

EcoCAR 3

ADVANCED VEHICLE TECHNOLOGY COMPETITION

ABOUT EcoCAR 3

EcoCAR 3 is the latest U.S. Department of Energy (DOE) Advanced Vehicle Technology Competition (AVTC) series. As North America's premier collegiate automotive engineering competition, EcoCAR 3 is challenging 16 North American university teams to redesign a 2016 Chevrolet Camaro to even further reduce its environmental impact, while maintaining the performance expected from this iconic American car.

Sponsored by DOE and General Motors and managed by Argonne National Laboratory, EcoCAR is the heart of American automotive ingenuity, innovation, and is the ultimate training ground for minting future automotive leaders.

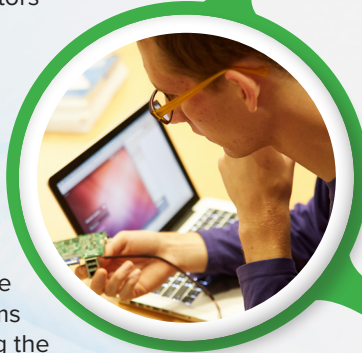
The sixth-generation Camaro is the most technologically advanced in the vehicle's history, and EcoCAR 3 teams will be tasked with further enhancing the vehicle by applying the latest cutting-edge technologies and incorporating new innovative ideas. Teams have four years (2014-2018) to harness those ideas into the ultimate energy-efficient, high performance vehicle.

EcoCAR will seed the automotive and related industries with hundreds of highly-skilled engineers, business leaders and communicators who will bring their enthusiasm and ingenuity into the American workforce. Automakers and other top employers are vying for such talent, and this launching pad moves students from academia to the working world-blazing the trail for generations to come.

FEATURES OF EcoCAR 3

EcoCAR 3 teams will follow the EcoCAR Vehicle Development Process and establish a plan for research and development, analysis, and validation of the vehicle design. EcoCAR 3 teams will have the opportunity to get hands on experience working in many vehicle technology areas, such as:

- ▶ Energy Storage System design and integration
- ▶ Hardware and Software-in-the-Loop simulation and testing
- ▶ Human-Machine Interfacing (HMI) for infotainment & displays
- ▶ Vehicle connectivity and embedded control systems
- ▶ Powertrain component bench testing
- ▶ Use of vehicle modeling and simulation tools
- ▶ Improving aerodynamics





TECHNICAL GOALS

The Camaro is a thrill behind the wheel, and now the EcoCAR students are in the driver's seat. They have four years to design and integrate vehicle powertrains and alternative fuels, that when compared to the production Camaro, will further:

- ▶ Reduce energy consumption;
- ▶ Reduce well-to-wheel GHG emissions;
- ▶ Reduce criteria tailpipe emissions;
- ▶ Maintain consumer acceptability in the areas of performance, utility, and safety;
- ▶ Meet energy and environmental goals, while considering cost and innovation.



EcoCAR 3 SCHOOLS

Arizona State University
 California State University – Los Angeles
 Colorado State University
 Embry-Riddle Aeronautical University
 Georgia Institute of Technology
 McMaster University
 Mississippi State University
 Ohio State University

Pennsylvania State University
 University of Alabama
 University of Tennessee, Knoxville
 University of Washington
 University of Waterloo
 Virginia Tech
 Wayne State University
 West Virginia University

SPONSORS

VISIONARY	LEADERSHIP	SUSTAINING	SUPPORTER	CONTRIBUTOR

CONTACT

Kristen De La Rosa, Director
 Advanced Vehicle Technology Competitions
 Center for Transportation Research
 Argonne National Laboratory
avtc@anl.gov

AVTC HISTORY

Since 1988, the U.S. Department of Energy has sponsored AVTCs through Argonne National Laboratory. These competitions represent a unique coalition of government, industry and academic partners who join forces to explore sustainable vehicle solutions. Argonne manages these competitions to educate the next generation of automotive engineers and accelerate the development and demonstration of technologies of interest to the DOE and the automotive industry.

