



# STEMCAMS24

## Overview, Schedule, Camp Descriptions and FAQs

At NOVA SySTEMic, we have the most exciting and educational summer STEM camps in Northern Virginia! Led by STEM teachers and college students enrolled in STEM programs, our STEM Camp program introduces Science, Technology, Engineering, and Math to thousands of grade-school students.

Camps are focused on hands-on, project-based learning that provides students with excellent opportunities to begin exploring STEM fields and to chart a course for future STEM education and workforce opportunities.

Registration for summer camps will open January 17, 2024.

If you have any questions that aren't covered in this document, please email [systemic@nvcc.edu](mailto:systemic@nvcc.edu) or call us at (703) 530-3505.



## Highlights

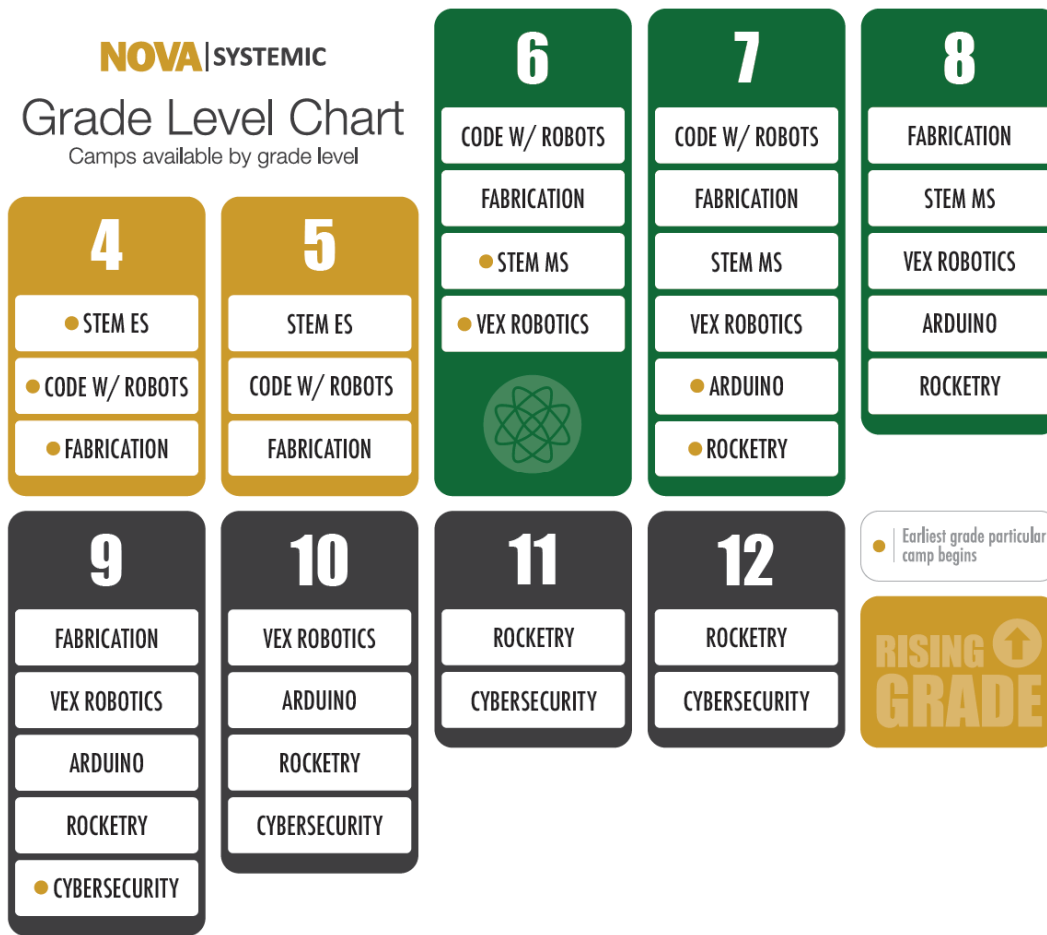
- Camps last one week and are \$475 per week if registering after April 16
  - \$375 per week if registering before February 15
  - \$425 per week if registering between February 16 and April 15
- Camps are offered at many of our NOVA campuses, and some schools in Northern VA
- Camps run from 8:30 am to 4:30 pm
  - Drop off as early as 8 am
  - Pick up as late as 5 pm
- We offer the following discounts (automatically added at check out):
  - Multi-Child (\$50) for each additional child in the same registration
  - Multi-Camp (\$35) for each additional camp in the same registration
- NOVA and Micron employees get \$50 discount on their registration

On our camp website we have links to the registration site for new or returning users.

