



Concepts of Electronic Warfare

9-11 September 2009

Presenter: Mr Dave Adamy

Conference Centre
Technology Park, Mawson Lakes SA

Teaching Arrangements:

The course will be conducted from 9.00am to 5.00pm. Morning tea will be available at approximately 10.00am to 10.30am, lunch from 12.30pm to 1.30pm and afternoon tea at approximately 3.00pm to 3.30pm.

Registration Fee: AU\$1980
(including GST)

Group and PhD student discounts available. Please enquire.

How to Register

To register fill out the registration form (overleaf) and

- fax it to +61-8-8343-8711; or
- scan and email it to industryeducation@nicta.com.au

Cancellation Policy

At least **4 weeks** notice is required for cancellation of a place in a short course for full reimbursement. If cancellation is later than 4 weeks then the place can either be given to another person or the registrant can be provided with a credit towards other NICTA training.

For details of further courses please see our web site: www.nicta.com.au/short_courses or contact the NICTA Industry Education Manager.

About This Course

This practical **3-day** course provides insight into the whole electronic-warfare field at the systems and operational level. It covers the basic definitions and technical and operational concepts of electronic and information warfare to enable students to communicate effectively with professionals in those fields and as a foundation for later higher level courses. It uses little math beyond algebra, yet students will learn to use important propagation and jamming equations in their simple dB forms. All concepts are explained in practical, physical terms.

Target Audience: The course is ideal for engineers expert in one aspect of EW/IW who want to round their EW education, engineers and advanced technicians new to the field, and those who need to understand how their products and subsystems fit into the big picture.

Brief Course Outline

Introduction: Basic concepts of EW and IW. Definitions, terminology and descriptions of subfields. Description of threats and threat signals. Aircraft protection, Ship protection, Ground vehicle protection. Communications and infrastructure vulnerability and protection.

Electronic Support Measures: Antennas, Receivers, Processors, Man-machine Interface, Search techniques, Emitter Location, Basic intercept calculations (received signal level, receiver sensitivity, effective range).

Electronic Countermeasures: Jamming concepts, Radar and Communication Jamming, cover jamming, deceptive jamming, Basic jamming calculations (J/S & Burn through for self protection and stand-off jamming).

Decoys: Expendable, towed and independent maneuver. Active and passive decoys. Decoy engagement calculations.

Chaff: Techniques and effectiveness. Aircraft protection, Ship protection.

Infrared and Electro-optical systems and countermeasures: Black body theory (very shallow coverage), Heat seeking missiles, FLIR,IRST, Night vision devices, Laser designators, LADAR, Flares, IR jammers, Laser countermeasures.

Relationship of EW and IW: IW Concerns and Techniques.

Course materials

Each attendee will receive a course syllabus, a special (newly available) Antenna and Propagation Calculation slide rule, and other handout booklets.

About the Presenter: Mr Dave Adamy.

Mr. Dave Adamy holds BSEE and MSEE degrees, both with communication theory majors. He has over 40 years experience as an engineer and manager in the development of electronic warfare and related systems. He has published over 150 articles on electronic warfare and communications theory related subjects, including a popular monthly tutorial section in the Journal of Electronic Defense. He has ten books in print. He consults to various military organizations and teaches electronic warfare and communication theory short courses all over the world.

About NICTA and Short Course Program

National ICT Australia (NICTA) is Australia's ICT Centre of Excellence and was established to drive innovation through high quality research, research training and technology transfer. As a world-class research institute NICTA uniquely combines excellence in research, education, commercialisation and collaboration. We are working to ensure that Australia is well placed to benefit from the significant opportunities that ICT research delivers.

NICTA is funded by the Australian Government as represented by the Department of Communications, Information Technology and the Arts and the Australian Research Council through *Backing Australia's Ability* and the ICT Centre of Excellence program. NICTA members are the Australian Capital Territory Government, the New South Wales Government, the University of New South Wales and the Australian National University.

NICTA short courses offer scientists, engineers and managers technical training with a leading edge in areas such as telecommunications, transport, security, defence, logistics, e-government, mining, finance and biotechnology.

There will be ample opportunities for discussion and questions and answers. Morning and afternoon tea/coffee and a light lunch will be provided. Extensive workshop materials will be made available to participants.

How to register

Please complete the registration form below and

- Fax it to +61-8-8343-8711 or
- Scan and email it to industryeducation@nicta.com.au.

Send the form as soon as possible to secure your place.

For further information please contact
Anne-Marie Eliseo
Industry Education Manager
Telephone: +61-8-8343-8710
Email: anne-marie.eliseo@nicta.com.au

Registration Form and Tax Invoice* ABN 62 102 206 173

*Upon completion of this form, including the relevant payment, this form will become a Tax Invoice.

Please register me for Concepts of EW on 9-11 September 2009.

PLEASE PRINT

Date: _____

Title: _____ First Name: _____ Surname: _____

Position: _____ Organisation/Division: _____

Postal Address: _____

Telephone No: _____ Facsimile No: _____ Email: _____

Dietary preference: _____

Course Fees: Full fee: AU\$1980 (incl. GST)
(Register before **Aug 9th, 2009.**)

Method of Payment (please tick below):

Cheque (payable to National ICT Australia Ltd)
Forward the cheque and a copy of THIS registration form to:
Anne-Marie Eliseo, Industry Education Manager, NICTA, Innovation House, First Ave, Mawson Lakes SA 5095, Australia.

Credit Card: Credit Card No.: _____ Expiry Date: _____

Visa Master Card Name on card: _____

Amount: AU\$ _____ Signature: _____ Tick if receipt required

Email address of card holder: _____

Electronic Funds Transfer
Please advise by email to Annette Van Bramer
annette.vanbramer@nicta.com.au
when payment is made

BANK	Commonwealth Bank of Australia
ACCOUNT NAME	National ICT Australia Limited
BSB	062 900
ACCOUNT NUMBER	1032 4576
REFERENCE NUMBER	090909

FAX the form to +61-8-8343 8711 or EMAIL it to industryeducation@nicta.com.au

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You can use the following options to access or remove your personal information from NICTA's databases, make a complaint about a breach of privacy or if you have a query relating to NICTA's privacy practices and policies:

- Send an email to comments@nicta.com.au or
- Phone NICTA's Industry Education Manager on +61 8 8343 8710.