DIPLOMA IN
FORENSIC SCIENCE
CURRICULUM BASED ON CREDIT SYSTEM

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PROGRAMME TITLE	DIPLOMA IN FORENSIC SCIENCE
TOTAL CREDITS	15 Credits
TOTAL LEARNING HOURS	150 Hours
GUIDED LEARNING HOURS	45 Hours

Total Learning Hour – 150 Hours

Guided Learning Hour – 45 Hours

1 Credit = 10 hours of effort (10 hours of learning time which includes everything a learner has to do to achieve the outcomes in a qualification including the teaching learning process, assessment procedures and practical's).

LIST OF UNITS

S. No.	Unit Title	Unit Specification	Credits
1	Fundamentals of Forensic Science	Essential Unit	3
2	Introduction to Crime Scene Basics	Essential Unit	3
3	Basics of Forensic Biology	Essential Unit	3
4	Introduction to Forensic Toxicology	Essential Unit	3
5	Digital Forensics Basics	Essential Unit	3
TOTAL CREDITS			**15**

UNIT TITLE	Fundamentals of Forensic Science
CREDIT	3
SPECIFICATION	Essential Unit

UNIT DESCRIPTION

To provide a basic understanding of what forensic science is and how it helps in solving crimes.

UNIT LEARNING OUTCOMES

1. **Understand what forensic science is and how it's used in investigations.**

    Indicative Content: Definition of forensic science; its history; simple case examples where forensic science helped solve crimes; roles of forensic scientists.

2. **Learn about different types of forensic evidence.**

    Indicative Content: Introduction to evidence types (fingerprints, hair, blood, digital); importance of each type in investigations; simple methods for collecting evidence.

3. **Explore basic techniques used in forensic labs.**

    Indicative Content: Simple lab safety tips; basic equipment used (microscope, magnifying glass); how to avoid contaminating evidence; introduction to lab activities like fingerprint dusting.

Indicative Study Reference Text Books

1. Fisher, B. A. J. (2004) Techniques of Crime Scene Investigation. 7th edn. Boca Raton, FL: CRC Press.

2. Saferstein, R. (2015) Forensic Science: From the Crime Scene to the Crime Lab. 3rd edn. New York: Pearson.

3. Bell, S. (2006) Forensic Science: An Introduction to Scientific and Investigative Techniques. Boca Raton, FL: CRC Press.

4. Inman, K. and Rudin, N. (2001) Principles and Practice of Criminalistics: The Profession of Forensic Science. Boca Raton, FL: CRC Press.

5. Jackson, A. and Jackson, J. M. (2008) Forensic Science. Harlow: Pearson Education.

UNIT TITLE	Introduction to Crime Scene Basics
CREDIT	3
SPECIFICATION	Essential Unit

UNIT DESCRIPTION

To teach the basic steps of securing and managing a crime scene to ensure evidence is preserved.

UNIT LEARNING OUTCOMES

1. **Understand how to secure a crime scene.**

   Indicative Content: Simple steps to set up boundaries (like using tape)-keeping people out to avoid contamination -role of first responders.

2. **Learn methods for documenting a crime scene.**

   Indicative Content: Taking basic photos of the scene-making quick sketches to show what was found where-writing simple notes on observations.

3. **Understand the basics of evidence collection.**

   Indicative Content: How to handle evidence without damaging it-basic packaging for small items (plastic bags, paper envelopes)-recording details about each item collected.

Indicative Study Reference Text Books

1. Pepper, I. K. (2005) Crime Scene Investigation: Methods and Procedures. Open University Press.
2. Horswell, J. (2004) The Practice of Crime Scene Investigation. Boca Raton, FL: CRC Press.
3. Lee, H. C., Palmbach, T., and Miller, M. T. (2001) Henry Lee's Crime Scene Handbook. San Diego: Academic Press.
4. Lyle, D. P. (2004) Forensics for Dummies. Hoboken, NJ: Wiley.
5. Geberth, V. J. (2015) Practical Homicide Investigation: Tactics, Procedures, and Forensic Techniques. Boca Raton, FL: CRC Press.

