

Ryerson

Formula SAE

*Sponsorship
2007-2008*



Ryerson Formula SAE Sponsorship Proposal

We here at the Ryerson University Formula SAE Team would like to Thank-You for your interest in the 2007-2008 Formula SAE Team. This year we are building RF-08 from the ground up, for those of you who do not know we name our car RF-08 meaning Ryerson Formula SAE and 08 for the 2007/2008 year.

We would like to offer you the opportunity to contribute to the **2007/2008 Ryerson University Formula SAE Team** and help us reach our goals. Through your sponsorship of the Team, you or your company will obtain exposure to thousands of future graduates representing hundreds of international universities with thousands of students participating from over 140 universities worldwide. Not only will there be exposure to university students but there are a large audiences at each of the events that we attend. We are pleased to announce that the Ryerson University Formula SAE team 2007/2008 will be participating in the **Formula SAE event in Detroit Michigan at the Michigan International Speedway, on May 13-18, 2008**. We are also excited about taking Ryerson's Formula SAE Team overseas again this year to compete in the **Formula Student event in England at the famous Silverstone Racetrack, on July 10-13, 2008**. On top of these competitions the Ryerson Formula SAE Team will be taking the RF-08 to the Ontario University Fair as well as numerous events at Ryerson University including National Engineering Week and Go-Eng-Girl. We also are planning on obtaining booths at the Toronto International Auto Show and The Steelback Grand Prix of Toronto.

While mainstream advertising may have the greatest reach, your involvement with the Ryerson University Formula SAE Team and being at Formula SAE events instantly marks your company as a progressive player in the industry. Not only will relevant persons see your advertisements, a new generation of engineers and technicians will enter the field with knowledge of your company. This year's exposure coming from the Ryerson University Formula SAE Team is going to be one the most ambitious advertisement campaigns that we have ever seen.

Enclosed is our proposal, You will find all relevant information regarding the team and the competitions as well as how you can help support our team. Should you require any additional information or would like to discuss this opportunity further, please do not hesitate to contact me or any of the contacts on the contacts page in this proposal. Any level of sponsorship being goods, services, or in-kind gifts are greatly appreciated. Again we would like to Thank-You for taking the time to look through our proposal and we look forward to speaking with you soon.



Best Regards,

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Introduction

Since 1982, the society of automotive engineers (SAE) has been host to an engineering collegiate design competition known as Formula SAE. Formula SAE has grown to host many international races taking place on 4 different continents. The Formula SAE event held in Michigan is an annual event that is sponsored by the "big 3" automotive manufacturers: General Motors, Ford Motor Company, and Daimler Chrysler.

For this competition, students are required to design and build a small formula style racecar. Through this process many students on the team are exposed to industry critical skills encompassing but not limited to experience in the machine shop, fabrication, design, project management, marketing, team building, budgeting, and time management. Students must also contend with other real life engineering, business and marketing problems as well as other hard and soft skill challenges. Team members receive experience with professionalism and with practical engineering with a keen awareness of the often pressures of performance, cost, safety, reliability, regulatory compliances and deadlines. The experience for team members is immense and unlike any other experience that a student would receive in a real life situation. The skills that team members develop are an asset to any newly graduated team member preparing to enter into any career.

Ryerson University Formula SAE Team first designed, manufactured and raced it's first car in 1994. Since, then the team has manufactured nine more cars for Formula SAE competition. The first five cars entered did not see favourable results, however through continuous evolution of the first design and many more design iterations the team was able to achieve a **10th place finish out of 140 entrants**, which include M.I.T., Cornell, and Helsinki Polytechnic, at the Michigan Formula SAE competition in 2005. The team also has 2 other notable finishes ranking 23rd of 125 teams finishing 2nd in Canada in 2003 and ranking 24th of 134 teams in our 2004 campaign.



SAE International

The society of automotive engineers has more than 84,000 members - engineers, business executives, educators, and students from more than 97 countries - who share information and exchange ideas for advancing the engineering of mobility systems. SAE is your one stop resource for standards development, events, technical information and expertise used in designing, building, maintaining and operating self propelled vehicles.

