

General Information

Students will be chosen to participate in the *IMPETUS for Career Success* program based on:

- **Economic eligibility**
- **Student aptitude and interest** in mathematics and science
- **Recommendation** from teacher and/or principal
- **Student commitment:** students are expected to participate for the life of the grant or their graduation from high school
- **Parent commitment:** parents are strongly encouraged to become involved with the activities at school and to attend the monthly CU activities. Family members are invited to the roller coaster competition day and the summer camp showcase day.



CLARKSON UNIVERSITY CONTACT INFORMATION

For more information contact:

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Or Call

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Visit IMPETUS on Facebook



<http://facebook.com/impetusprogram>



CLARKSON UNIVERSITY



ABOUT IMPETUS

SUMMER CAMP

SCHOOL YEAR EVENTS

The **IMPETUS** (Integrated Mathematics and Physics for Entry To Undergraduate STEM) **for Career Success** is an after-school program for students in grades 7—12 who are interested in mathematics, science and technology.

Each week IMPETUS members meet to work on projects and to develop their own roller coaster. Juniors and Seniors also have the opportunity to design and conduct their own original research projects.

IMPETUS members come to the Clarkson campus once a month for special activities, such as the Science and Engineering Festival and Pi Day. Clarkson students visit schools to provide hands-on support for the projects and to tutor middle school students in Math.



Building a solar car was a popular activity at the Science and Engineering Festival.

High school students have the opportunity to explore different career paths, including the high school classes required to enter college. They also explore the classes that are needed for Science, Engineering and Math major.

IMPETUS participants who go to college are eligible for financial and academic support through the C-STEP program. This program is available at most colleges. So the benefits of participating in IMPETUS reach beyond Clarkson University and are long lasting!

Roller Coaster Summer Camp

The Roller Coaster Camp is a full week of exciting activities on the Clarkson campus. Students work in teams or companies to design and test their own roller coasters. Students also program and ride their own coaster with our VR2002 Virtual Reality Coaster. The camp includes a day-long trip to Six Flags Great Escape in Lake George, NY to research and collect data on real roller coasters. The visit to the amusement park often includes a presentation by Frank Hardick, a roller coaster engineer who designed many of the rides at the park, including reconstructing the wooden roller coaster, The Comet. The camp includes a showcase day for family, friends, and teachers to see what the campers have achieved over the week! This day includes additional games and challenges. The camp concludes with an awards ceremony.



Trying to find the right height for hills is part of the problem solving at Roller Coaster Camp.



**JOIN
THE
FUN!**

Roller Coaster Competition

During the school year, students design and build working roller coaster models to be presented at a competition held at Clarkson University. The roller coasters may have themes, such as Candy Landslide, Polar Ice Express, or Sun Ship, that demonstrate creativity as well as technical merit. A panel of judges will award a trophy to the team that scores highest on the four categories: Time, Bonus Points, Theme, and Rider Enjoyment.



In 2011, top honors in the roller coaster competition went to North Country Racing from Colton-Pierrepont Central School.

Research Project Competition for Junior and Seniors

This is a challenge for upper class students! They select a topic, and design and carry out a research project. A panel of judges from Clarkson will select the best abstract. The winning students are eligible to attend the STEP Student Conference in Albany. North Country students has won awards for the past five years!

Harrisville Central School students took second place at the 2012 NYS STEP Conference. Their research focused on the differences in cell phone use between males and females.