UNIT TITLE	Introduction to Forensic Biology
CREDIT	3
SPECIFICATION	Essential Unit

UNIT DESCRIPTION

To introduce biological evidence, including what it is and how it can help identify people involved in crimes.

UNIT LEARNING OUTCOMES

1. **Identify types of biological evidence.**

    Indicative Content: Basic introduction to biological evidence (hair, blood, saliva); how these types can help in identifying people; why it's important to preserve this type of evidence carefully.

2. **Learn what DNA is and why it's useful.**

    Indicative Content: Basic DNA structure; how DNA is unique to each person; simple explanation of how DNA can link people to crime scenes.

3. **Understand simple tests for biological evidence.**

    Indicative Content: How to do basic tests for blood; handling biological evidence with care; simple safety practices (e.g., wearing gloves).

Indicative Study Reference Text Books

1. Foran, D. (2009) Fundamentals of Forensic DNA Typing. Burlington, MA: Academic Press.

2. Goodwin, W., Linacre, A., and Hadi, S. (2011) An Introduction to Forensic Genetics. Chichester: Wiley-Blackwell.

3. Tully, G. (2015) Forensic Biology. London: CRC Press.

4. Butler, J. M. (2005) Forensic DNA Typing: Biology and Technology behind STR Markers. San Diego: Academic Press.

5. Quinones, I., and Daniel, B. (2019) Forensic DNA Typing Protocols. New York: Humana Press.

UNIT TITLE	Basics of Forensic Toxicology
CREDIT	3
SPECIFICATION	Essential Unit

UNIT DESCRIPTION

To introduce students to the concept of toxicology, focusing on common substances that can be involved in crimes.

UNIT LEARNING OUTCOMES

1. **Understand the basics of toxicology.**

   Indicative Content: What toxicology means; introduction to poisons and drugs; overview of how toxins affect the body.

2. **Identify common toxins and their effects.**

   Indicative Content: Introduction to common toxins (alcohol, drugs); how these substances affect the body; why they might be relevant in forensic cases.

3. **Learn simple testing methods for toxins.**

   Indicative Content: Basic methods for screening (e.g., urine tests); how to collect and store samples safely; basic precautions and handling methods.

Indicative Study Reference Text Books

1. Levine, B. (2015) Principles of Forensic Toxicology. 4th edn. Washington, DC: AACC Press.

2. Baselt, R. C. (2017) Disposition of Toxic Drugs and Chemicals in Man. Foster City, CA: Biomedical Publications.

3. Langford, A. M. (2016) Forensic Toxicology: Mechanisms and Pathology. Amsterdam: Elsevier.

4. Karch, S. B. (2003) Drug Abuse Handbook. 2nd edn. Boca Raton, FL: CRC Press.

5. Kerrigan, S., and Goldberger, B. A. (2015) Forensic Toxicology: Principles and Concepts. London: Springer.

UNIT TITLE	Digital Forensics Basics
CREDIT	3
SPECIFICATION	Essential Unit

UNIT DESCRIPTION

To introduce digital forensics, focusing on types of digital evidence and how it can be collected for investigations.

UNIT LEARNING OUTCOMES

1. **Understand what digital forensics is.**

   Indicative Content: Definition of digital forensics-examples of digital evidence (e.g., files, emails)- how digital forensics is different from traditional forensics.

2. **Learn about types of digital evidence.**

   Indicative Content: Different sources of digital evidence (computers, phones)- importance of preserving digital data as evidence.

3. **Explore basic techniques for collecting digital evidence.**

   Indicative Content: Overview of imaging and copying files-simple steps to avoid altering digital evidence-use of secure storage methods.

Indicative Study Reference Text Books

1. Sammons, J. (2012) The Basics of Digital Forensics. Waltham, MA: Syngress.
2. Casey, E. (2011) Digital Evidence and Computer Crime. 3rd edn. Waltham, MA: Elsevier.
3. Nelson, B., Phillips, A., and Steuart, C. (2010) Guide to Computer Forensics and Investigations. 5th edn. Boston: Cengage Learning.
4. Easttom, C. (2021) Computer Crime, Investigation, and the Law. 2nd edn. Boca Raton, FL: CRC Press.
5. Lyle, D. P. (2011) Forensics for Dummies. Hoboken, NJ: Wiley.