SAE's Vision

Advancement of the mobility community to serve humanity, this includes capable practitioners worldwide in the land, sea, air, space, government, industry, education and a worldwide network of technically informed mobility practitioners.

Improved Processes and systems for mobility product life cycles with a focus on total life cycle. Specifically, SAE wants to meet the needs of mobility practitioners who serve in all five phases of the product life cycle. These phases include; design, manufacturing, operations, maintenance and disposal/recycling.

A culture that fosters innovation, creativity and timely response to change, social responsibility and user satisfaction with a focus on a better natural environment for the benefit of future generations.

SAE's Purpose

SAE is a non-profit educational and scientific organization dedicated to advancing mobility technology to better serve humanity. Over 84,000 SAE members develop technical information on all forms of self propelled vehicles including automobiles, trucks, buses, off-highway equipment, aircraft, aerospace vehicles, marine, rail and transit systems. SAE disseminates this information through it's meetings, books, technical papers, magazines, standards, reports, professional development and electronic databases.

SAE in the community

Everyday, SAE demonstrates their commitment to society through local national, and international public awareness programs that promote vehicle safety, maintenance and energy resource conservation. SAE is also deeply involved in the engineering related education of children, teachers, university students and faculty. Industry and faculty awards provide recognition to outstanding contributors in the profession.



2008 Formula SAE

Competition Objective

The Formula SAE competition is for SAE members to conceive, design, fabricate and compete with a small formula style racecar. The restrictions on the car, frame and engine are limited so that the knowledge, creativity and imagination of the students are challenged. The car is built with a team effort over a period of a year and is taken to competitions for judging. The end result is a great experience for students in a meaningful engineering project as well as the opportunity of working in a very dedicated team effort.

Vehicle Design Objectives

For the purpose of this competition, the students are to assume that a manufacturing firm has engaged them to produce a prototype car for evaluation as a production item. The intended sales market is the nonprofessional weekend autocross racer. Therefore, the car must have very high performance in terms of acceleration, braking and handling qualities. The car must be low in cost, easy to maintain and reliable. In addition, the cars marketability is enhanced by other factors such as aesthetics, comfort and use of common parts. The manufacturing firm is planning to produce 4 cars per day for a limited production run and the prototype vehicle should actually cost below \$25,000. The challenge to the design team is to design and fabricate a prototype car that best meets these goals and intents. Each design is compared and judged with other competing designs to determine the best overall car.



Judging Categories

The cars are judged in a series of static and dynamic events including; technical inspection, cost, presentation, engineering design, solo performance trials and high performance track endurance. These events are scored to determine how well the car performs. In each event, the manufacturing firm has specified minimum acceptable performance levels that are reflected in the scoring equation. Points are allocated for these categories:

Static

Presentation	75
Engineering Design	150
Cost Analysis	100

Dynamic

Acceleration	75
Skidpad	50
Autocross	150

Fuel Economy	50
Endurance	350

Total	1000
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2008 Formula Student

SAE organizes a series of annual Formula competitions worldwide including Formula Student in England and Formula Australia in Australia. All Formula competitions are open to any registered university team and feature schools from countries worldwide in a showdown to determine the best designed car based on standings in both static and dynamic events.

While Formula SAE is a North American based competition, it has proven to be an international success. Formula SAE West located in California looks build upon the success of established Formula SAE competitions by providing another opportunity for teams to compete in North America.

Formula Student gives excellent exposure to the global automotive industry. Teams represent their country, their schools, their sponsors and themselves. All parties involved are interrelated and success is largely dependent upon the team's performance at the competitions.

Formula SAE and Formula Student competitors are a truly international group and travel from their homelands to compete at the Formula SAE and Formula Student competition worldwide. Many teams from around the world race against the clock to finish their cars and battle with financial resources and demanding schedules to complete their cars each year and by doing so, a standard is set that is constantly being raised with every passing competition and successful design.

