



FACULTY OF INFORMATION TECHNOLOGY

# MAT FITCAL 2024

## INTRODUCTION

FALL, 2024

# About Me

Lecture: VŨ NGUYỄN SƠN TÙNG

- Main courses: Calculus, Probability & Statistics, Discrete Math.
- Department of Mathematics & computer science - FIT – Hanu.
- Graduate at Belgorod state University (BSU), Russia – 2012.
- MSc in Differential Equations and Dynamical Systems, at BSU – 2013.
- PhD at Lomonosov Moscow State University (MSU), Russia – 2019.
- Research determine: differential equations, inverse problem, nonlocal problem, transport equation.

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# Module Descriptions

- Available at course website (<http://fit.hanu.edu.vn>) :  
61FIT: **F2024#CAL** ; 62FITCLC: **F2024%CAL**
- Nature of the module & learning objectives
  - Fundamental theory and techniques of linear algebra and calculus.
  - Learn how to solve linear algebra and calculus problem: *Linear equation, matrix, determinant, derivative, limit of functions, integral and it's application.*
  - Understand how linear algebra and calculus are used in various scientific disciplines
- Module delivery
  - 15 lectures + 15 tutorials

# Module Descriptions

- Lectures
  - Delivered by V.N. Son Tung – Room 901C
    - Monday, 12:20 – 14:25
- Tutorials
  - Room
  - Wednesday, Thursday – by V.N. Son Tung
  - Email : tungvns@hanu.edu.vn

# Module Descriptions

- Assessment
  - Attendance : **10%** : Student must participate 2 times per week and do problem set before each tutorial (problem set will be release before tutorial)
  - Midterm : **30%** : May be have one or two **Closed exam** in 90 mins
  - Final exam : **60%** : **Closed exam** in 90 mins

# Module Descriptions

- Pass criteria
  - You will not have the chance to take the final exam if you take part in less than 80% of classes, contain Lectures and Tutorials
- To obtain a grade of pass or higher:
  - The final band score must be at least 5.

# List of topics

## **Part 1: Linear Algebra**

1. Linear equation in linear algebra
2. Matrix algebra
3. Determinants
4. Vector spaces



# List of topics

## **Part 2: Calculus**

1. The limits and continuity
2. Derivative
3. Integration

# Academic honesty and misconduct

- Academic honesty and misconduct
  - Hanoi University expects all students and staff to act with honesty and integrity with all matters
    - Assignment
    - Examination (Assignments, Midterm & Final exam)

# Learning resources

- Textbook
  - David C. Lay, Steven R. Lay, Judi J. McDonald, *Linear Algebra and its applications*, 6th Edition, Pearson.
  - H. Anton, I. Bivens, S. Davis, *Calculus - Early Transcendentals*, 11th Ed., MA, USA: John Wiley & Sons, Inc., 2016.
- Problem set for each topic
- Study guide for each topic
  - Summary of importance concepts and ideals
  - Example test (with answers)
- Course website
  - All materials are uploaded there
  - Announcements & information