



Forensics

(Source: Pinterest - Grand Duchess Anastasia Romanova)

Word study

Forensics	homicide	superimpose
Forensic accounting	suicide	skeleton
Forensic archeology	autopsy	dental work
Forensic dentistry	birthmark	ancestry
Forensic psychology	crime scene	evidence collection
Forensic medicine	prosecution	defense
Pathologist	terminal illness	natural death

Forensic science (forensics) applies a broad spectrum of sciences to answer questions of interest to the legal system. There are several types of forensics, such as: computer forensics, forensic accounting, forensic archeology, forensic dentistry, forensic psychology, forensic medicine.

Forensic medicine studies those elements that lead to the death of a victim, it studies the way in which a body died. It identifies the murder victim by dental records, birthmarks, tattoos or bodily signs, it can reconstruct the victim long time after death by the aid of specialized computer programs. It can also determine the cause of death, the time of death,

it can help to determine ancestry. The tasks in forensic medicine are carried out by pathologists.

A pathologist does not only perform autopsies, but provides expert advice to law enforcement agencies, supervises the pathology laboratory and its employees. He or she supervises the crime scene and the evidence collection process, attends inquests, and gives advice to juries and counsel. All the information provided, on the findings after autopsies, the opinions on the nature of death are important to the prosecution and defense.

A pathologist must have a good knowledge of several areas of forensic science and medicine, such as: forensic dentistry, pathology, crime scene evaluation, anatomy, microscopy, anthropology.

Famous Cases – The Forensic Identification of the Romanovs- The Grand Duchess Anastasia

The last imperial family to rule Russia (1693-1917) the Romanovs were executed by the Bolsheviks on 17 July, 1918. The Tsar and his wife, their children were shot and buried on a road side secretly.

During a construction work in July 1991, nine skeletons were found in a grave in Yekaterinburg, Russia. They were taken to examination. Based on skull measurements, on the type of dental structure, and by superimposing images of the skulls on the existing photos, scientists managed to associate the skeletons to the Tsar, the Tsarina, three of the children, the doctor and other three servants: two more bodies were missing, those of Alexei and Marie. When a team of American scientists examined the skeletons, they came to the conclusion that the missing girl was not Marie, but the grand duchess Anastasia. There were rumours that some members of the Tsar's family survived. One of them was Anastasia, who had been only wounded and taken away by a Red Guard.

What does a pathologist do? Complete the pathologist's list of tasks:

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-
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-
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Fill in the missing words:

Imperial, duchess, buried, rumours, skeleton, survived, forensic, grand, definitely, skulls, missing, scientists

Executed by the Bolsheviks in 1918, the Romanov _____ family were _____ on a roadside in Yekaterinburg. When their _____ were found, they were taken to _____ examination. The images of the _____ were superimposed on existing photos. At the examination performed by a team of American _____ it was found that the _____ girl was actually the grand _____ Anastasia, not Marie. There were _____ that some members of the Tsar's family _____. One of them was the _____ Duchess Anastasia.

Arrange the following events in logical order: number them according to the order of occurrence.

- the police close the area
- the body of a woman is found on the roadside, outside the city
- the people contact and inform the police
- the police and the pathologist arrive
- they take photos of the scene
- the pathologist examines the body
- the woman is declared dead
- they take the body to autopsy
- the pathologist performs the autopsy
- a report is drawn on the cause and time of death
- the woman's identity is established

Match the following notions with their correct definitions:

forensics

1. forensic accounting
2. computer forensics
3. forensic psychology
4. forensic archeology

1. the branch of forensics which provides results of archeological investigation for court room use
2. pertains to legal evidence in computers and digital storage media it is the examination of digital media to identify, preserve, recover, analyze and provide opinions about the information
3. investigative accounting to give expert advice for use in a court of law
4. it provides psychological findings for use in the courtroom
5. the application of a broad spectrum of sciences to answer questions of interest to the legal system

Form adjectives from the following nouns:

- forensics	spectrum	science
- accounting	archeology	psychology
- medicine	pathology	death
- body	heart	homicide
- suicide	blood	murder
- crime	dentistry	

When examining the deceased, a pathologist will look for the four main categories of death, the four manners in which death can occur. When the body ceases to function of its own

accord or it suffers from terminal illness, heart disease for example, then there is a death by natural causes.

Homicide , another category, means the taking of one human life by another human being by means of pre-meditated murder, that is purposely planning and executing the murder in cold blood.

The death of an individual by means other than natural death, murder or suicide, is termed as accidental death.

The deliberate taking of one's own life is categorized as suicide. The four categories help in decision on the manner in which a person died. An autopsy is also performed to provide proof for the correctness of the assumptions.

Group the following events into the four categories mentioned in the text (homicide, natural death, suicide, accidental death).

