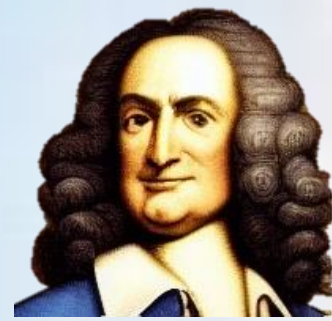
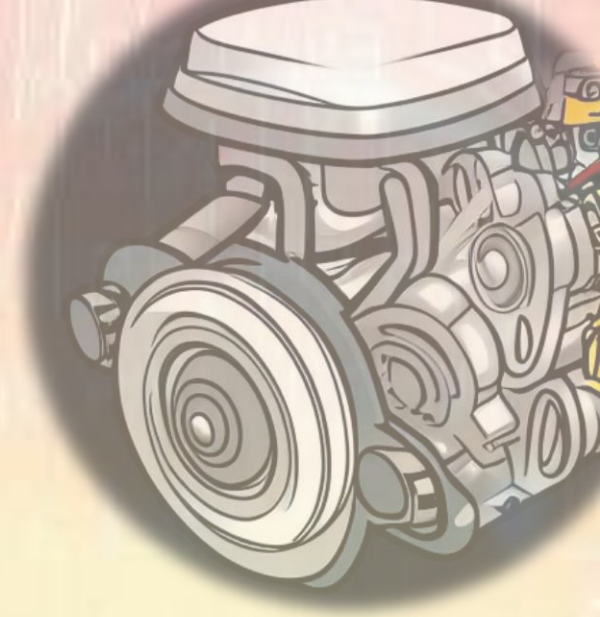




Forces



Heat

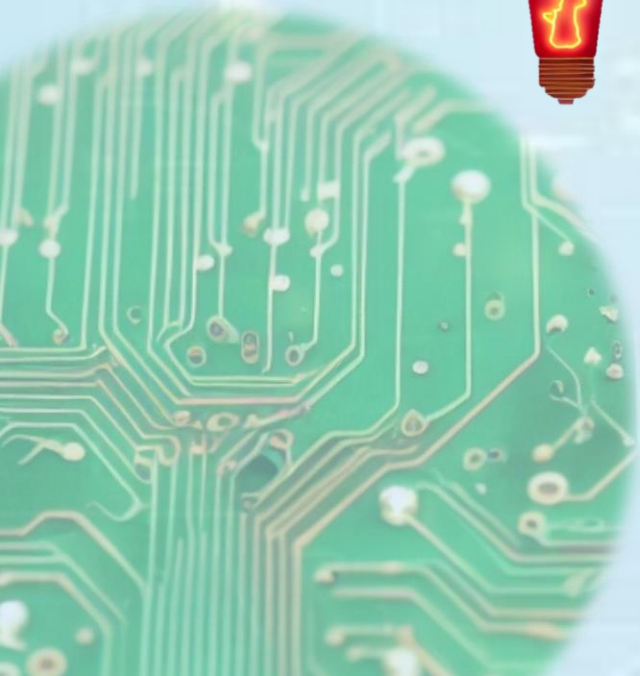


Dual Program Level 1 (Physics)

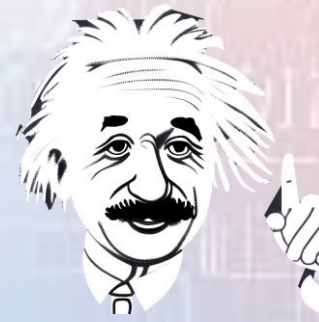


Dr Ho Ting (Tony) FUNG
School of Engineering

Quantum Physics



Electricity



Goals of the Course



Deepen understanding of fundamental concepts



Extend problem-solving skills to tackle more general questions



Connect theories to observations with class demonstrations



Provide a chance to learn special relativity and modern physics

Prepare for university-level courses



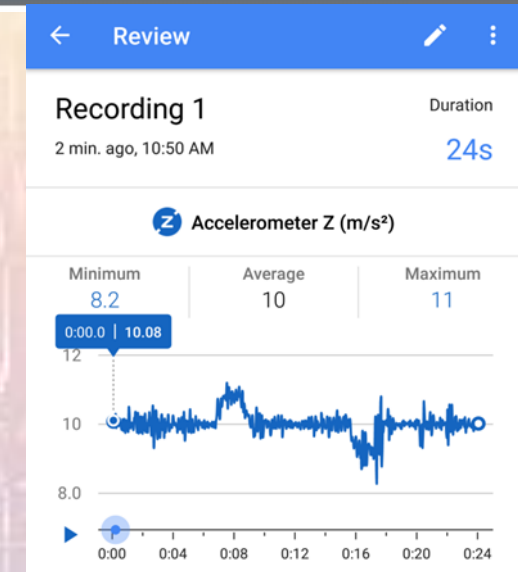
Blended Learning

Lecture Video (1 hr per week)

- Covering the key concepts and examples
- Available about one week before the class
- Watch before class

Face-to-face lecture (~2 hr per week)

- Some interesting experiments will be demonstrated during the class
- Class exercises
- Individual / group problem solving



Who can join?