Last year, Ryerson Formula SAE competed in the Formula Student Competition in Silverstone, England where the team placed an impressive [13th in the acceleration run](#) and a [10th place finish in the skidpad event](#). The team looks forward to build on last years success heading into this year's competition.



Ryerson FSAE History

Since the Team's inception in 1994, Ryerson Formula SAE Team has fielded nine cars. The cumulative knowledge and expertise passed down from season to season has helped the Ryerson Formula SAE Team garner three top 30 and a top 10 finish.

2006-2007 (RF-07)

Accomplishments

- Top 30 finish at Formula Student, Silverstone, U.K.
- Acceleration run 13th place
- Skidpad 10th place

Technical Highlights

- Highly advanced Data Acquisition
- Carbon Fibre Suspension



2005 (RF-05)

- Hybrid Tubular-Panel Chassis
- Modular Rear-end

In the 2005 competition, the team secured a 10th place finish overall and 2nd in Canada. In addition to this outstanding overall finish, the car also placed 12th in the very rigorous and demanding design competition.



2004 (RF-04)

- FEA optimized 4130 Steel Chassis
- Bonded in Aluminum Honeycomb Panels

At the 2004 competition the Team finished 24th overall, 4th in Ontario and 5th in Canada. The team was pleased to find out that we finished with more points overall than any of the previous years, proving that the team had improved.



2002-2003 (RF-03)

- Carbon Fibre Monocoque Chassis
- Modular Rear-end
- Yamaha R6 motorcycle engine

In 2002, the team committed to a two-year project in order to improve the design and fabrication process. These improvements paid off at the 2003 competition where the Team enjoyed its then best success to date by finishing 23rd overall. This result placed the Team 1st in Ontario and 2nd in Canada.