Please visit <https://www.nvcc.edu/academics/divisions/iet/systemic.html>

# Frequently Asked Questions

## Which camp should my child take?



## Where are your camps located?

We offer camps in Prince William County, Loudoun County, Fairfax County, Arlington/Alexandria/Falls Church.

## How do I sign up or review my registration?

On our camp website we have links to the registration site for new or returning users. Please visit <https://www.nvcc.edu/academics/divisions/iet/systemic.html>

## What are your camp hours?

Camp hours are 8:30 a.m. to 4:30 p.m.

## Who should I contact with questions?

Please contact a [regional coordinator](#) or the main office [systemic@nvcc.edu](mailto:systemic@nvcc.edu)

## Do you have a waitlist?

Yes. Please add your child to the waitlist on the registration website if you would like to enroll in a camp that is full. Some camps have long waitlists with 20+ students and others have 1 or 2. We do our best to find every student an opportunity. No deposit is required to join the waitlist. Once an opening is available, an invitation to join the camp is sent to those who are first in line. Registration remains open throughout the summer.



## Do you offer before and after care?

No, unfortunately not currently. Camp drop off will start as early as 8am and pick up ends at 5pm.

## Are STEM camps a suitable environment for kids with special needs?

Yes and No. We utilize certified teachers who have experience making accommodations for students; however, many of our summer camps are fast paced, occur in a loud hands-on environment and require group work and high social interaction. You know your child best and some camps may work well and others may not. Please contact us at [systemic@nvcc.edu](mailto:systemic@nvcc.edu) to discuss. Please feel free to speak with the regional coordinator or camp director about STEM camp.

## When is the parent showcase?

Parent showcases have taken place on the last day of camp. This year we are not offering a parent showcase on the last day of camp, however, students will be able to document their progress during the week and will be able to share this with their parents after camp has concluded.

## What if I need to change a camp registration, date or location?

Please contact your [regional coordinator](#) or email [systemic@nvcc.edu](mailto:systemic@nvcc.edu). We will do our best to get your student in a camp that meets your schedule.

## What is your student-to-staff ratio?

Depending on the camp, typically we achieve a ratio of 1 teacher per 10 students.

## Are meals provided?

Students bring their own lunch and snacks every day. On the last day of camp, we provide lunch. There will be an order form sent home with the student on the first day of camp and is due back the following day.



## What if my child has an appointment during camp?

Please contact the [regional coordinator](#) or email [systemic@nvcc.edu](mailto:systemic@nvcc.edu)

### **Can you make an age or experience exception?**

We strongly discourage making exceptions. Students are grouped with peers in such a way to optimize their camp experience. Students without the necessary maturity or experience for a higher or more advanced camp tend to struggle to enjoy it.



### **Do you use Mac or Windows at STEM camp?**

We use laptops with Microsoft Windows operating system for most camps, but some camps may use an Apple iPad.

### **How do you support students with food allergies/special dietary needs at camp?**

During the registration process there is an option to designate a student as having allergies or special dietary needs. We will provide a special lunch on the last day of camp for that student.

### **How would my 6th grader work with a 12th grader? Would they be paired together?**

We pair according to age group as much as possible.

### **Do you provide transportation to the camps?**

No, unfortunately not. It is the responsibility of the parent/guardian to arrange for transportation to and from camp. We do provide transportation for the Rocketry field trip to the launch site.

### **When are parents allowed to be in the classroom?**

We understand parents may want to visit the classroom that their students will be in on the first day. While we encourage parents to drop-off and pick-up at the check-in/out table, you can walk your child to class. Parents are not permitted to be in the class during regular camp hours.

### **What is the policy on electronic devices?**

Devices are approved by the instructor for emergency purposes or documentation use. Students may use their phones during lunch, planned breaks and before or after camps at their discretion. Students are responsible for their own devices.

### **Can my child miss the first day of camp?**

We strongly discourage it, because that is when partners are formed, and the fundamentals of camp are set. Ultimately, we do allow students to miss a day if there is no alternative.

