# 電子物理
# Electric Physics
# 資訊工程系四日一B
# **課號 2771**

Instructor：洪士程 教授兼系主任
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Room:資訊大樓M313
Tel: 7631

# Course Time & Office Hours

## Course Time

Friday 4 (11:20 – 12:10)

Classroom: T2-420

Friday 5,6 (13:30 – 15:20)

Classroom: G-107

## Office Hours

Monday 10:25-12:10

# Credits

## Required or Elective

Required (必修)

## Credits

3 Credits (三學分)

# Goal

An basic knowledge of physics.

Give an introduction to:

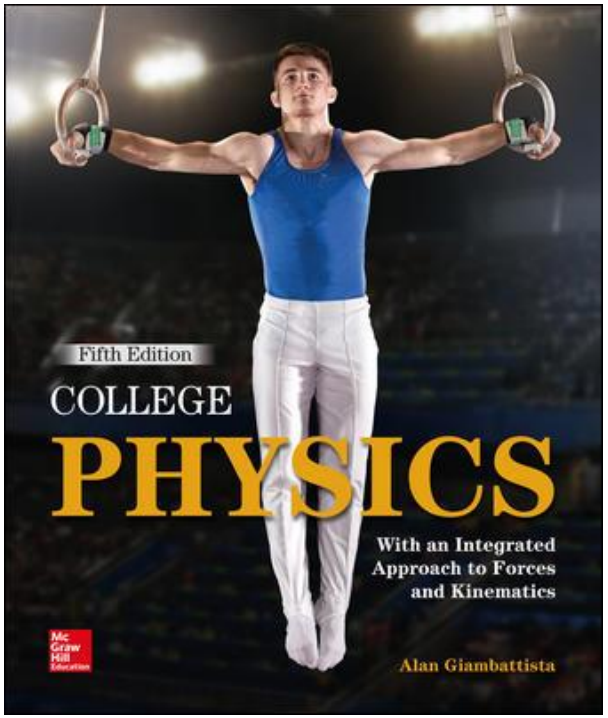
- Electrostatics: Electric Fields, Energy , Ohm's Law, Capacitance, Resistance, Electric Current, Voltage, Power
- Magnetism: Magnetic field, Currents, Ampere's law
- Magnetic force, Faraday's law, Maxwell equation.

# Text Book

College Physics, 5th edition, 2019.

McGW-HILL, ISBN 978-0073513959

- Alan Giambattista
- Robert Richardson
- Betty Richardson



# Reference Books

Reference:

University Physics, 2nd edition, 1996.

Harris Benson

Publisher: John Wiley & Sons, Inc

ISBN: 0471152641

# Schedule of Progress (1/3)

Introduction to course (week 1)

Chap 1 Introduction (week 1)

Chap 2 Newton's Laws of Mechanics (week 2)

Chap 6 Conservation of energy (week 3)

Chap 16 Electric Forces and Fields (week 4)

Chap 16 Electric Forces and Fields (week 5)

Chap 17 Electric Potential (week 6)

# Schedule of Progress (2/3)

Chap 17 Electric Potential (week 7)

Chap 17 Electric Potential (week 8)

Midterm exam (week 9)

Chap 18 Electric Current and Circuits (week 10)

Chap 18 Electric Current and Circuits (week 11)

Chap 19 Magnetic Forces and Fields (week 12)

# Schedule of Progress (3/3)

Chap 19 Magnetic Forces and Fields (week 13)

Chap 20 Electromagnetic Induction (week 14)

Chap 20 Electromagnetic Induction (week 15)

Chap 21 Alternating Current (week 16)

Chap 21 Alternating Current (week 17)

Final exam (week 18)

# Resources

- Text Book
- Handout

http://tronclass.cyut.edu.tw/

TronClass數位教學平台

# Evaluation

Quiz (30%)

Participation (10%)

Mid exam (30%)

Final exam (30%)