SKM3002

Matematik untuk Pengkomputeran Multimedia
(Mathematics for Multimedia Computing)

Credit hours : 3(3+0)

Semester 2, 2022/2023

Lecturer (Group 3)

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- C3-09 FSKTM, UPM

- Lecture:
  - Wednesday 2pm-3pm
  - Thursday 3pm-5pm

Learning Outcome

- At the end of this course, students should be able to:

  - relate appropriate mathematical theory in various multimedia computing problems. (C4)

  - build program functions to apply mathematical theory in multimedia computing. (P4)

  - evaluate the appropriateness of using mathematical theory in solving multimedia computing problems. (CTPS, NS)

Course Outcome

CPS	Description
CPS1	analyse knowledge, concepts, facts, principles, and theories related to Computer Science.
CPS2	analyze algorithms and techniques to design and optimize computing solutions
CPS3	adapt appropriate methodologies and techniques for modeling, design, development and evaluation of computing solutions
CPS5	use digital and numeracy skills to solve problems in the field of study.

Course Outline

- 1 - Chapter 1: Algebraic Expressions
- 2 - Chapter 2: Linear Transformation
- 3 - Chapter 3: Analytic Geometry
- 4 - Chapter 4: Matrix Analysis
- 5 - Chapter 5: Vector Calculus
- 6 - Chapter 6: Probability
- 7 - Chapter 7: Distribution
- 8 -Chapter 8: Optimization Using Gradient Descent
- 9 - Chapter 9: Convex Optimization

Course Assessments

Num	Assessment				CPS	%
1	Ujian 1				1	20
2	Projek Fasa 1				1	10
3	Projek Fasa 2				3	10
4	Projek Fasa 3				2	10
5	Kuiz				5	10
6	Final				3	40

Rules and Regulations

- Students are responsible for their own lecture attendance.
  - Sign your attendance for every lecture and lab.
  - Prepare supporting documents (Medical Certificates, exemption letter, etc.) for absent with reasons and submit to the lecturer **within 2 weeks**.
  - Students with **midterm attendance less than 40% (out of 50%) will be receive a warning letter**.
  - Students with **final attendance less than 80% will be prohibited from taking the final exam**.

DOs

- Find your own resources and perform self study regarding Multimedia Computing.

- Brush up your mathematical and programming skills.

- Be punctual on assignment submission dates. Make sure submission is complete.

- Don't be shy to discuss or voice out if you have problems.

DONTs

- Strictly **no copying** in all close book assessments and examinations.

- Strictly **no plagiarism** in all assessments.

Thank you
and
Happy Learning