### **What are your COVID protocols?**

We follow CDC and College protocols when it comes to social distancing and mask wearing in our camps. We will assess and communicate final protocol and practices closer to camp starting in the summer.

## What is your cancellation policy?

Camp registration fees are refundable until two weeks before first day of camp minus a 20% cancellation fee. Cancellation occurring within two weeks before first day of camp may be granted a partial refund. There are NO refunds for any cancellations in the 7 days before first day of camp. We do our best to place students in a new camp in case of illness or other family emergency.



Our registration system, Active, also offers optional cancellation insurance which can be purchased during check out. Cancellations for covered reasons will be honored through this cancellation insurance.

## My child is not happy with his/her partner, can he/she change partners?

We encourage teams or groups to try and work it out with the instructor's assistance. Part of the benefit of hands-on project-based learning is developing collaboration and communication skills. Some students struggle in this area and it can be difficult, please contact your regional coordinator and/or camp director.

## Can my child volunteer for camp as an instructor?

Absolutely! We always welcome volunteers that are 16 and older. Please contact your regional coordinator for more information.

## What is the cost of your summer camp?

One-week camps are \$475 per week. There are early registration discounts for registrations before a certain date. \$100 discount applies to registrations before February 15<sup>th</sup> and \$50 discount applies to registrations between February 16<sup>th</sup> and April 15<sup>th</sup>. We also help a few other organizations run camps occasionally and those prices may vary.

## What is your Tax ID #?

Our fiscal agent for camps is the NOVA Educational Foundation. TAX ID # 51-0249730; mailing address associated is 4001 Wakefield Chapel Road, Suite 252, Annandale, VA 22003.

## Do you offer financial aid or scholarships?

We strive to make our camps affordable and accessible to as many students as possible in NOVA's service area. If you need assistance in getting your child enrolled in camp please contact us at [systemic@nvcc.edu](mailto:systemic@nvcc.edu) or call our main office at: (703) 530-3505.

## Do you have any discounts/coupons?

We offer several discounts described below. To receive the automatic discounts, all registrations must be included in a single transaction.

- Multi-Sibling, an automatic \$50 discount is applied at check out for additional children
- Multi- Camp, an automatic \$35 discount is applied at check out for additional camps
- \$50 Discount for employees of Micron and NOVA.

Please contact [systemic@nvcc.edu](mailto:systemic@nvcc.edu) if you need assistance with these.

# Summer Camp Descriptions

## STEM Elementary School (rising 4<sup>th</sup> to 5<sup>th</sup> grade)

In this weeklong camp students will learn about design-based thinking and apply that to activities planned for the week. Students will use the VEX GO robotics system to apply the design-based learning. Students will be learning about the micro:bit microcontroller. Participants will have planned breaks each day for extensions and practice time.



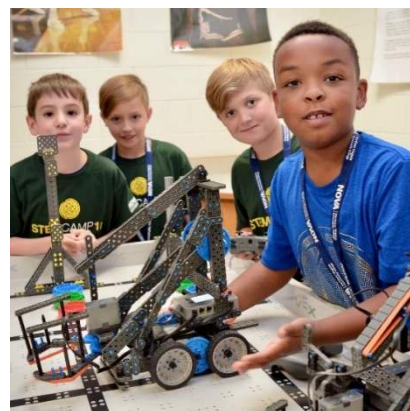
### Sample Activities:

- Learn about design thinking
- Build and program VEX GO kit as a heat shield like the James Webb telescope uses
- Making a thermometer using the micro:bit

Format: Primarily Individual with some group interactions

## Coding with Robotics (rising 4<sup>th</sup> to 7<sup>th</sup> grade)

In this one-week camp participants will work with technology to engage in a variety of coding projects that include using the VEX IQ Robotics platform. Each day students will participate in challenges. Participants will have planned breaks each day for extensions and practice time.



### Sample Activities:

- Build and program VEX IQ Robot
- Challenges: Maze, Sumobot & Catapult.
- Real World Application: MARS Rover

Format: Pairs

## Fabrication (rising 4<sup>th</sup> to 9<sup>th</sup> grade)

In this one-week camp participants will explore various ways to design and make items. This introduction to fabrication involves using design software, solving design problems, and learning about fabrication tools such as 3D printers, laser cutters, and CNC routers. These concepts will be applied in a hands-on format in the form of design challenges throughout the week.



