MCj02869570000[1]MCj02869570000[1]**Forensics Crime Lab: Final Exam Study Guide**

**Spring 2013-2014**

Your final will consist of 2 sections:

1. Multiple Choice
2. Short Answer

You will be allowed to bring a “cheat sheet” to the exam:

a handwritten 3 x 5inch index card

Topics on the Exam:

1. DNA

* Function and structure of DNA
* Where DNA is found
* DNA Fingerprinting
* Restriction enzymes
* PCR
* Nuclear vs. Mitochondrial DNA
* CODIS

1. Questioned Documents

* Types of forgery
* Handwriting Characteristics
* Methods of signature forgery
* Document Alterations
* Counterfeiting deterrents in currency

1. Toxicology

* Exposure Methods
* Ways toxicity is affected
* LD50
* How drugs are identified
  + PDR
  + Field Tests
  + Screening Tests
  + Confirmatory Tests
* Blood Alcohol Content

1. Arson Investigation

* Fire Causes
* Determining Point of Origin
* Motives for Arson
* Identify Point(s) of Origin
* Recognize different fire patterns and what situation causes them
* Understanding the process of investigating arson

1. Impressions

* Tool marks
* Shoeprints
* Tire treads
* Bite marks
* Class vs. Individual characteristics of impressions
* Know how impressions can be documented and preserved
* What can be learned about the tool that was used to make an impression

1. Human Remains

* Time of Death determination
* Algor, livor and rigor mortis
* Age determination
* Gender differences
* Odontology

**To prepare for the Short Answer questions:**

This section will consist of a crime scene scenario where you will have to apply the concepts, techniques, and tests that we have covered this semester to help preserve the crime scene, document and collect evidence and analyze the evidence. You need to go back through all of your notes and most importantly your labs and review the different techniques and tests that we used to:

Human DNA extraction

DNA fingerprinting and analysis

Gel Electrophoresis

Handwriting analysis

Analysis of drugs and poisons

Calculating Rf values

Detection of currency forgery

Gender and age determination of human bones

Impression lab

Arson analysis/investigation (based on notes/class discussions)