



MATERIALS ENGINEERING CAMPSM

August 3-7, 2009
Peoria, Illinois

ATTENTION: High School Students!

Who:

- Students entering their Junior or Senior year of high school, in Fall 2009.
- Students involved in math, science and industrial technology classes.
- Highly motivated, inquisitive learners, with math and science aptitude.

What:

- Weeklong, summer camp utilizing hands-on learning experience, involving math, physics and chemistry.
- A very unique team-based, intensive problem solving, science experience, under the direction of a distinguished faculty "Materials Mentor".
- Combination of mini-demonstrations, field trips, and extensive involvement in laboratory facilities, to actively explore materials science & engineering principles.

Where & When:

- August 3-7, 2009
- 8:30am - 4:00pm
- Bradley University, Various Caterpillar Facilities, Plant Tours of Local Industries

Cost:

- Students receive FREE tuition, knowledge, meals and entertainment.

How to apply:

- Applications are available on-line, and are due by **June 12, 2009**.
<http://www.asm-afs-peoria.org>
- Required information includes one letter of recommendation.

Who decides?

- Students must have basic knowledge of algebra, chemistry, and physics and describe why they want to learn more about engineering and materials science as a possible college major and career.
- Prior participation in science fairs and engineering programs is helpful, but not required.
- Experienced, practicing engineers review each application to select the "best and brightest", highly motivated students, who have an interest in engineering.

Questions?

For more information on Materials Camps around the US:

http://www.asminternational.org/Content/NavigationMenu/ASMFoundation/Materials_Camp/Materials_Camp.htm

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Frequently Asked Questions

What is Materials Engineering Camp?

- A weeklong summer camp geared toward high school juniors and seniors exploring the exciting field Material Science and Engineering.
- A day camp (non-residential), starting at 8:30 am and running to 4:00 pm.
- A unique, team-based, hands-on, problem-solving, scientific experience.
- A combination of mini-projects, field trips, and opportunities to work with a team and "Materials Mentors", to creatively solve a materials problem, such as:
 - How can we make plastics out of plant-based materials instead of petroleum?
 - Is this roller blade wheel material worth its cost?
 - Are the more expensive work tools more durable, and why?



Where is the Camp located?

- The students will meet at the Bradley University Campus on Monday.
- For the remainder of the days, (Tuesday, Wednesday, and Thursday) the students will be working at various assigned materials labs in the area, including Bradley University and Caterpillar.
- A graduation ceremony will be held for all students on Friday at Caterpillar.
- There will also be plant tours of local materials engineering industries. (Transportation provided.)
- The students are responsible for providing their own transportation to their assigned locations.
- A more detailed itinerary will be provided on the first day of the Camp.

What types of people work in this field?

Materials engineering professionals are typically college graduates who studied engineering with an emphasis on metals, ceramics or polymers.

What is ASM International?

It is a global professional membership of 40,000 professionals working in the field of Materials Science and Engineering.

What is the ASM Materials Education Foundation?

A non-profit organization devoted to helping excited young people worldwide to explore the field of Materials Science and Engineering. Programs include: Educational and career services, "Materials Camps," scholarships, leadership training, and providing information that promotes careers in the field.

Who pays for Materials Camp?

The ASM Materials Education Foundation, the Peoria Chapter of ASM, and local industries provide funds for all expenses, including food, tuition and tours.

What do students learn at Materials Camp?

Students have the opportunity to solve problems in a fun, hands-on environment with their peers: The basic question they seek to answer is: "...why did a material fail to provide the intended use?" During their week of learning, students will have the opportunities to interact with adults employed in the industry and use a wide variety of sophisticated analysis techniques used by engineers every day. At the end of the Materials Camp, the students will walk out with the rich experience of having solved a real life materials problem in a stress-free learning environment.

How many students are selected?

20 full scholarships are provided for each session of Materials Camp.

How much does the Materials Camp faculty get paid?

Faculty members are all volunteers, who often take personal vacation time to enable their participation.