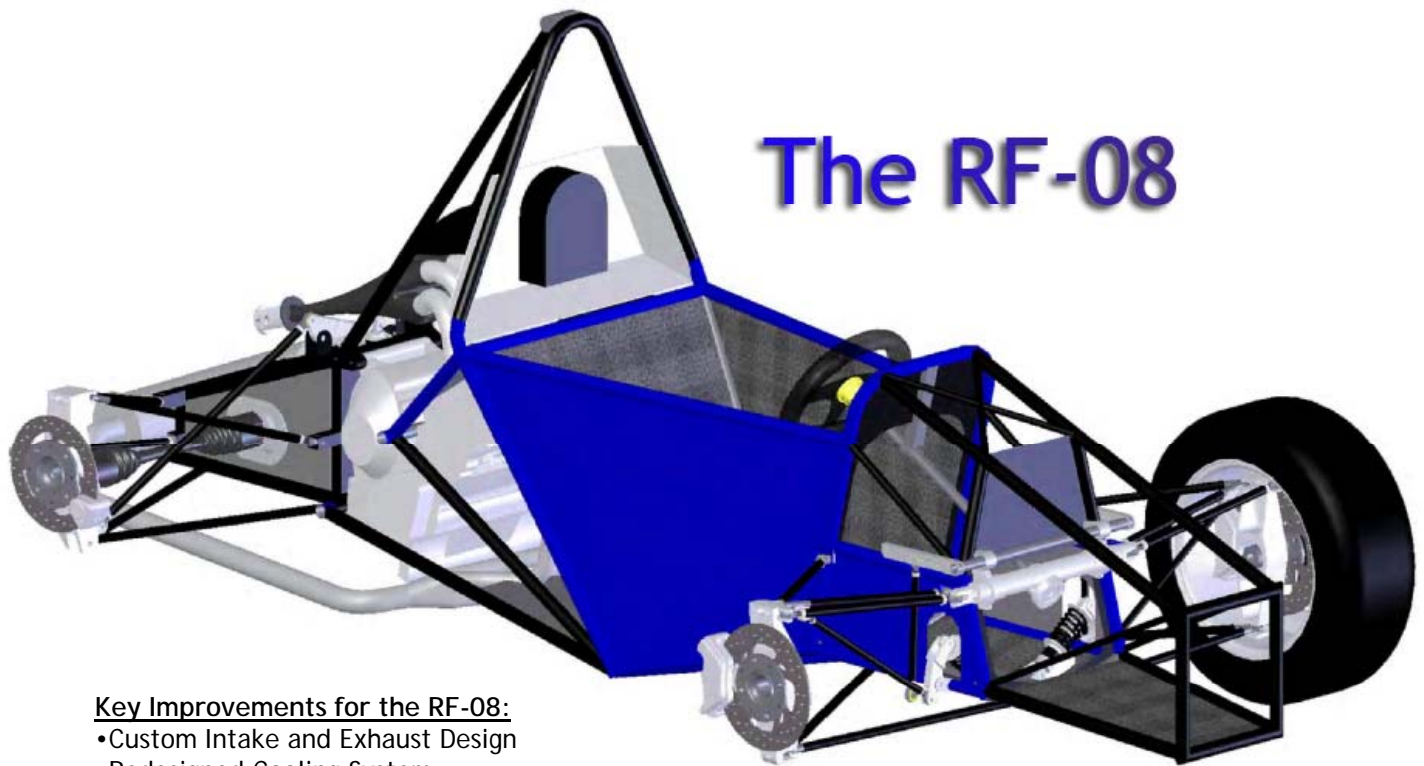


2008 Ryerson FSAE Car

Ryerson Formula SAE is looking to build upon the success of the 2006-2007 campaign and RF-07. With newly redesigned systems and innovations to reach our performance goals, the Team is confident in producing a highly competitive and marketable racecar.

Our main focus this season is to fine tune the engine to help increase the power and reliability of the Yamaha R6 Engine. A redesigned drivetrain including a clutch-packed Salisbury differential which is replacing the classic Torsen Audi A4 differential which was used for years by the Ryerson Formula SAE Team. Other improvements include a custom intake and exhaust system specifically designed for the RF-08.

The Ryerson Formula SAE 2008 Car:



Key Improvements for the RF-08:

- Custom Intake and Exhaust Design
- Redesigned Cooling System
- Clutch Packed Salisbury Differential
- Custom Steering Rack
- New Data Acquisition System



