WEEK 1

PERSONAL INFORMATION

- Office Hour: Wednesday 2pm-3pm, Friday 3pm-4pm or by appointment
- Location: Y6628
- Email: kywon9@cityu.edu.hk

SYLLABUS

- Chapter 0: Review
- Chapter 1: Points and Lines in the Plane
- Chapter 2: Lines and Planes in Space
- Chapter 3: Transformation of Coordinates
- Chapter 4: The Conics and Locus Problems
- Chapter 5: The Quadric Surfaces

GRADING POLICY

- Final Exam (70%): For a student to pass the course, at least 30% of the maximum mark for the examination must be obtained.
- Coursework (30%) = Midterm (21%) + Assignments (3%+3%+3%)
  - Midterm Test (21%)
    - March 11th 2021 *(Wednesday) (during schedule class time) 12:00pm-1:30pm (1.5 hours)*
  - Assignments (3%+3%+3%)
    - 3 Assignments will be given during the semester. (Attention: *no make-up Assignments*)
  - Formative assignments (optional)

ILLNESS OR OTHER CIRCUMSTANCES AFFECTING ASSESSMENT

- Approval from home department and MA department are required; (http://www6.cityu.edu.hk/arro/content.asp?cid=171)

REFERENCE BOOK

- *Coordinate Geometry* by Luther Pfahler Eisenhart, Dover Publications (2005)

TIMELINE ASSIGNMENT

Due date	Details
January 28th 11:59pm (HKT)	Assignment 1 due
February 25th 11:59pm (HKT)	Assignment 2 due
March 11th	Midterm Test
April 1st 11:59pm (HKT)	Assignment 3 due
TBA	Final Exam

*This schedule is subject to change. Changes, if necessary, will be updated here. This page is the final authority on schedule information.

FAQ

- How do I get A+
- How do I pass

STRUCTURE OF EACH CONCEPT

- Definition
- Example
- Application
- Proof

QUESTIONS?

CHAPTER ZERO REVISION

- Coordinate
- Vector and Scalar
- Matrices

CHAPTER ZERO REVISION

- Coordinate
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COORDINATES

DIMENSION

- One dimension
- Two dimension
- Three dimension

CARTESIAN PLANE 2D

CARTESIAN PLANE 3D

FYI

- There are many other dimensions for example:

CHAPTER ZERO REVISION

- Coordinate
- Vector and Scalar
- Matrices

VECTOR AND SCALAR

MAGNITUDE VS VECTOR

PROPERTIES OF VECTORS

- Equality of vector
- Zero vector
- ”Negative” of a vector
- Scalar multiplication of a vector
- Addition of vector
- Subtraction of vector
- Unit Vector

EQUALITY OF VECTOR

ZERO VECTOR

”NEGATIVE” OF A VECTOR

SCALAR MULTIPLICATION OF A VECTOR

ADDITION OF VECTOR

SUBTRACTION OF VECTOR

UNIT VECTOR

EXAMPLE

VECTOR IN 2D

EXAMPLE

VECTOR IN 3D

EXAMPLE

VECTOR FORM/NOTATION

SCALAR

PROPERTIES OF SCALAR

SCALAR PRODUCT

EXAMPLE 1

EXAMPLE 2

EXAMPLE 3