SUMMER CAMPS 2020

UAB

Electrical & Computer Engineering

June 1 - 26 | Mo. - Fr. | 9AM - 3PM

STEM @ UAB

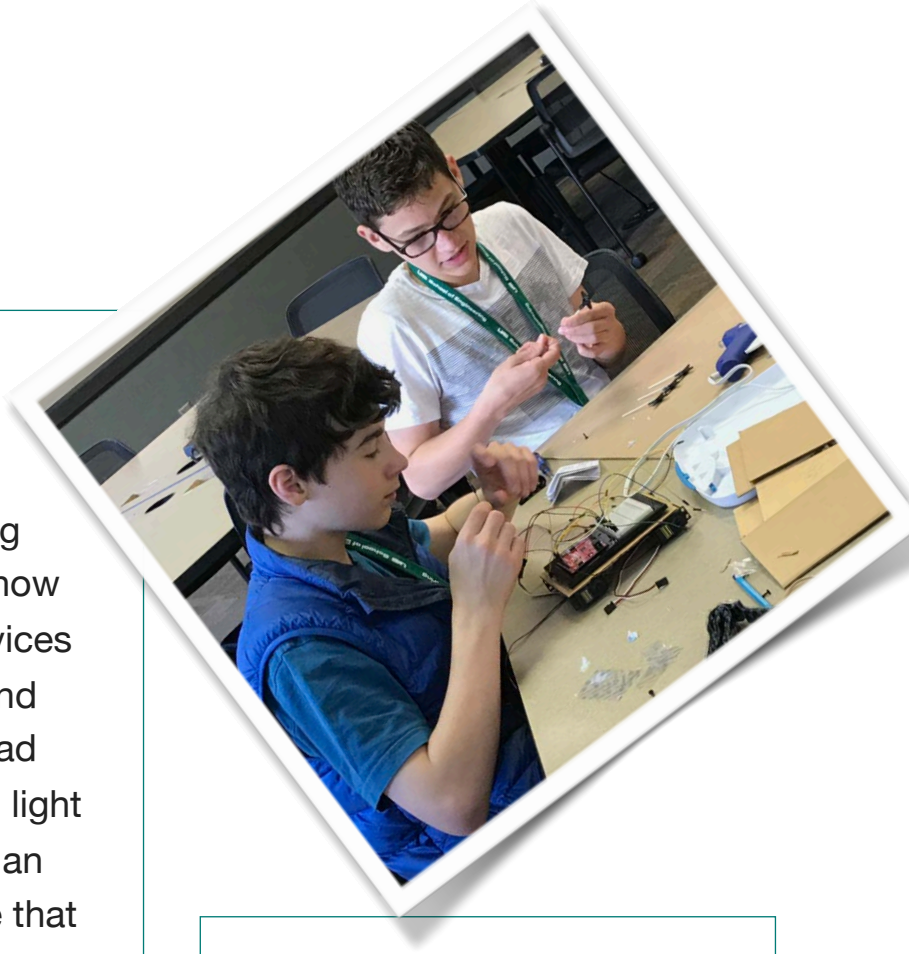
HOW TO REGISTER ?

- INTRODUCTION TO PROGRAMMING
- AUTONOMOUS CARS & ROBOTICS
- ADVANCED PROGRAMMING - PYTHON
- COMPUTER AIDED DESIGN & 3D PRINTING

✉ UAB School of Engineering♦HOHEN Engineering Building
1075 13th St. South♦Suite 101♦Birmingham, Alabama♦35294-4440

Introduction to Programming

June 8 - 12.



Introduction to programming is a hands-on computer programming camp, that will teach the basics of computer programming using C#. Camp contents include: how computers work, how to control devices and components with computers, and how to write a simple program to read various sensors and control motors, light sources and digital displays. This is an Arduino based programming course that we are strongly recommending for the students who never had an experience with computer programming. For the course a laptop (Mac or Windows) is mandatory. This camp is an introductory course; no prior experience in programming is required.

