

UNITED STATES NAVAL ACADEMY *Admissions*

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Summer STEM (Science, Technology, Engineering, Mathematics) Program



Engineering is all about creating, building, and making things better! So what does it take to be an engineer? If you like math and science, you are off to a great start. If you enjoy discovering new things, solving problems, and learning how things work – even better! Creativity, persistence, and the desire to make the world a better place are also important qualities. Becoming an engineer requires hard work and a good education. Our summer program will be a great start to your career in science and engineering.

The STEM program Application will be open early February 2010



"I enjoyed my stay and I loved meeting all the people from the different parts of the country. I would love to come back next summer."

— 2008 STEM Program Participant

I would like to thank the Naval Academy for giving me the best opportunity to learn more about science and technology. I'm wishing that I can come back next year.

— 2009 STEM Program Participant



Summer STEM Schedule

2010 Summer STEM Program Sessions:

| <u>Grade Level</u> | <u>Dates</u> |
|--------------------|--------------|
| 8th & 9th | June 7-12 |

MONDAY:AY: Travel and Check-in **10th** **June 14-19**
11th **June 21-26**

TUESDAY: Air and Space Museum/DC Tour

WEDNESDAY: So What Really Happened to the *Titanic*? *Challenger*? the Ford Pinto?

The tragedy of the *Titanic* as well as other engineering disasters have served to foster many technological discoveries and innovations. As you learn more, you will break steel and investigate crash mechanics. You'll examine Material Fingerprints to characterize technical crimes. You will visit the Hydro and Fluids Labs to study hull designs and structures and in the Aero Labs, you will investigate the forces of nature.

THURSDAY: Cryptography, Computers and Code, Forensics and Fingerprints

Can you break the code? Learn how mathematics, computer science, and engineering have been used throughout history to keep messages hidden and cryptic. Create and program your own video game to solve a crime in 3D. Use chemical analysis to solve crime and investigate fingerprinting of physical phenomenon.

FRIDAY: Biometrics, Electronics, Robotics

Learn how technological advances in engineering assist in catching criminals, spies and other bad guys. Build and program your robot to master the maze. Wire and solder your own electronic device for voice modulation. A tour of Biometrics Lab will find you performing iris scans and facial recognition techniques.

SATURDAY: Open House and Demonstrations

Share your new skills with your parents and friends. End the week by putting your projects on display.

I learned so much and had so much fun! This camp brought up some interests in subjects that I didn't even know about before! I am so grateful that I was able to come! Thank you!

— 2009 STEM Program Participant

Top 5 Reasons to Attend the USNA Summer STEM Program!

1. Gain exposure to the number five 'Best Undergraduate Engineering Program' in the country, as ranked by *U.S. News & World Report*.
2. Spend time in world-class lab facilities that provide a unique learning environment outside the traditional classroom.
3. Experience real-life application of math and science principles through hands on practical learning.
4. Meet like-minded students who share a similar interest in technology and engineering.
5. Because a short time at a STEM session can inspire a lifetime of learning!!!



"The group leaders were very nice, down-to-earth, and fun. The program and everything that I did there were very helpful, fun, and exciting. I loved meeting the new people, and I'm happy I was a part of it all."

— 2008 STEM Program Participant

Eligibility Requirements

The Naval Academy Summer STEM Program is offered to rising 8th-11th Graders. Students must demonstrate superior academic performance to include GPA, class standing, and/or strong PSAT, SAT or ACT results. Selection is based in large part on ensuring geographic representation along with overall accomplishments in and out of the classroom. All applicants will be notified of their status by May 1st.

Tuition and Expenses

All students selected to participate will receive a full scholarship to attend the camp, which includes your room and board, meals, as well as a variety of materials. Plan on bringing extra cash for snacks and souvenirs.

Each student is responsible for arranging transportation to and from the Naval Academy. Those flying commercial air should make arrangements to arrive at Baltimore-Washington International airport (BWI) between 9 a.m. and 3:30 p.m. on Day 1 of the program, and depart after 2:00 p.m. on the last day of the program. Buses and midshipmen escorts will be on hand to get you to and from the Academy and BWI.

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