



# UT Martin Jackson Center Jackson Robotics Summer Camps



## ▲ WeDo ▲

**Ages:** 5 - 7

(Students must have completed Kindergarten)

**Dates:** Camp 1: June 26-30, 2017  
Camp 2: July 17-21, 2017  
Camp 3: July 24-28, 2017

**Time:** 9:00-11:00AM

### WeDo

Are you ready to build a robot? In WeDo Camp you will design, build, and control your own motorized robots. You will program the robot and add sensors to complete the challenges. Students must have completed Kindergarten. Parents - Robotics is the Future. Class emphasis is on the practical use of the Scientific Method in a fun environment. If you child has taken Lego Robotics before they will be given more in-depth challenges.



## ▲ NXT Robotics Camp: ▲ ▲ Mars Rescue! ▲

**Ages:** 8 - 14

**Dates:** Camp 1: June 26-30, 2017  
Camp 2: July 17-21, 2017

**Time:** 1:00-4:00PM

### NXT Robotics Camp - Mars Rescue!

Your spacecraft has been hit by a meteor shower and crash-landed in the Mariner Valleys of the planet Mars! The Mariner Valleys are 4.3 miles deep and 2,500 miles long, over three and a half times deep and nine times as long as Earth's Grand Canyon! From your scattered spacecraft you must build your own Mars Rover and with it guide your surviving crew members to Arsia Mons, a dormant caldera over twice as high as Earth's Mount Everest and thirty times as large as the volcano Mauna Loa on Hawaii! With your salvaged Mars Rover you must traverse glacial rifts and secure the safety of the Seven Sisters, gargantuan caves formed from extinct lava tubes. But your time is limited because your sensors have detected a massive meteor storm heading your way!

**Parents - Robotics is the Future.** We cover the basics but this course is unique will be challenging even if your child has taken an NXT Robotics course before. Limited Time creates a sense of suspense, imminent failure, and excitement. Class emphasis is on the practical use of the Scientific Method, using Observation, Query, Hypothesis, Prediction, Testing, Refinement or Rejection, and Theory to build, program, and refine a Lego NXT Robot to overcome challenges, resulting in a sense of accomplishment.

## ▲ Survival Challenge ▲

**Ages:** 8 - 14

**Date:** July 24-28, 2017

**Time:** 1:00PM-4:00PM

### 2017 UTM Robot Extreme Survival Challenge

The Extreme Survival Challenge is for students who have completed previous LEGO NXT courses and want advanced challenges. The students should have the ability to program the motors and sensors. The Extreme Survival Challenge will require teams to build and program robots to survive on an island. They will forage food and store it in a safe place, identify dangerous vs. safe objects and areas, climb over rough terrain and traverse a chasm. Other challenges will arise, and may include a battle with unfriendly native animals or plants. Take this Challenge if you dare!

Two member teams will design, build, and program one robot and modify it for each challenge, finishing with a multi-tasking robot capable of facing any challenge at any time. The teams will test their designs and redesign and reprogram to improve the design. Emphasis will be on team work and the engineering process of design to challenge, test, evaluate and rebuild. As each challenge has unique requirements, the original design may be completely changed by the last challenge - or a creative alternative may be found. Robots and programs will be modified as needed. Each challenge will involve changing partners to develop team working skill sets.

**Prerequisite** is prior completion of a Lego NXT Robotics Programming class or instructor's approval.

### ▲ Instructor: James Swanger,

B.A. in International Studies and has years of experience teaching Taekwondo, Coaching Youth Soccer, and volunteering as Cub Scout Den Leader. Plus two years' experience teaching Robotics for UT Martin.

▲ **Registration Fee:** \$155 per student; includes camp T-Shirt.

▲ **Register Online** - <http://www.utm.edu/departments/nondegree/jackson.php>

▲ Due to the cost of the kits, the students will not be taking a kit home, but product information and kit/part costs will be available.

