College of Informatics and Virtual Education (CIVE)

IA 418: Cyber Criminology and Techniques

Course Outline

Course Facilitator

- **Dr. Daniel Ngondya**
  - ✓ PhD in Information and Communication Science and Engineering.
  - ✓ Postgraduate Diploma in IT Infrastructure and Systems Security.
  - ✓ M.Sc. Computer Science.
  - ✓ B.Sc. With Computer.

IA 418: Cyber Criminology and Techniques

- **Course Weight:**
  - ✓ 7.5 Credits
- **Time Table:**
  - ✓ Lecture: Thursdays (1530-1730hrs), Venue **LRA020**
  - ✓ Tutorial: Wednesdays (1330-1430hrs), Venue **LRB 002A**
  - ✓ Lab: Thursdays (1400-1600), Venue **LRB 003D**
- **Pre-requisite:**
  - ✓ IA 121: Foundations of Cyber Security

Course Description

- This course explores **technical**, **legal**, and **social** issues related to **cybercrime**.
- Cybercrime is a broad term that includes:
  - ✓ Offences where a computer may be the **target**.
  - ✓ Crimes where a computer may be a **tool** used in the commission of an existing offence
  - ✓ Crimes where a computer may play a subsidiary role such as **offering evidence** for the commission of an offence.

Course Objectives

- **Course objectives are as follows:**
  - ✓ Students will understand different **concepts** that underpin **cyber crimes**.
  - ✓ Students will understand and acquire knowledge on different **methods** used by **cyber criminals**.
  - ✓ Students will be imparted with the knowledge of **tools** and **techniques** used by **cyber criminals.**
  - ✓ Students will understand and appreciate the **jurisdiction** issues on **cyber security**.

Course Details

- **Legal Composition of Cybercrime**
  - ✓ Definition
  - ✓ Classes of cyber offences
  - ✓ Computer offences
  - ✓ Computer facilitated offences
  - ✓ Computer supported offences
  - ✓ Prevalence and frequency of cybercrime in Tanzania and beyond.
- **Methods and Techniques Used in the Commission of Offences**
  - ✓ Malicious software

Course Details..

- **Methods and Techniques Used in the Commission of Offences**
  - ✓ Viruses
  - ✓ Worms
  - ✓ Trojan horses
  - ✓ Spyware
  - ✓ Adware
  - ✓ Impersonation
  - ✓ Salami techniques
  - ✓ Scavenging
  - ✓ Trap doors

Course Details..

- **Methods and Techniques Used in the Commission of Offences**
  - ✓ Logic bombs
  - ✓ Phishing
  - ✓ Wire-taping
- **Internet Activity of Cyber Criminals**
  - ✓ Analysis of illegal internet activity and abuses of the system
  - ✓ Investigating ways of tracking sources of Internet activity and review of tools used to detect unusual or illegal activity
  - ✓ Electronic Discovery
  - ✓ Depositions and Expert Testimony

Course Details..

- **Internet Activity of Cyber Criminals**
  - ✓ Electronic Evidence in Litigation;
  - ✓ Electronic Surveillance in Communications Networks
  - ✓ Evidence Retention, Preservation and Spoliation
  - ✓ Legislation Affecting the Information
  - ✓ Security Professional
  - ✓ Privacy Issues
  - ✓ Searching and Seizing Computers
  - ✓ Search Warrant Issues
  - ✓ Security

Course Details..

- **Hacking**
  - ✓ Classification of hackers
  - ✓ Techniques used by hackers
  - ✓ Spamming
  - ✓ Phishing
  - ✓ Skimming
  - ✓ Botnets
  - ✓ Distributed denial of service attacks.
- **Computer offences**
  - ✓ Illegal access
  - ✓ Illegal interception

Course Details..

- **Computer offences**
  - ✓ Data and system interference
  - ✓ Misuse of devices.
- **Content-related offences**
  - ✓ Child Pornography
- **Offences against the person**
  - ✓ Cyberstalking,
  - ✓ Grooming
  - ✓ Voyeurism
  - ✓ Cyberbullying

Course Details..

- **Fraud and financial crimes**
  - ✓ Fraud
  - ✓ Identity theft
  - ✓ Money laundering
  - ✓ Copyright infringement
  - ✓ Software piracy
- **International issues**
  - ✓ Cyber-terrorism
  - ✓ Cyber-warfare
  - ✓ Human trafficking

Course Details..

- **Jurisdictional issues**
  - ✓ Tanzanian laws and jurisdiction
  - ✓ Global nature of cybercrimes and jurisdictional issues
  - ✓ Prescriptive jurisdiction
  - ✓ Adjudicative jurisdiction
  - ✓ Enforcement jurisdiction
- **Forensics Traces**
  - ✓ Network logs and traffic analysis
  - ✓ Intrusion detection and analysis
  - ✓ Using Honeynets to monitor illegal activity

Course Details..

- **Analysis of Computer Forensics Tools**
  - ✓ Overview of open source tools and priority products for analysis computer systems
  - ✓ Comparison of different suites of tools on various systems
  - ✓ Identifying trends and activities in computer crime and developing new tools to deal with such activity

Key References Books

- **Cyber Criminology**: Exploring Internet Crimes and Criminal Behavior by K. Jaishankar, CRC Press.
- **Cybercrime:** The Transformation of Crime in the Information Age, David S. Wall, 2007, Polity Press, Cambridge, UK.
- **Interpersonal Criminology**: Revisiting Interpersonal Crimes and Victimization by K. Jaishankar, CRC Press.

Course Materials

- **Course materials will be shared on Google Drive:**
  - ✓ Register on: so that I can have your email address and share with you course materials.

Course Evaluation

- **Tests, Quizzes, Lab Assignments, and Reports: 40 Marks**
  - **Test One-10 Marks: 11/12/2024**
  - **Test Two-10 Marks: 08/01/2025**
- **Plagiarism and Cheating in Your Works:**
  - ✓ Strict and punitive.
  - ✓ Not allowed to copy from your colleagues or from the Internet.

Contacts

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