MAKLUMAT PROGRAM

Tajuk/ Nama Kursus/ Nama Program	**Small Unmanned Aircraft**
Sinopsis	Unmanned aircraft systems (UAS) are playing increasingly prominent roles in defense programs and defense strategy around the world. Technology advancements have enabled the development of both large unmanned aircraft (e.g., Global Hawk, Predator) and smaller, increasingly capable unmanned aircraft (e.g., Wasp, Nighthawk). As recent conflicts have demonstrated, there are numerous military applications for unmanned aircraft, including reconnaissance, surveillance, battle damage assessment, and communications relays.
Hasil Pembelajaran (Learning Outcomes)	1. Enable participants to develop a comprehensive understanding of unmanned aircraft systems (UAS) and their applications. 2. Ability to design and implement a complete end-to-end flight simulator, covering aspects such as realistic flight dynamics, sensor models, autopilot design, and path planning.
Mod Pengajian (Delivery Mode)	Lectures/ Presentation
Tempoh (Duration)	4 working days **2nd – 5th September 2024**
Kumpulan Sasaran (Target Participant)	Junior and Senior Executive
Syarat Kemasukan (Admission Requirement)	Nil
Struktur Kursus (Course Outline) / Struktur Kurikulum (Topics Covered)	**Day 1** 1. Course Introduction - lecture 1 2. Introduction to UAV - lecture 2 3. Coordinate Frames - lecture 3 and 4 4. Reconfiguration of RC aircraft - exercise 1 5. Kinematics and Dynamic - lecture 5 **Day 2** 1. Kinematics and Dynamics - lecture 6 2. Forces and Moments - lecturer 7 and 8 3. Programing of Autopilot - exercise 2 **Day 3** 1. Linear Design Models - lecture 9 2. Autopilot Design - lecture 10 and 11 3. Calibration and Flight Test - lecture 12 **Day 4** 1. Sensors - lecture 13 2. State Estimation - lecture 14 3. Nonlinear Design Model - lecture 15 4. Waypoint and Orbit Following - exercise 3 5. Path Planning - lecture 16 6. Path Manager - exercise 4
Yuran Kursus (Course Fee)	**RM1,500.00 per participant**

Facilitator

Associate Prof. Lt Col Mohamed Tarmizi bin Ahmad TUDM (Retired) graduated with MSc (Applied Flight Mechanics-Aerodynamics), University of Cranfield and BSc Hons 2nd Class Upper (Aeronautical Engineering), Kingston University, UK. Also Qualified PPL pilot with flying experiences in single and twin-engine aircraft.

As a former Air Force aeronautical engineer he led the depot, intermediate, and line maintenance operations for fighter aircraft, transport aircraft, and helicopters and ensuring aircraft safety and operational readiness. Supervised and trained a team of aeronautical engineers and technicians, enhancing their skills and performance. Implemented quality assurance and safety compliance measures, implementing threat errors management and safety management system.

As a former CEO SME Aviation/Director SME Inc. USA, he established and led a successful aviation company that specialized in light aircraft design and manufacturing. Secured contracts and funding from various sources, including the Malaysian government. Oversee the operations, finances, and marketing of the company, ensuring profitability and growth. Expanded the company's presence and reputation in the global aviation market, securing partnerships and collaborations with leading aerospace firms.

As an Associate Processor UTM/ UPM/ UPNM he played a pivotal role in teaching and supervising undergraduate and postgraduate students, imparting industry knowledge and nurturing future aviation professionals. Conducted research and innovation projects in various areas of aeronautical engineering, such as rocket propulsion, aircraft tracking, and flight laboratory and flight simulator. Published and presented findings in reputable journals and conferences, advancing the field of aviation science.

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