



UTM
UNIVERSITI TEKNOLOGI MALAYSIA

School of
Professional and
Continuing
Education
(SPACE)

Short Course on GROUND BASED AIR SURVEILLANCE RADAR



3 DAYS

UTM JOHOR BAHRU



Ground based air surveillance radar is a generic terms that covers all types of radars used for detecting and monitoring the movement of aircrafts over a national air space for a military organization or air navigation service provider. The use of these radars is application dependent among others is to provide early warning of possible intrusion by potential adversary, management of air traffic, provide targeting information for air defence artillery and surface to air missile, and vector fighter jets to the vicinity of the potential intruders. The course will explain the various components that make up a ground based surveillance covering the propagation of signals, antennas, transmitters, receivers and signal processing.



FACILITATORS

Assoc. Prof. Dr. Nor Hisham bin Haji Khamis



Dr. Nor Hisham Haji Khamis obtained his Bachelor of Science in Electrical Engineering at University of Evansville, Indiana, U.S.A in 1988, Master of Engineering Science in Electrical Engineering (Communications) at University of New South Wales, Australia in 1992 and Ph D at Universiti Teknologi Malaysia, Skudai in 2005. He is a member of Eta Kappa Nu, and Senior Member, IEEE. At present, he is an Associate Professor at the School of Electrical Engineering, Faculty of Engineering, Universiti Teknologi Malaysia (UTM). His research interest includes Antenna Design and Fabrication, Microwave Engineering, and Propagation Studies. He now leads the Sonar Technology and Marine Instrumentation (STAR) Research Group of the Innovative Engineering Research Alliance of UTM.

Assoc. Prof. Dr Ahmad Zuri bin Sha'ameri



Assoc. Prof. Dr Ahmad Zuri bin Sha'ameri obtained his B. Sc. in Electrical Engineering from the University of Missouri-Columbia, USA in 1984, and M. Eng. Electrical Engineering and Ph D both from UTM in 1991 and 2000 respectively. He was the Head of the Microelectronic and Computer Engineering (MICE) Dept and currently the Academic Coordinator for the DSP Lab, Faculty of Electrical Engineering, UTM. His research interest includes signal theory, signal processing for radar and communications, signal analysis and classification and information security. The subjects taught at both undergraduate and postgraduate levels includes digital signal processing, advance digital signal processing, and advance digital communications. He has also conducted short courses for both government and private sectors. At present, he has published 160 papers in his areas of interest at both national and international levels in conferences and journals.



LEARNING OUTCOMES

At the end of this course, the participants will be able to ;

1. Acquire fundamental knowledge in ground based air surveillance radar.
2. Provide an overview of ground based air surveillance radar and its components.
3. Awareness of present day application and future development.



COURSE CONTENTS

- Introduction to radar principle
- Types of radar
- Radar equation
- Effect of operating frequency on radar
- Conceptual radar system design
- MTI radar
- Pulse Doppler radar
- Radar receiver
- Radar transmitter
- Tracking radar
- Sea echo and ground clutter
- Radar antennas
- Fundamentals of signal processing
- Signalling in primary radar and choice of signal selection – simple pulse and pulse compression
- Signalling for secondary radar – mod A, C, and S, and ADS-B,
- Signal detection theory
- Application of detection for various received signal conditions.
- Radar performance evaluation based on the radar specifications.
- Radar quality assurance and performance verification.

UTMSPACE ESTD 1993

IN-HOUSE COURSE can be designed in accordance with organizational requirements

CENTRE FOR PROFESSIONAL DEVELOPMENT UTMSPACE

07-531 8044 / 019-7773667 (Ms. Nurul Ain)

07-520 5725

nurulain@utmspace.edu.my



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REGISTRATION FORM

To confirm your registration, please complete this form including payment.

YES! Please register the following participant(s) for this course

I am interested but unable to attend. Please put me on your mailing list

Please tick (/) where applicable

Course Name : Short Course on Ground Based Air Surveillance Radar

Date : 3 Days

Venue : UTM Johor Bahru

Fee : **RM1590.00** per pax

Includes refreshment, course material & Certificate of Attendance

Please contact MS. NURUL AIN at 07-531 8044 / 019-777 3667 for special package (more than 20 persons) and accommodations.

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*DETAILS OF PARTICIPANT ATTENDING THE COURSE :

Bil.	Name of Participant	Mobile No.	E-mail	NRIC	FEE (RM)

(Please attach a separate list if necessary)

*UTMSPACE respects the privacy of its customers with regards to personal data. For further details, please visit www.utmspace.edu.my/pdpa

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Cancellations received in writing 30 days prior to the programme are eligible for refund, subject to a 15% cancellation fee. Cancellations received less than 14 days from the date of the programme are not eligible for a refund. However, substitute attendees are welcome. Please note that the speakers and topics are confirmed at the time of printing. However, circumstances beyond the control of the organisers may necessitate substitutions or cancellations of speakers and/or topics. As such UTMSPACE reserves the right to alter or modify the advertised speakers and/or topics.

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B. Telegraphic Transfer / Local Order

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I Terms & Conditions Apply I

FOR FURTHER INFORMATION, PLEASE CONTACT :

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