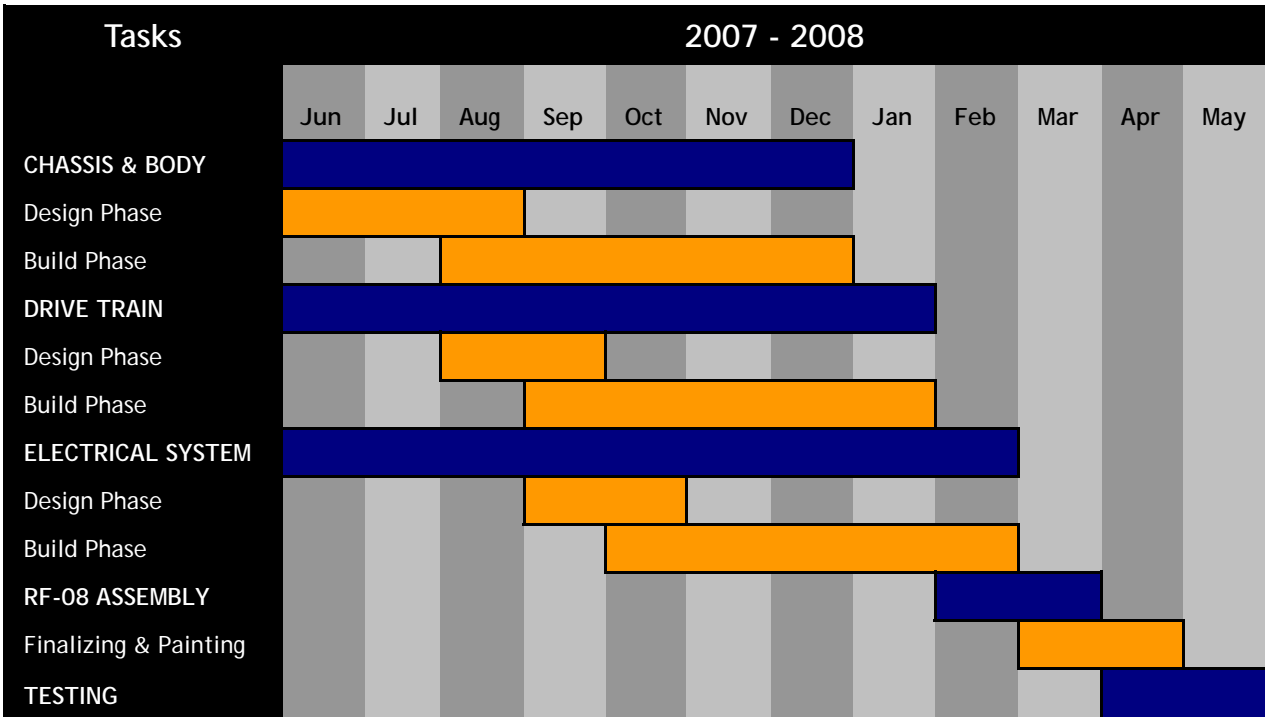
Facilities at Ryerson

The members of Ryerson University Formula SAE team pride themselves on having a clean, well organized, professional and functional fabrication shop.

Team members that have received full training have full access to an on-site machine shop. This shop is conveniently located directly adjacent to the team's fabrication shop. New members are trained and taught by senior members to become productive members of the team learning how to use all of the shops tools including; mills, lathes, drills, sheet metal breaks, band saws, grinders, welders and many other standard shop tools.



Schedule for RF-08



Major Events & Competitions

Toronto International Autoshow
 Formula SAE (Michigan International Speedway)
 Formula Student (Silverstone, U.K)
 Steelback Grand Prix of Toronto

Feb 15th - 24th 2008
 May 14th -18th 2008
 July 10th -13th 2008
 July 7th -10th 2008

Other Notable Events & Appearances

Frosh week at Ryerson University
 Ontario Universities Fair
 Go Eng Girl (Hosted by Women in Engineering)
 Various Autocross Events and Track Days

Aug 25th - 29th 2008
 Sept 26th - 28th 2008
 Oct 13th 2008
 Throughout April and May 2008

The 2008 Ryerson Formula SAE Car (the RF-08) is Projected to be Unveiled on March 21st, 2008



Budget Projection

Expenses (all figures CDN \$)

Chassis, Body and Suspension	26,120
Drive Train	11,150
Electrical System	4,700
Testing	23,700
Competitions	27,600
Tools and Machine Maintenance	3,790
Team Uniforms	3,250
Competition Displays	1,050
Total	101,360*



Chassis, Body and Suspension

The new Chassis on the RF-08 is being designed around the feedback given from the Team's drivers and the judges in the 2007 competitions. The main object of the new chassis is to reduce weight and assembly time. These improvements will increase design points in the 2008 competitions while at the same time increase torsional rigidity. The suspension is being iterated to allow for better handling during tight cornering.

Electrical System

The new electrical system includes a custom gauge cluster unique to the RF-08. This system will also improve the data acquisition system which will be used for further development of the car from testing. Also, new to the electrical system will be a custom fuse box designed for easy access and reduced volume.

Competitions

The team is projected to compete in two major competitions including the Formula Student competition in Silverstone, England and the Formula SAE competition at the Michigan International Speedway.

Drive Train

The new engine for the RF-08 will be a 2007 Yamaha R6 engine. The new engine offers a lighter magnesium head and an additional 20 horsepower. The differential is being changed to a clutch packed salisbury type which allows the torque-bias ratio to be adjusted. Also the new drive train will allow the centre of gravity of the entire car to drop two inches.

