

**ATTENTION:** 3<sup>rd</sup> Year & Final Year Students  
of

B.E - CSE / ECE / EEE / IT branches

**AU-KBC Research Centre, Anna University**  
in association with  
**National Resource Centre**  
**for Free/Open Source Software (NRCFOSS)**

Announces a *Certificate Course* in

## **Wi-Fi with FOSS** **(IEEE 802.11 and Open Source tools)**

*Forenoon: Presentations*

*Afternoon: Hands-on Labs /Demos*

For further details and benefits visit:

<http://comm.au-kbc.org/wificourse/>

Registration is open

**Course Date: Dec 17 - 22, 2007 (6 days)**

**NRCFOSS / AU-KBC Research Centre**

MIT Campus of Anna University, Chrompet, Chennai -44.

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# Details of “Wi-Fi with FOSS” Certification Course

(Dec.17 to 22, 2007)

*Conducted by*

**Wireless Communications Group of AU-KBC Research Centre**

*in association with*

**National Resource Centre for Free and Open Source Software (NRCFOSS)**

## List of topics covered

### **Networking & Linux Fundamentals**

- § Introduction to OSI Layers, TCP/IP protocol in action
- § Understanding Linux OS Architecture, Linux commands

### **WLAN basics**

- § WLAN introduction and applications, BSS, IBSS, ESS, DS, BSSID, SSID
- § IEEE 802.11 set of standards, Spectrum of operation, AP/STA hardware structure

### **WLAN PHY**

- § RF fundamentals: path loss and fading, Transmit, receive power: dB calculations
- § DSSS & OFDM PHY: fundamentals and data rate support

**WLAN MAC** - DCF Protocol, PCF Protocol, Tuning MAC parameters

### **WLAN framing and management**

- § MAC frames and fields, Network entry
- § Active scanning and passive scanning
- § Timing and power management

### **WLAN Security**

- § Basics of Network Security, WEP – Encapsulation, RC4 Algorithm
- § WEP Vulnerabilities, WPA – TKIP, WPA2 - CCMP mode of operation
- § IEEE 802.1x Authentication and Key management, EAP and RADIUS
- § EAP –MD5, EAP-TLS, EAP- TTLS, EAP-PEAP, EAP-LEAP, EAP-SIM
- § WLAN Security tools

**WLAN QoS** – EDCF, HCF, APSD, Block –ACK

### **Wi-Fi products and network management**

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**Note: Forenoon – Concepts through presentations, Afternoon: Hands-on Labs/ Demos**

*Labs Hands-on: Demonstrations using open source tools and Atheros Access Points / Client cards*

**For more details contact: [contact-wireless@au-kbc.org](mailto:contact-wireless@au-kbc.org) or call : 044-2223 2711/4885**

Visit: <http://comm.au-kbc.org/wificourse/> or <http://nrcfosshelpline.in/web/>