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ELEC1100 - Tutorial 1 Basic Components and Breadboard

Introduction to Lab#01



- Mixed-mode Lab & Project
- Canvas Pages & ZOOM Meeting Classes

- Basic Components
- Equipment at physical lab
- Use Tinkercad to do online Circuits building

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Mixed Mode ELEC 1100 Project – at physical Lab



Mixed Mode ELEC1100 – Online

AUTODESK" JOIN NOW Gallery Blog Learn Teach Q Sign in From mind to design in minutes

Tinkercad is a free, easy-to-use app for 3D design, electronics, and coding. It's used by teachers, kids, hobbyists, and designers to imagine, design, and make anything!

Start Tinkering

Join your class

Teaching Team

Course Instructors





Give lectures, decide course grades, make decisions on the course

Instructional Assistant



T1&3 (Thu)

Teaching Associate



Give tutorials, handle administrative matters

Technical Officer



In charge of the lab and equipment

Student Helpers

See your lab demo, invigilate exams & project demo

Teaching Assistants

Help you in your labs and project, introduce ECE to you all

Special Academic Arrangements for Spring Term

- Classes in Spring Term will be delivered using live interactive on-line mode on the <u>scheduled</u> <u>timetable</u> until further notice.
- Students successfully registered in a course should go to the course page in Canvas to join the on-line meeting at class time.

Course Website – Canvas Pages



Canvas – Menu Bar

Announcements will also be sent to you via emails (your HKUST account)



Canvas – ZOOM meeting class

If you are in difficulties in Canvas access, a Meeting ID can also let you join a class through <u>https://hkust.zoom.us/</u> with your HKUST account.

ELEC1100 (L1) > ELEC1100 (L1) - Introduction to Electro-Robot Design

zoom

2019-20 SPRING

Home

✤ Ask the teaching team if needed.

Your current Time Zone is (GMT+08:00) Hong Kong. 🖉

Grades					
People	Upcoming Meetings	Previous Meetings	Cloud Recording	gs	C
Syllabus					
Modules	Start Time	Торіс		Meeting ID	
Zoom Meeting	Wed, Feb 19 (Recurrin	ELEC1100 (L1) - Intro	oduction to Electr		Join
	g) 9:30 AM	o-Robot Design		870-451-940	Invitation
	Mon, Feb 24 (Recurrin	ELEC1100 (L1) - Intro	oduction to Electr	070 454 040	Join
	9) 9:30 AM	o-Robot Design		870-491-940	Invitation

ZOOM meeting ID

https://hkust.zoom.us/

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zoom	ZOOM JOIN HOST
Video Conferencing	Meeting ID or Personal Link Name
Join	Join
Connect to a meeting in progress	Join a meeting from an H 323/SIP room system
Host	
Start a meeting	
Sign in	
Configure your account	
Made with Zoom	
Getting Started	
Download Client	(?) Help

Online Lab Class

Preparation

 Read over the lab manual, follow the steps to sign in Tinkercad <u>https://www.tinkercad.com/</u>

2019-20 SPRING		
Home		
Modules	 Lab#01: Equipment (Mar 04, Wed, 12:00-14:50) 	
Zoom Meeting	A Loh 1 2020s online ndf	
Grades		
	Lab1_2020s_physical.pdf	

Lab Grading Policy

Lab Results

- Show demo to your TA at online lab class to have an attendance record
- INDIVIDUALLY submit your completed Summary Sheet <u>on Canvas</u>, before the Deadline.
- Failure to do so may result in a zero mark.

Submission **Deadline**:

LA1 (Wed, 14:50) LA2 (Thu, 11:50) LA3 (Mon, 16:20)

Basic Components



Circuit Diagram Example



Light-Emitting Diode (LED)

• An LED is a semi-conductor light source



• How to make it work? Draw figure below:



Equipment at Physical Lab

Can you name them?



Fig. 2: Digital Multimeter

and the second	0444
And the second	077

Fig. 4: Digital Storage Oscilloscope



Fig. 1: DC Power Supply



Fig. 3: Signal Generator



Fig. 5: Breadboard

Breadboard



Breadboard Exercise

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How will you connect the circuits below?





Circuit Building in Tinkercad [1]



Circuit Building in Tinkercad [2]



Circuit Building in Tinkercad [3]





Summary

Lab Reminder

- Sign-up in Tinkercad <u>https://www.tinkercad.com/</u>
- Join your enrolled lab meeting class (LA1/LA2/LA3) on time
- Read carefully about the instructions in lab manual
- Show demo to your TA during the on-line lab class
- Upload your completed lab sheets before the deadline