Testing

The testing budget compensates for the rental of a test facility for 10 full testing days. This budget is also for the purchase of testing equipment including driving suits, gloves and shoes which are all fireproof. Also the team is interested in purchasing a trailer as opposed to renting vehicles.

Tools and Machine Maintenance

The majority of the RF-08 is built in-house. Much of the machinery requires new cutters, mills, drills, taps, etc.

**For a detailed budget, please contact us*



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Benefits of Sponsorship

Official Receipt of Donations

- All cash donations and gifts-in-kind are income tax deductible and an official receipt of donation will be issued.

- Gifts-in-kind are non-cash gifts which include parts, equipment and materials. Donating services such as time and effort is not transfer of property, and as a result, an official donation receipt cannot be issued. The donation is still greatly appreciated.

- Ryerson University Formula SAE Team can pay for services rendered and later then accept the return of all, or part, of the payment as a donation. In this situation the team can issue an official receipt but the donor has to declare this income when filing an income tax return.



- By supporting Ryerson University Formula SAE Team you will be giving students the opportunity to learn and participate in this very prestigious competition. As a sponsor you will achieve the following:

- International Exposure to thousands of the future generation of engineers and many other students at the Formula SAE competitions attended by this team in Detroit and England.

- National Exposure to over a half million people at events such as: Steelback Grand Prix of Toronto, Toronto International Auto Show Autocross Events across Ontario and Quebec offering exposure to the "tuner" crowd Ontario University Fair at the Metro Toronto Convention Centre

- Exposure on campus at Ryerson University during Frosh week, National Engineering week as well as many other event throughout the school year

- The opportunity for long term exposure as a sponsor on our team uniforms used at all events attended by the team

- Differentiate your product from competitors we can provide your company with a competitive selling advantage

- Combat larger ad budgets of sponsorship to traditional media advertising allowing smaller companies to compete with larger companies

- Image Enhancement/Lifestyle Association Sports and entertainment are an emotional part of consumer's life. When your message is aligned to a personality or an event, your message can gain an edge over the competitors.



Types of Sponsorship

Sponsorship can be in many different forms and any consideration is greatly appreciated since it will help Ryerson University Formula SAE team reach our goals.

Donations, Service, Materials: What will it be used for? How will it be used? What is needed?



Cash Donations: Cash is used to purchase parts and equipment as well as pay for entrance fees into competitions as well as travel expenses and accommodations during competitions

Machine Time: Numerous parts on the car are custom design to optimize weight and use and need to be machine on CNC lathes and 3 or 5 axis mills

Material Donations:

Aluminum	6061, 7075, 5052
Steel	4130, 4340, 1040
Carbon Fibre	Nomex Panels & Fabric

Parts Donation/Discount: Motorcycle and Automotive parts

Technical Support

Tools and Any Other Shop Related Equipment are always needed and appreciated



Conclusion

The entire Ryerson University Formula SAE Team would like to Thank-You for taking the time to review our proposal. We feel that this is a great opportunity for us to forge and strengthen our relationship which would be beneficial to both of our organizations.



Sponsoring Ryerson University Formula SAE Team will allow you to create a lasting impression of commitment to the well-being of Ryerson's Students. This year, we will be providing the most coverage in recent years with all the events and conferences that we will be attending giving you maximum exposure.

We know all of our sponsors expect nothing but the best from us and we accept nothing less than that from our team. Great improvements to the car and excellent additions to the team give us great confidence for a very strong showing this season at the Formula Events.



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Ben Flynn
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4th Year Mechanical Engineer

Assistant Captain
Eric Stevens
3rd Year Mechanical Engineer

Electrical & Engine
Edwin Steele
3rd Year Electrical Engineer

Exhaust & Cooling
Oggie Glisic
4th Year Mechanical Engineer

Throttle Body
Daniel Hayek
4th Year Aerospace Engineer

Intake
Dasha Scherbakova
4th Year Aerospace Engineer

Crash Box
Jonathan Zalger
4th Year Aerospace Engineer

Steering Rack
Rob Kingston
3rd Year Mechanical Engineer

