COURSE DETAILS

Course Code: F20CN
Full Course Title: Computer Network Security
SCQF Level: 10
SCAF Credits: 15
Available as Elective: No

DELIVERY LEVEL

Undergraduate: Yes  Postgraduate Taught: No  Postgraduate Research: No

Additional Information:

COURSE AIMS

Impart critical understanding of key concepts, issues, theories and principles of computer network security.

• Develop detailed theoretical and practical knowledge of foundational issues in computer network security.
• Provide detailed understanding and practical experience with key services and tools used for computer network security purposes.
• Give practical experience of analysing requirements, designing, implementing and testing security solutions for computer network applications

LEARNING OUTCOMES – SUBJECT MASTERY

Detailed and critical understanding of the concepts, issues, principles and theories of computer network security

• Critical theoretical and detailed practical knowledge of a range of computer network security technologies as well as network security tools and services
• Practical experience of analysing, designing, implementing and validating solutions to computer network security challenges using common network security tools and formal methods.

LEARNING OUTCOMES – PERSONAL ABILITIES

• Ability to deal with complex issues and make informed judgements about network security in the absence of complete or consistent data.
• Demonstrate critical reflection on network security issues. (PDP)
• Exercise substantial autonomy and initiative in addressing computer network security challenges.
• Showing initiative and team working skills in shared computer network security application development. (PDP)

SYLLABUS

• Basics of cryptography: principles & algorithms - concepts (classification, symmetric vs asymmetric encryption etc); public-key encryption: challenges
A fundamental knowledge of computer networking, formal methods and Java programming are pre-requisites to this course.