeCC	Palmer Engineering	2 <sup>nd</sup> Floor, Raymond
East Kentucky Power	462 FPAT	Seimons Westinghouse Power Corporation	462, FPAT
Fuller Mossbarger Scott and May Engineers Inc.	2 <sup>nd</sup> Floor Raymond	Toyota	1 <sup>st</sup> Floor Lobby, FPAT
		Trane	203, RGAN

## Contests

Sponsor	Type of Contest/Time	Name of Contest	Location
KSPE	Pre-Registration Contest 9:30	Pringle Mailing	Basement, Raymond
Chi Epsilon	Pre-Registration Contest 10:00	Popsicle Stick Bridge	226, Raymond
Eta Kappa Nu	Pre-Registration Contest 9:00	Rube Goldberg	207, RGAN
ASCE	Pre-Registration Contest 11:00	Egg Drop	Basement, Raymond
AICHe	Pre-Registration Contest 9:00	Volcano	Basement, FPAT
ITE	Pre-Registration Contest 12:00	Newspaper Bridge	112, Raymond
ASME	Pre-Registration Contest	Mini Battle Wagon	12, RGAN
AIAA	Walk-up Contest	Glider	Basement, Raymond
SWE	Walk-up Contest	Edible Car	53, Raymond
FESC	Walk-up Contest	Barge Loading	2 <sup>nd</sup> Floor walkway, ASTeCC
ASCE	Walk-up Contest 11:00	Index Card Bridge	112, Raymond
SME (Mining)	Walk-up Contest	Coal Loading	255, FPAT
SAE	Walk-up Contest	Catapult Basketball	209, RMB
ASME	Walk-up Contest	Model Crane	209, RMB
SMSE	Walk-up Contest	Hair Strength Test	67, FPAT
	Walk-up Contest	Triangle Skyscraper	4th floor Lobby, RMB
CHEGSA	Walk-up Contest	Scavenger Hunt	2 <sup>nd</sup> Floor, FPAT
NSBE	Walk-up Contest	Tower Building	1 <sup>st</sup> Floor, RGAN