

2009 - 2010

FORMULA SAE COMPENDIUM



PURDUE



FORMULA SAE

WHAT IS FORMULA SAE?

Design

Formula SAE (FSAE) is a student design competition sanctioned by the Society of Automotive Engineers. Adhering to rules published by SAE International, students use their creativity and engineering skills to design, build, and race a small, Indy style race car. Restrictions are placed on overall dimensions, engine, and tire sizes. Students are encouraged to apply their design ideas and engineering theories to the rest of the car's design.

International Competition

Teams from all over the world compete at three United States competitions. There are competitions in Virginia, Michigan, and California. Each competition not only attracts students but also many spectators, industry professionals, and businesses from many industries. Designs are scored by industry professionals based on three static events and four dynamic events.

Design, Build, Test

Our team manufactures each component of our vehicle, and we build a new vehicle every year. This one year time frame requires our team to expertly navigate a complex design and build schedule to ensure that there is enough time to test and validate our vehicle.



Formula SAE Competition

Static Events:

Business Proposal (7.5%)

Manufacturing Cost (10%)

Technical Design Review (15%)

Dynamic Events:

Acceleration (7.5%)

Skid Pad (5%)

Auto-cross (15%)

Endurance (30%)

Fuel Economy (10%)

Vehicle Summary:

Performance

◆ 0-60 mph in 3.7 sec

◆ 1.4g Lateral Acceleration

Specifications:

◆ 409 lbs

◆ 600cc Honda Engine

◆ 6 Speed Transmission

◆ Pull rod activated suspension





GLE

35

KAYDON

Purdue M
Engin

MACH



ALCOA

GOODYEAR
RACE

PURDUE



FORMULA SAE

ABOUT OUR TEAM

Our Team

Purdue University is renowned world-wide for its engineering program. Members of the Purdue FSAE team combine this excellent theoretical background with strong hands-on skills to create a well engineered race car each year. By utilizing good engineering skills and state of the art analysis tools, the team produces outstanding and innovative designs year after year. Our team is comprised of mechanical engineering students as well as other disciplines from technology to accounting.

Purdue FSAE Strengths and Skills:

Members of our team have experience with and work actively in the following areas:

- ◆ Leadership
- ◆ Project Management
- ◆ Time Management
- ◆ Technical Knowledge and Skill
- ◆ Design Creation and Analysis
- ◆ Computer Modeling and Manufacturing (CAD and CAM)
- ◆ Machining Skills (Lathe, Mill, Hand Tools, CNC, etc.)



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OUR HISTORY

History

Purdue Formula SAE's recent history began in 1992. The team has worked and evolved for over a decade. The main goal has always been improvement. Each year, designs are improved upon, and challenges are overcome.



2007



2008

Brief Purdue FSAE History:

- ◆ 2009 FSAE East Competition, 4th Overall
- ◆ 2008 FSAE East Competition, 5th in Design
- ◆ 2007 FSAE West Competition, 4th Overall
- ◆ 2001 FSAE East Competition, 9th Overall



2009







BECOMING A SPONSOR

What Sponsorship Means To Our Team

Sponsorship of Purdue FSAE means that your company supports our program and our goals. By making a donation of time, parts, material, equipment, or funds, you are supporting our students in a great learning opportunity. Sponsorship will also build a connection between your company and future members of industry.

Why We Need Sponsors

Our cars are completely student designed and built. This includes obtaining funding for the entire project. The budget for a FSAE car can range between \$30,000 to \$40,000 per year. Depending on material and design changes, our budget fluctuates each year. In order to meet our design standards and remain competitive, we need funding to purchase our materials and supplies.

Benefits Of Being A Sponsor

As our sponsor, your company will receive both recruiting and advertising benefits. All of our sponsors have access to recruit students for employment in internships or full time. You have the option of using email, visiting our shop, or speaking at a meeting. Your company can also reach audiences outside of our team, by placing your logo on our website and car. Gold and Titanium level sponsors can take their marketing one step further by utilizing team photos and videos in advertisements.

How To Become A Sponsor:

- ◆ Contact Purdue FSAE to discuss the type of donation you would like to make
- ◆ Ask us about the opportunities we have for companies to be involved with our team
- ◆ Make your donation by mailing a check to the address on the back of this packet, or by contacting us to arrange a time to meet regarding parts, material or time donations



LEVELS OF SPONSORSHIP

Contribution Levels

Any level of sponsorship is greatly appreciated by our team. The sponsorship levels shown below reflect the benefits for each donation level. We would like all of our sponsors to see the difference their donations have made to our team, so our shop is always open to sponsor visits. In addition, each level above Patron will receive advertising opportunities.

Benefits Of Being A Sponsor:

- ◆ Access to recruit our team members through our email list
- ◆ Visitation of our shop during any normal operating hours, contact us for more details
- ◆ Presentation time at our team meetings to recruit for employment
- ◆ Gold and Titanium Level: Use of team videos and photographs

CONTRIBUTION OR EQUIVALENT VALUE	\$0 – 249	\$250 – \$2,999	\$3000 – \$7,499	\$7500 – \$11,999	\$12,000+
SPONSOR LEVEL	PATRON	BRONZE	SILVER	GOLD	TITANIUM
EMPLOYMENT RECRUITING OPPORTUNITIES					
ACCESS TO TEAM RECRUITMENT EMAIL					
ACCESS TO VISIT TEAM SHOP					
PRESENTATION TIME AT TEAM MEETINGS					
ADVERTISEMENT OPPORTUNITIES					
WEBSITE LOGO DISPLAY					
SMALL COMPANY LOGO ON CAR					
MEDIUM COMPANY LOGO ON CAR					
LARGE COMPANY LOGO ON CAR					
TEAM AND CAR FOOTAGE ACCESS					
CENTRAL AREA ON CAR					
T-SHIRT LOGO DISPLAY					



Working in the machine shop



Reviewing race data



Inspecting the car after a run





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