- Age Group: 12 – 16
- Laptop is required
- No prior programming experience is required
- Fee: $250

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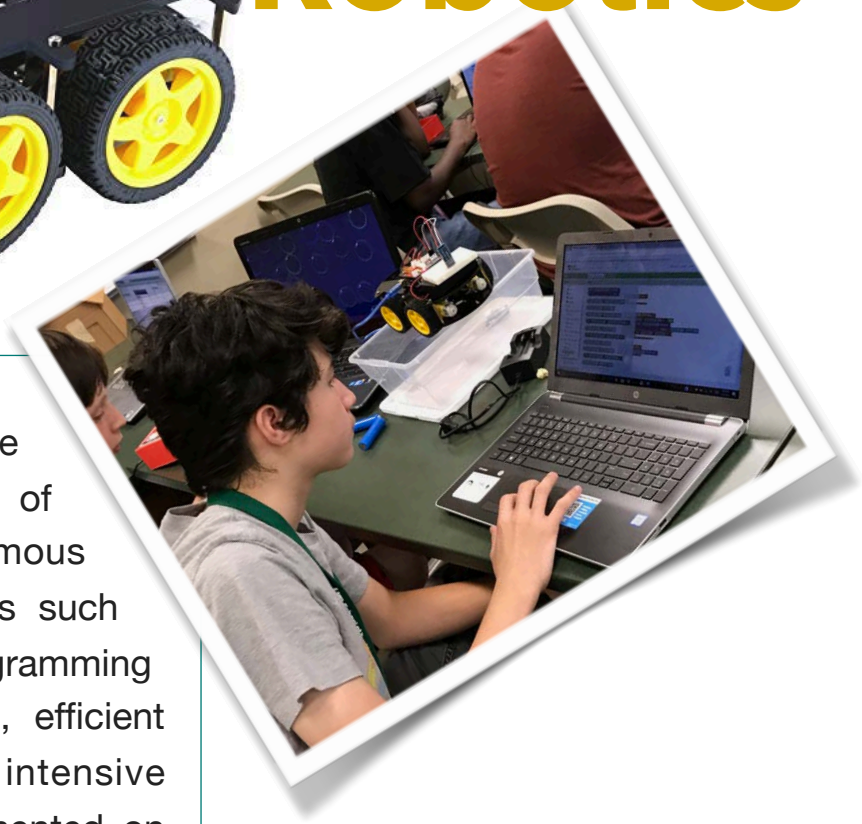
Autonomous Cars & Robotics



June 15-19.

Autonomous Cars and Robotics camp is a hands-on camp that will cover the basics of the current infrastructure of autonomous transportation, autonomous vehicles, sensors, and input/outputs such systems. Students will learn basic programming skills, algorithms for decision-making, efficient programming techniques through intensive hands-on projects that will be implemented on model robot car. Camp material promotes critical thinking, solving complex programming challenges and engineering problems. All experiments and examples will be implemented on programmable robotic cars. This is an Arduino based programming course that might require introductory level programming experience. For the course a laptop (Mac or Windows) is mandatory.

- Age Group: 12 – 16
- Laptop is required
- Introductory programming experience is required
- Fee: $275

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3D Design & 3D Printing

STEM @ UAB

June 8 - 12,

June 15 - 19.

Welcome to the era of Industry 4.0! Be ready for the future of design and product development! UAB-Electrical & Computer Engineering offers an exciting camp full of fun and great experiences through hands-on and project-based learning. Camper will learn basic concepts of product design and development on paper and then bring it in life with a modern 3D printer. Students will work as teams of two and, will design and develop products from hand sketch to physical model with 3D Printing. Using computer-aided design (CAD) CAD software such as Autodesk, SolidWorks, the students will design 3D objects and artifacts for various project. An intro level computer programming and the basic understanding of 3D CAD design required. For the camp a laptop (Mac or Windows) is mandatory.

- Age Group: 14 – 16
- Laptop is required
- Basic 3D/CAD programming experience is required
- Fee: $250

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STEM @ UAB

NEW

Programming with Python & RaspberryPi

June 15 - 19.

