Q Project Virtual Academy Orientation

Slides developed by Armaan Kapoor

We will get started soon!
Please turn off your camera and mute your mic. Utilize the chat feature if you have questions. Go ahead and introduce yourself and say 3 fun facts about yourself.

What we will do today?

1. Simple Introductions of Staff
2. Material Logistics
3. Rules and Expectations
4. Weekly Logistics
5. Overview of each Virtual Academy
6. Media release Form
7. FAQ
8. Questions, Comments, Concerns?
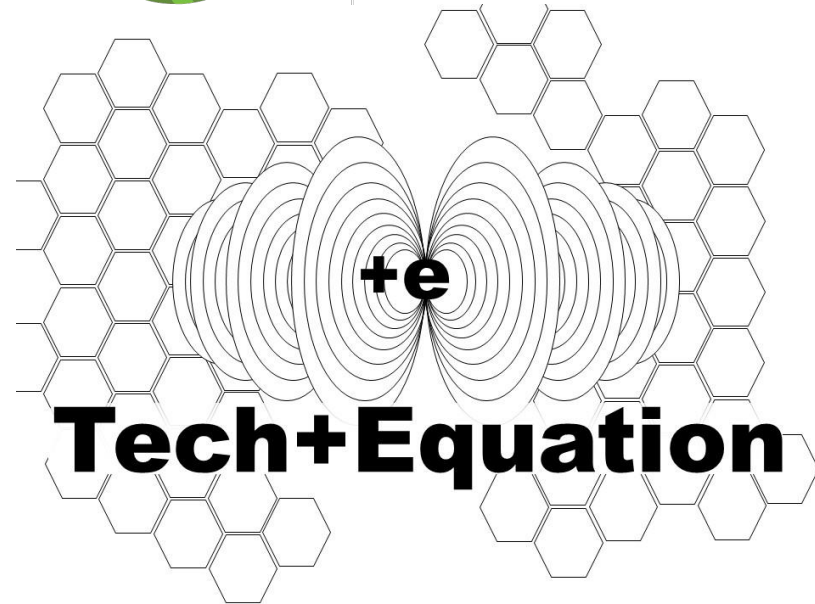9. Google classroom Activity

Who are we?

Staff Members

1. Armaan Kapoor - Treasurer of Q Project (akapoor3@ucmerced.edu or apro2324@gmail.com)
2. Jesica Lopez - Secretary of Q Project (jlopez-perez2@ucmerced.edu)
3. Ramiro Gonzales - Head of LORA Network Academy (rgonzalez69@ucmerced.edu)
4. Solomon Denning - Head of Cyber Academy (sdenning@ucmerced.edu)
5. Jesus Perez Hernandez - Head of Arduino Academy (jperezhernandez@ucmerced.edu)
6. Silvano Romero - Q Project Member (sromero31@ucmerced.edu)
7. Julian Grado - Q Project Member (jgrado@ucmerced.edu)
8. Roxanne Spielman - Project Director Liaison for UC Merced Center for Educational Partnerships (rspielman@ucmerced.edu)

Virtual Academies

Summer 2020

1. LORA Network Virtual Academy

2. Arduino/Robotics Virtual Academy

3. Cyber Security Virtual Academy

Material Logistics: Overall

- You will receive your items within the next few days. If you have not, please contact rspielman@ucmerced.edu (Center for Educational Partnerships)
- When you receive your materials, feel free to open them carefully. Setup instructions will follow
- Please treat all materials with the utmost care.
- They are sharp and they can hurt you as well, so please be very very careful.
- All materials would have to be returned in their original packaging so do not throw anything out.
- Different Virtual Academies will receive different materials, so please do not mix them up if you are in multiple academies.
- Any questions about the delivery or pickup of materials can be directed towards rspielman@ucmerced.edu

Material Logistics: Lora Network

1. ESP32 LoRa 32 (V2), ESP32 Development Board WIFI Bluetooth LoRa Dual Core 240MHz CP2102 with 0.96inch OLED Display included 868/915MHZ Antenna for Smart Cities, Smart Farms, Smart Home, and IoT Makers. ~~~Looks like small plastic bin with red Heltec Label~~~

2. MakerFocus 4pcs 3.7V Lithium Rechargeable Battery JST1.25 Connector 2pin, 852540 3.7V 1000mAh Battery with Protection Board and Insulated Rubber Tape Compatible with ESP32 Development Board WiFi Kit ~~~Looks like four small mini white boxes~~~

3. RAK811 LPWAN Breakout Module - US915 ~~~ Looks like an antenna and a chip in a white plastic bag~~~

4. MAYBE: Dragino LoRa Bee Module 915MHZ Ultra Long Range RF Wireless Transceiver SX1276 for Arduino, Built-in Temperature Sensor Low Battery Indicator, Low Power Consumption ~~~Looks like an antenna and a chip in a white plastic bag~~~

