



February 2007

Innovative learning examples, company success stories, new course offerings, and the know-how to make it all happen for your company – that's the kind of information SAE's Corporate Learning Solutions e-newsletter promises to deliver every other month.

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## SAE satisfies increased demand for eLearning

Engineers are demanding more eLearning options, and SAE is delivering. How so? Take the launching of the new learning management system (LMS), which will enable all current and future e-Seminars to be fully available online as an alternative to CDs. The LMS will also provide SAE corporate customers with a customized learning portal linked to their particular site, allowing their engineers to access SAE eLearning courses. Plus, companies can track the progress of employees.

Engagement in SAE's e-Seminars, courses that provide a video of the instructor teaching along with synchronized slides, more than tripled between 2005 and 2006 and have sold in more than 30 countries worldwide. Moreover, a third of the participants were from outside North America. An equally interesting fact is that roughly half of these courses were delivered in bulk-quantity – directly to companies vs. individuals.

New e-Seminar titles are also under production including Vehicle Dynamics for Passenger Cars and Light Trucks, Race Engine Calibration, and Accelerated Test Methods, with more to come. Additionally, new short-duration online eLearning formats are under development.

e-Seminar features and benefits:

- save costs by no travel or time away from the workplace
- self-paced learning can be done on individual or company time
- can be used for structured group learning
- content is chunked into one-hour modules or less
- Pre-tests and post-tests provide screening and deep level learning assessment

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## Active Learning

[**ak-tiv lurn-ing**] – noun

Anything that involves the learner in doing things while thinking about what they are doing

Read on about SAE's new seminars, Applied Brake Controls and Vehicle Frontal Crash Occupant Safety and CAE, for examples of this philosophy.

### The crash test classroom – Vehicle Frontal Crash Occupant Safety and CAE Seminar

When she was thrown from her automobile on August 31, 1869, Mary Ward of Parsonstown, Ireland, tragically lost her life and became what is believed to be the first recorded victim of a motor vehicle accident.



Unfortunately, the fatalities associated with motor vehicle accidents didn't stop there, and have since obligated car companies and suppliers to make every effort to find a means of analyzing and mitigating the effects of accidents on occupants.

Safety standards have recently become more complex due to new regulations, and with more complexity comes more challenges for the engineers who design the various vehicle components. Additionally, new restraint technologies are being developed and engineers need to understand how they can better protect occupants. This new seminar, [Vehicle Frontal Crash Occupant Safety and CAE](#), allows the student to see firsthand how vehicle frontend stiffness and restraint system affects occupant response.

Students can simulate the effects of crash pulses and restraint characteristics on occupants by making adjustments to a model crash vehicle's frontal structure and restraint stiffness using energy absorbing paper blocks. An acceleration recorder is used to document occupant response; the data is then entered into computers to further evaluate the correlation of stiffness and impact on the passenger, plus it provides a total overall picture of restraint, components, and impact on the occupant.

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### Applied Brake Controls: the fast lane to interactive learning

Observers watch with baited breath as the sleek red vehicle enters turn two. Suddenly, the driver loses traction and skids across the slick, frosty track. Reacting quickly, he rights the vehicle by using just the right touch of steering and throttle. As he brings the car back in line to maintain position on the course, he smiles with satisfaction....

No, it's not NASCAR, or any kind of race for that matter. But to most engineers, a chance to slide cars around on the icy test track of the new Applied Brake Controls seminar is probably just as good! As the latest in "driving courses" that debuted in January 2007 at Continental's Brimley Development Center in Brimley, Michigan,

attendees operate cars under the tutelage of skilled driving instructors in order to experience the concepts of ABS, traction control, and stability control that were previously discussed in the classroom. Exercises are purposefully crafted to demonstrate how the vehicles behave differently when these systems are engaged and disengaged.

These types of highly interactive courses are SAE's most favorably evaluated and attended seminars.

Applied Vehicle Dynamics is another driving course that has proven to be extremely popular. Similar to the design of the Applied Brake Controls seminar, it's held at both the BeaveRun Motorsports Complex in Pennsylvania and the BMW Performance Center in South Carolina. The principal instructor for both courses is James Walker, Jr., an experienced engineer and accomplished teacher in the brake controls arena.

For more details, [click here](#) to visit SAE's vehicle dynamics course listings.

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## New courses

Coming soon! New seminars on the following topics:

- Systems Engineering
- Engine Oils
- On-Board Diagnostics

To request additional information about new course offerings, email [bhoerner@sae.org](mailto:bhoerner@sae.org).

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## Instructors Wanted

SAE Professional Development is seeking experienced engineering professionals with industry/academic backgrounds to propose, develop, and instruct seminars covering all technical areas, including:

- Vehicle Safety Systems
- Accident Investigation
- Composite & Plastic Materials
- Electronics
- Alternative Fuels
- Sheet Metal Stamping
- High Strength Steels
- Automotive Testing

Other technical areas will also be considered.

The potential seminar instructor must have experience in either the engineering field, academia, or both (preferred). All submitted seminar proposals will be evaluated by a Technical Review Committee to ensure high quality and value to the engineering community.

Interested individuals should contact:  
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