Got a **grade B** in Physics Pre-stage /
Mathematics Level 1

OR

Pass the ***screening test***

Screening Test (甄別試)

Purpose:

Ensure uniformity in students' academic background

Format:

- Online Video Proctored Exam (Zoom)
- Topics covered in Pre-stage Physics (vectors, derivative and integration etc)
- 1 hour
- Short Written Questions

Test Schedule:

- Oct 12, 2024 (Sat), **2:30 pm to 3:30 pm**

More on the Screening Test

Direct Message from CDGT

- A makeup exam will **NOT** be provided, and there will be **NO EXCEPTIONS!**
- Please ensure you can attend the Screening Test on 12 October 2024, before submitting applications.
- You will receive emails about the camera settings if you are required to take the test.
- **No revision is required for the test, so there is no pressure**

Who should join?



If you are interested to know more about

Mechanics

Kinematics,
Newton's Laws,
Momentum,
Angular Momentum,
Work and Energy

How should I throw a
piece of trash to the
trash bin when riding a
bike?



How can I get good at
playing snooker?



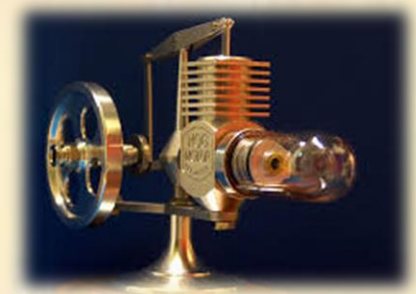
Who should join?



If you are interested to know more about

Thermal Physics

Ideal Gas Law,
State of Matter,
1st and 2nd Law of
Thermodynamics



How do a heat engine and
a refrigerator work?



Who should join?



If you are interested to know more about

Electrostatics

Coulomb's Law,
Electric Field, Potential,
DC Circuit, Resistor,
Capacitor

Why can't I make a call in the lift?



No Signal

Who should join?



If you are interested to know more about

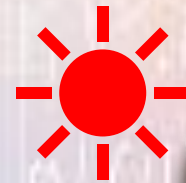
Modern Physics

Einstein's Relativity
and Quantum
Physics

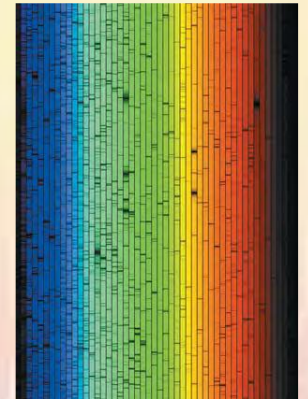
Why does Superman become shorter when flying?



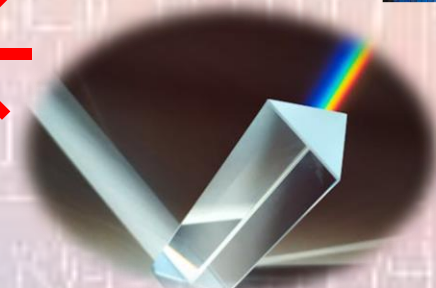
Wow! Superman is short and fat!



Sun



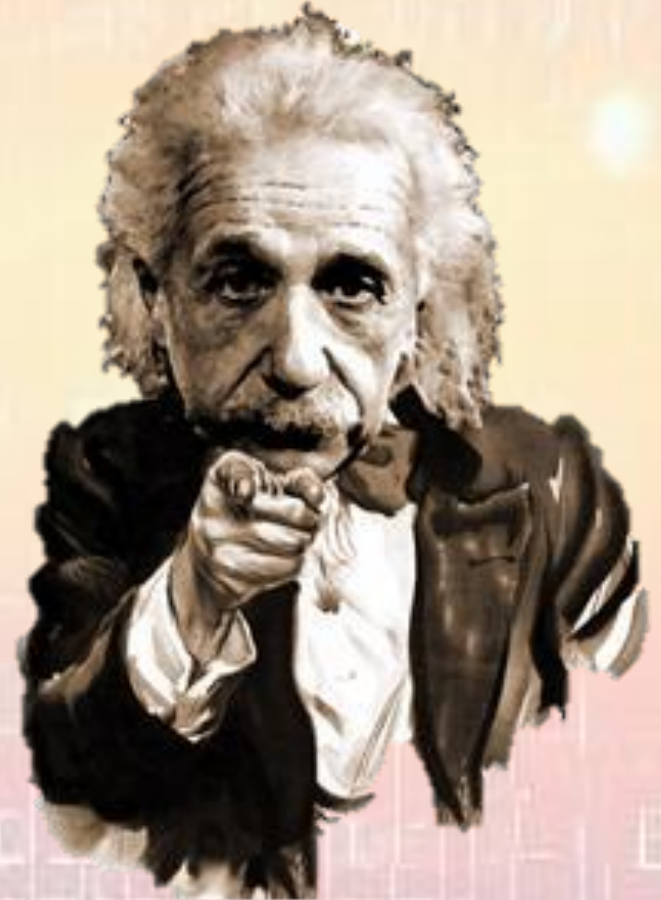
Why are there black lines?



To summarise

If you have a passion for the topics
above
and willing to commit your time and
effort, and challenge yourself,

This course is for **you!**



What's next?

Some statistics

- 90% completion rate.
- About $2/3$ of the students are eligible to be promoted to Level 2.
- About 20 students enroll in Level 2 every year.
- Level 2 is credit bearing course equivalent to first-year general physics I at HKUST.



Questions about this course?

Instructors

Dr Ho Ting (Tony) FUNG

egtonyfunght@ust.hk

Dr Ting Pong CHOY

tingchoy@ust.hk

Thank you!

