

# JANUARY 2016

Jocelyn H. Lee Innovation Lab

Class Registration is Required: 281-488-1906

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
KEY: * Registration Not Required †Meets in the Computer Lab				1 CLOSED	2 CLOSED
4 2:00 pm Art Bots	5 10:30 am Mechanical Systems I 4:00 pm Intro to Tinkercad†	6 10:30 am Spaghetti Structures 7:00 pm Laser Cutter Orientation	7 5:00 pm Intro to Scratch† 7:00 pm Basic Circuits I	8	9 10:30 am 3D Printing Orientation†
11	12 10:30 am Mechanical Systems II	13 4:30 pm Teen Makers* 7:00 pm Arduino 101	14 5:00 pm WeDo LEGOs 7:00 pm 3D Printing Orientation†	15	16 10:30 am Laser Cutter Orientation 3:00 pm Vacuum Molding
18 CLOSED	19 4:00 pm 3D Printing Orientation†	7:00 pm 3D Printer Users Group*	7:00 pm Basic Circuits II	22	23
25	26	<b>27</b> 7:00 pm Arduino: Motor Control	28 5:00 pm Lab Skills: Soldering 7:00 pm Lab Skills: Soldering	29	30 10:30 am Raspberry Pi 101 1:00 pm Minecraft Pi



Information for Persons with Disabilities: Harris County Public Library will make reasonable accommodations for people with disabilities who are interested in attending library programs. To make a request, notify the Branch Librarian two working days in advance of the program.

**Clear Lake City-County Freeman Branch Library** 



# UPCOMING PROGRAMS AT THE CLEAR LAKE CITY-COUNTY FREEMAN BRANCH LIBRARY

The JOCELYN H. LEE INNOVATION LAB is a *makerspace* – a place for people to learn, share resources, work on projects and network with other creative minds. Access to the Lab and classes is free to the public. Participants under age 12 must be accompanied by an adult guardian.

#### **3D Printing Orientation**

Get an overview of the Lab's 3D scanning and printing capabilities and discover easy ways to generate your own models and prints. This class is required for reserving print time on the 3D printers.

#### **3D Printer Users Group**

Share your latest 3D models, swap tips and collaborate on projects.

#### Arduino 101

The Arduino is a small microcontroller making a big impact on the maker scene. Come learn how easy it is to develop your own circuits and programs in this hands-on class.

#### **Arduino: Motor Control**

Learn how to control speed and direction of a brushed DC motor using motor-driver circuits and an Arduino microcontroller.

### **Art Bots**

Use electric motors and found supplies to create a device that draws unpredictable designs. The shapes are interesting and the machines are fun to watch, but is it art? I'll leave that for our future robot overloads to decide.

#### Basic Circuits I & II

These hands-on sessions progressively introduce concepts of basic circuits. Session I focuses on circuits using batteries, switches and lights. Session II focuses on resistors and LEDs.

#### Introduction to 'Scratch'

'Scratch' is an easy-to-use programming language using graphical blocks to create fun and interactive multimedia software. The class will use this free software to explore primary concepts in computer programming.

#### Introduction to 'Tinkercad'

Learn the basics of 3D design using a free, browser-based tool that is easy to use and able to generate models suitable for 3D printing.

### Lab Skills: Soldering

Learn the tools and techniques of 'thru-hole' soldering in this handson class. All material is provided.

# **Lab Skills: Vacuum Molding**

Learn the process of thermal vacuum forming by building a custom pattern and creating a plastic mold from food-safe polystyrene plastic – use it for candies, plaster casts or as adornment for your latest costume.

#### **Laser Cutter Orientation**

Learn the techniques for using the laser cutter and prepare your own jobs for cutting and etching. This class is required for reserving time on the laser cutter. *Participants under age 16 must be accompanied by an adult guardian.* 

#### Mechanical Systems I & II

These hands-on sessions will progressively cover simple principles and elements of mechanical designs. Session I introduces simple machines and static forces. Session II examines rotary motion and gears.

#### Minecraft Pi

Learn the Python programming language by customizing a Minecraft game using Raspberry Pi computers and simple circuits.

### Raspberry Pi 101

The Raspberry Pi is a single board computer developed to teach basic computer science. Explore the Raspberry Pi's Linux operating system and interface the Pi with the physical world.

#### **Spaghetti Structures**

Good structural design depends on understanding geometry and the properties of your building materials. Participants will be challenged to build structures from nothing more than spaghetti and marshmallows.

#### **Teen Makers**

Open lab time for teens (ages 12-18) to explore the tools in the Innovation Lab, hone skills and work together on group projects.

# WeDo LEGOs

The LEGO WeDo construction sets provide an easy introduction for young students into mechanics, programming and robotics. Appropriate for ages seven and up with adult guardian.

