SUMMER CAMPS 2019

School of Engineering

UAB

SUMMER CAMPS 2019

June 2 - 28 | Mo. - Fr. | 9AM - 3PM

STEM @ UAB

* BASICS OF PROGRAMMING
* ROBOTICS
* BIOMEDICAL APPLICATIONS
* CAD DESIGN & 3D PRINTING

UAB School of Engineering • HOHEN Engineering Building
1075 13th St. South • Suite 101 • Birmingham, Alabama • 35294-4440
Introduction to programming is a hands-on computer programming camp, that will teach the basics of computer programming. 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 recommended 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 so; no prior experience in programming is required.

- Age Group: 12 - 15
- Laptop is required
- No prior programming experience is required
- Fee: $225
Robotics camp is hands-on training that will cover the basics of automation systems, sensors, system input/outputs, and autonomous cars. Students will learn basic programming skills, algorithms for decision-making, efficient programming techniques through intensive hands-on projects. Camp material promotes critical thinking, solving complex programming challenges and engineering problems. AI 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: 14 - 16
- Laptop is required
- Introductory programming experience is required
- Fee: $250
Welcome to the era of Industry 4.0! Be ready for the future of design and product development! UAB School of 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: $275
This summer UAB School of Engineering offers an exciting hands-on Biomedical Engineering Applications camp for interested students building and programming Biomedical Devices! The camp program includes measuring various bio-signals of the human body, building and/or controlling bionic hands, devices for measuring heart pulses, body temperatures, and many other exciting projects. This camp covers the basics of embedded computers that are present almost all smart devices and portable medical devices. An intro level computer programming and the basic understanding of electronics might be required. It will be a fun camp with a lot of new experiences in the Biomedical Engineering field. For the camp a laptop (Mac or Windows) is mandatory.

- **Age Group:** 14 - 16
- **Laptop is required**
- **Introductory programming experience is required**
- **Fee:** $275
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
How to register?

1. Please visit the Summer Camp website at:
   https://www.uab.edu/engineering/home/summercamps

2. Download (or fill out online) “Application Form” for each camp that you would like to register.

3. Download (or fill out online) the “Summer Camp Required Documents” for each applicant.

4. Please write a check for each camp you register. Make your check(s) are “Payable to UAB School of Engineering”. 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

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