G. S. SANYAL SCHOOL OF TELECOMMUNICATIONS

IIT KHARAGPUR

- **Telecommunications Network Security [TNS]:** (3-0-0, 3 credits), **Prerequisite – Digital Communications [EC31002] or equivalent**

    Telecommunications Network - security objectives, policies and models (4);
    Security challenges of emerging telecommunications infrastructure (3);
    Cryptographic services and mechanisms (4);
    Encryption algorithms - DES, AES, block and stream ciphers (4);
    Mobile IPv6 (4);
    Firewalls and Intrusion Detection Systems (4);
    Malware detection (3);
    UMTS security protocols (4);
    WLAN security (2);
    Security in mobile adhoc and sensor networks (3);
    Security certification and accreditation (4);
    Common Criteria for security evaluation (2);

Reading Resources:

1. Handbook of Applied Cryptography by Menezes, P. van Oorschot, S. Vanstone:, CRC Press, 1997
2. Computer Security by D. Gollmann, Wiley, 2011
3. UMTS Security by V. Niemi, K. Nyberg, Wiley, 2003
4. Security for Telecommunications Network Management by M. Rozenblit, PHI, 2000.