### Sample Activities:

- Design a product that converts a common household item into a toy or game.
- Design or revise a product that makes your school life easier.

Format: Individual

## STEM Middle School (rising 6<sup>th</sup> to 8<sup>th</sup> grade)

In this weeklong camp students will learn how to code, create circuits and projects using an Arduino and Raspberry Pi. Participants will make simple circuits using Arduino or Raspberry Pi boards to create a Smart Home. In addition, students will be able to use their logical thinking skills to solve some problem-based activities.



### Sample Activities:

- Build and code an alarm with LEDs and sound.
- Build a small computer with a Raspberry Pi.

Format: Individual

## VEX Robotics (rising 6<sup>th</sup> to 10<sup>th</sup> grade)

This one-week camp introduces students to the VEX Robotics Design System where students will build and program a VEX V5 robot to solve a challenge on a 12' x 12' field. The challenge includes solving a maze autonomously and integrates part of the game from the yearly VEX Robotics Competition. We pair older students together.



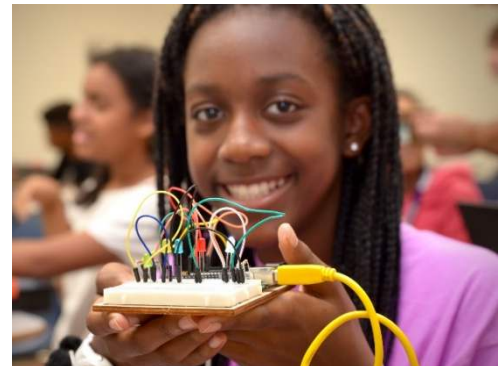
### Sample Activities:

- Build and Code a VEX V5 robot.
- Solving a Maze: Integrate Sensor feedback into your code.
- Team Competition at end of the camp.

Format: Pairs, competing against other camp teams.

## Arduino (rising 7<sup>th</sup> to 10<sup>th</sup> grade)

In this one-week camp students will work with electronics to create projects using software engineering and the Arduino microcontroller. Participants will learn how to integrate and control electronics such as LEDs, motors and sensors to complete projects and challenges. A variety of coding structure will be taught to control and refine the function of each project. No previous experience required.



### Sample Activities:

- Build and program a custom display with a custom message.
- Wire and control LEDs to turn on and off in a pattern.
- Wire and control a motor/servo with a sensor.

Format: Students work in groups of 2-4 students, complete challenges and compete against other teams.

## Rocketry (rising 7<sup>th</sup> to 12<sup>th</sup> grade)

This one-week camp introduces students to rocketry. During the camp students will build rockets to complete challenges and simulate flight. These activities teach the basics of rocketry, the science behind how they work, and rocketry safety. The students will have a field trip on the last day of camp to a launch site to safely launch their custom designed rockets.



### Sample Activities:

- Build a 2-foot rocket to complete a flight altitude challenge.
- Use Rocket Simulation software to model flight.
- Field trip to launch site.

Format: Individual Challenges.

## Cybersecurity (rising 9<sup>th</sup> to 12<sup>th</sup> grade)

High school students interested in exploring the Cybersecurity domains and furthering their knowledge of human security, computer hacking, digital safeguarding of applications, and secure communication will find much to learn through two cybersecurity camps offered this year. Each camp will feature hands-on activities and labs to engage students. **Laptops will be provided.**



### Sample Activities:

- Explore and experience different cybersecurity tools
- Capture the flag challenge

Format: Individual and team

### Cybersecurity camps offered:

#### **Cybersecurity Basic**

This camp will introduce students to the foundations of cybersecurity. Students will explore topics around personal security, cyber law, ethical hacking, digital forensics, network security, cryptography, and encryption. Students will be introduced to the Linux command line interface and different cybersecurity tools throughout the week.

#### **Capture the Flag**

This camp will explore the exciting world of Capture the Flag. Students will practice their cybersecurity and computer science knowledge during the week with a variety of challenges, ranging from the beginner level with simple clues and easy-to-use tools, to the advanced level requiring multiple tools and a deeper understanding of computer science and cyber concepts. Students are expected to have participated in the Cybersecurity Basics camp or other cyber camp/program prior to this camp and must have experience using the Linux command line and other cybersecurity tools.