



**College of Hospitality Industry
Management
Suan Sunandha Rajabhat University
(CHM, SSRU)**



**Lecturer responsible for this course:
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Course description

Introduction to linear algebra and artificial intelligence; Vectors and matrices; Determinants; Linear Equation; System of Linear Equation Using Matrices, Exemplar of learning instruction in Linear Algebra incorporate with dynamic software program such as the Geometer's Sketchpad, Matlab.



Week 1

Chapter 1: **Introduction to linear algebra**

Week 2 - 4

Chapter 2: **Matrices**

Week 5 - 7

Chapter 3: **Determinant**

Week 8

Mid-term examination (On-site)



Week 9

Chapter 4: **Linear Equation**

Week 10 - 12

Chapter 5: **System of Linear Equation Using Matrices**

Week 13 - 14

Chapter 6: **Vector-1**



Week 15 - 16

Chapter 7: **Exemplar of learning instruction in Linear Algebra incorporate with the Geometer's Sketchpad, Mathlab.**

Week 17

Final Examination



Assessment

- 1. Attendance, Ethics and Personality **10%**
- 2. Assignments **40%**
 - Assignments and Activities (20%)
 - Project Assignments (20%)
- 3. Midterm Test **20%**
- 4. Final Examination **30%**



Grading

Scores	Grade	Value
86 - 100	A	4.00
82 - 85	A ⁻	3.75
78 - 81	B ⁺	3.50
74 - 77	B	3.00
70 - 73	B ⁻	2.75
66 - 69	C ⁺	2.50
62 - 65	C	2.00
58 - 61	C ⁻	1.75
54 - 57	D ⁺	1.50
50 - 53	D	1.00
46 - 49	D ⁻	0.75
0 - 45	F	0



I : Incomplete

W : Withdraw





Week 1

Chapter 1: Introduction to linear algebra

Linear Equation

System of Linear Equation

$$2x + y = -8$$

$$2x + y + 8 = 0$$

$$y = -2x - 8$$

$$Ax + By + C = 0$$

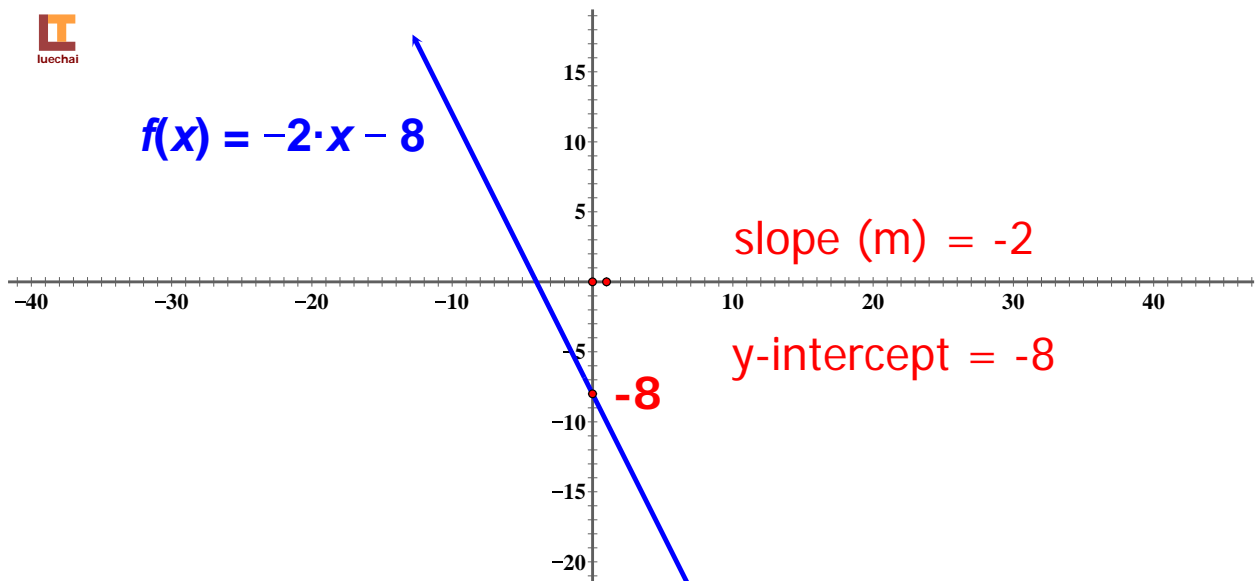
General form

$$y = mx + c$$

Standard form



$$f(x) = -2 \cdot x - 8$$





ms



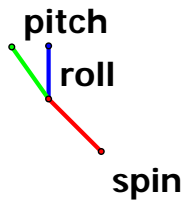
Matrix

$$A = \begin{bmatrix} 2 & 0 & \frac{1}{4} & -5 \\ 3 & -2 & -7 & 0 \\ -3 & 5^2 & \sqrt{3} & 4 \end{bmatrix}$$

3 rows
4 columns

- Perspective
- Orthogonal
- Isometric
- Initialize
- Hide Axes

0



- แสดง เวกเตอร์1
- แสดง เวกเตอร์2
- การบวก
- เริ่มต้น
- ผลบวก ไป
- ผลบวก กลับ

$x = 1$	$x = -4$
$y = -2$	$y = 2$
$z = 2$	$z = 4$

กำหนด $\vec{v} = \begin{bmatrix} 1 \\ -2 \\ 2 \end{bmatrix}$, $\vec{u} = \begin{bmatrix} -4 \\ 2 \\ 4 \end{bmatrix}$ จงหา $\vec{v} + \vec{u}$