Material Logistics: Arduino

1. Elegoo Arduino Kit ~~~Big box of small electronics~~~

Material Logistics: Cyber

1. Raspberry pi 4 Cana Kit ~~~ Yellow Cardboard Box labeled Raspberry pi 4 kit~~~

2. Keyboard and Mouse ~~~A box which has a picture of a keyboard and mouse on it~~~

3. 7 inch touchscreen ~~~ A box which has a picture of a tablet~~~

Rules and Expectations

See attached document

Email Etiquette

- We get a lot of emails every day, so please use correct etiquette when emailing staff
- Things you need for good Email Etiquette
  - Subject: Choose an appropriate subject relating to the body of the email. Make sure you add "Q Project Virtual Academy Summer 2020 ..." to the beginning of your subject
  - Email Body: (3 parts)
    - "Hello [name of person you are emailing]" or "Good afternoon/morning/evening"
    - Describe your problem or question. Include pictures if necessary
    - Thanks with your name

Weekly Logistics

- There are four weeks of instructions/workshops. Every single virtual "meet-up" is planned to be recorded. All meetings will be on ZOOM. The links will be posted on the google classroom stream board
- Schedule:
  - Monday: Lecture/Introduction to the workshop. Assignment/Task assigned to student
    - 9:30-10:30 am: Cyber
    - 10:45-11:45 am: LORA
    - 12-1 pm: Arduino
  - Wednesday: Check in. More instruction/helpful tips/Class wide Office Hours
    - 3:45-4:45 pm: Cyber
    - 5-6 pm: Arduino
    - 6:15-7:15 pm: LORA

Weekly Logistics

- ○ Friday: Wrap up. Answers to assignments/Final words/Future workshop implications
    - ■ 9:30-10:30 am: Cyber
    - ■ 10:45-11:45 am: LORA
    - ■ 12-1 pm: Arduino
- Schedule subject to change depending on workshop/academy - Announcements will be made on the google classroom stream
- Assignments/Progress will be checked via tasks assigned within the google classroom.
    - ○ For example: One task may be to collect information and research online. One task may to build/setup the device
    - ○ There will be an end questionnaire which will test your knowledge of the academy.
    - ○ We will issue certificates of completion for each and every one of you who complete the academy. There will also be a special certificate issued to the top students in the virtual academy

Overview of Virtual Academies

1. LORA Network (Ramiro)
   a. Week 1 Workshop: LORA Intro (Ramiro)
   b. Week 2 Workshop: Building LORA Receiver/Gateway (Solomon)
   c. Week 3 Workshop: Things network (Solomon)
   d. Week 4 Workshop: Sending Messages (Julian)
2. Arduino (Jesus)
   a. Week 1 Workshop: Arduino/IOT Intro (Jesus)
   b. Week 2 Workshop: Blinker Project (Silvano)
   c. Week 3 Workshop: Digital Displays (Silvano)
   d. Week 4 Workshop: Stepper Motor (Jesus)

3. Cyber (Solomon)
   a. Week 1 Workshop: RPI Setup (Solomon)
   b. Week 2 Workshop: Wifi Packets (Armaan)
   c. Week 3 Workshop: Security Vulnerabilities (Ramiro)
   d. Week 4 Workshop: Domain Name systems (Solomon)

All workshops and teachers are subject to change

Media Release Form

- All meetups will be recorded live and we plan on posting our lectures only onto a youtube channel to help other kids to learn what you guys will learn.
- During these recorded meetings, your video/audio may be present, and we need you (or parents if under 18) to sign a media release form.
- As a reminder, you do not have to show your video or talk. You can also utilize the chat feature in Zoom. Participation is highly suggested
- Forms will be sent to your email and reply is requested before the end of the virtual academy.
- You may have to sign multiple forms. (Q Project and Center for Educational Partnership)

FAQ

1. I cannot attend some meeting times. What do I do?
   a. First of all, you let us know. Email person leading the week's workshop, head of academy, and Armaan Kapoor.
   b. All meetups are planned to be recorded so you can watch it in the google drive folder assigned to the google classroom. However, this does not mean that you can skip a meet up. You learn best when you are watching live. We give priority to give help to those who show up over those who do not show up.
2. I need technical help with the academy. Who do I contact?
   a. If it is a question you think others will benefit then you can ask the question on the google classroom stream board FAQ thread for that virtual academy.
   b. You contact the person leading the week's workshop. Then you contact the person in head of the academy. Then you contact Armaan Kapoor. We are available 24/7 for questions. Zoom is also possible outside meeting hours. You can email or contact via google classroom.
3. I can't sign up to the google classroom, I can't see the google classroom drive folder, etc.
   a. For all logistic questions please contact Armaan Kapoor. Use a "@gmail.com" account first.
4. I want to sign up for another Virtual Academy/I need to drop out of a Virtual Academy.
   a. Contact Armaan Kapoor and Roxanne Spielman.

Questions, Comments, Concerns?

Google Classroom Activity

1. Find post where I introduce myself. Starts with "Hello all…"
2. Comment with the following details
   a. Name
   b. City/School you are from
   c. Virtual Academy(s) attending
   d. What you hope to learn from the Virtual Academy(s)
   e. What you hope to teach other people after you attended the Virtual Academy(s)
   f. 1 Fun Fact about yourself
3. This is your first assignment and will be recorded in the gradebook.