This summer, UAB-Electrical & Computer Engineering offers an exciting hands-on advanced programming camp with Python. The Python programming language is a widely-used programming language in web-based applications, game design, and computer image processing. The camp program includes introducing the Linux OS, RaspberryPi mini-computer, and advanced programming techniques using Python. The course will teach interfacing the hands-on HW/SW applications using Python and Raspberry Pi programming environment. An intro-level computer programming and a basic understanding of electronics might be required. It will be a fun camp with a lot of new experiences in high-level programming. For the camp, a laptop (Mac or Windows) is mandatory. (At the end of the camp the campers will have a Raspberry Pi kit to take home)

- Age Group: 14 – 16
- Laptop is required
- Introductory programming experience is required
- Fee: $300 (Includes personal Programming kit for camper to keep.)

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Electronics in Art

June 15 - 19.

This summer camp will utilize the artistic skills of the students towards learning of the sensor system. Who does not love the art of drawing? Starting from scribbles in the early childhood to the higher level complicated geometrical shapes kids are exposed to artworks at different levels. How about transform all of these exciting artworks into electrical circuits and by combining with sensors and microcontroller, make them magical displays. The summer camp participants will learn the basics of circuit and sensor system and uncover the mystery of all of those magics! For the camp a laptop (Mac or Windows) would be beneficial but not mandatory.

- Age Group: 12 – 16
- Laptop is suggested
- NO programming experience is required
- Fee: $50

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How to register ?

STEM @ UAB

1. Please visit the Summer Camp website at :

   https://www.uab.edu/engineering/home/summercamps

2. Download and fill out (or fill out online) "**Application Form**" **for each camp** separately that you would like to register.

3. Download and fill out (or fill out online) the"**Summer Camp Required Documents** " **for each applicants**.

4. Please write a check for each camp you register. Make your check(s) are "**Payable to UAB**". If you register your child more than one camp, you can also write a single check for total $-amount for all camps that you are registering.

5. **Mail your application form(s) and the check(s) to following address:**

   Dr. Abi Yildirim
   UAB - School of Engineering
   HOEN 101, 1075 13th Street South
   Birmingham, AL 35294-4440

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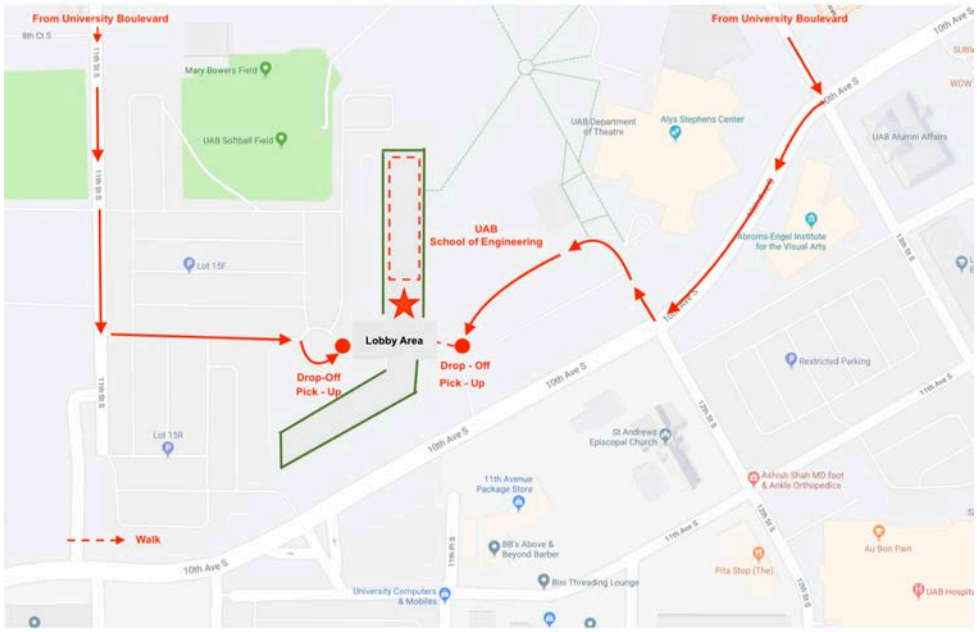
If you have questions, please contact by phone at **205. 975-3388** or by email at yildirim@uab.edu,

Where we will have the Camp ?



Camp Address: Education & Engineering Complex (Previously, Business Engineering Complex)
1150 10 th. Avenue South , Birmingham, AL 35294