-A masked man enters a store and threatens the shop-keeper with a gun. As the man attempts to convince the attacker that there is no money in the shop at that moment, the attacker shoots the shop-keeper and vandalizes the store. The police find the shop-keeper dead.

- A young man climbs a tall, wet cliff, without being properly anchored by ropes. He slips off. He is found dead.

- An old lady collapses in the street. When the paramedics arrive, they find her without heart beat and declare her dead.

- After finding out about the arranged marriage her parents had planned for her, a 20-year-old Indian girl swallows some poisonous substance and dies.

Cyber Forensics

To investigate, identify, and provide the means of discovering and punishing criminals based on information technology, IT, cyber forensic science has been diversified into several branches.

After the advent of the World Wide Web, cyber crimes are on the rise. As a distinctive branch of forensics science, computer forensics provides the possibility to trace out legal evidence

through computers, mobile devices, and other kinds of digital storage media. It can identify, analyze data, and draw conclusions that are regarded as legal evidence at the courts.

Such evidence must be the result of electronic discovery, the examination of information security, of computer forensics investigation, all based on solid technical expertise. Such cyber forensics methods deal with computer data analysis, the recovery of information from corrupt or encrypted files, and their analysis.

People performing these activities are trained as computer forensics examiners, cyber crime specialists, computer forensics investigators, electronic crime specialists, cyber security experts etc. They deal with cyber crimes like ID thefts, Internet fraudulence, spreading spam, deleting or destroying data, hacking, intruding, privacy breaking, cyber bullying, Internet based character assassination, releasing viruses, installing spy software, software copying without holding copyrights so on.

With the wide use of the Internet, the issue of Internet security has gained primacy. Specialists have to design and implement network protecting mechanisms, application access control, save the systems from hackers; setup hacker shield and detection programs. Without the computer forensics specialists, the law wouldn't be able to base its decisions on proper evidence: computer forensics experts also deliver expert opinions at the courts.

Those who require their services are law enforcement agencies, financial institutions, investment firms, lawyers, judges, and even a state which is subjected to the threat cyber attack.

The process involving such examination extends from the crime spot to the courtroom judging high-tech crimes. There are five stages in dealing with digital evidence: assessment, acquisition, examination, documentation, and reporting. During these stages, general forensic and procedural principles are applied. The examination must be conducted by highly trained specialists who keep the integrity of such evidence unaffected, and perform an accurate examination. The findings, the examination, the transfer of the evidence must be documented. All these items are handled with care, as digital evidence is easily damageable, destroyable. Examinations are always conducted on a copy of the original for the integrity of the evidence to be preserved. Any request for forensic services entails the consideration of several conditions, such as the nature of crime, the court dates, the potential victim, the legal consideration, the volatile nature of evidence, and the availability of resources.

This particular branch of forensic science has had a rapid development dictated by the need to find genuine evidence from the virtual world, usable as concrete evidence in the physical world. by S.K.K. Shuvra – *Cyber Forensics*)

Find the Romanian equivalent of the following words and phrases:

- provide the means
- the advent of WWW
- on the rise
- to trace out legal evidence
- digital storage media
- regarded as legal evidence
- examination of information security
- based on solid technical expertise
- recovery of information
- corrupt or encrypted files
- cyber security experts
- ID theft
- Spreading spam
- Installation of spy software
- Gain primacy
- Design and implement network protecting mechanisms
- Set up hacker shield
- Law enforcement agency
- The threat of cyber attack
- Digital evidence

- Assessment
- Acquisition
- Keep the integrity of evidence unaffected
- Perform an accurate examination
- Transfer evidence
- Entails the consideration of several conditions
- The volatile nature of evidence
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Finish the following sentences using the suggestions in brackets:

If I had competency in computer forensics, I(apply for that job).

You wouldn't have any lead if it....(not be for data recovery possibility).

He won't get that job unless he(be specialized in computer security).

If he had had better communication skills, he.....(meet the requirements).

You can apply right away on condition that you.....(have a degree in criminal justice).

Had he proved more competency in solving crimes, he (can become)..... a private investigator.

Had I studied computer science, I.....(become an IT specialist).

If you can prove your innocence, they(withdraw the charges).

You will have to testify if you.....(be cited as witness).

He could have asked for the position if he(have a B.A. in cyber crime).

Formulate a short note of polite refusal to Peter Sparks, who has applied for the position of computer crime specialist, but doesn't have a degree in criminal justice or a B.A. in cyber crime.

Dear Mr. Sparks:

Thank you for submitting your application for the position of computer crime specialist.....

Vacancies !!!

You find the following adverts in the *Journal of Computer Forensics*, in the March issue of this year: choose one of the positions and write your letter of application, using the block format and the instructions provided.

Letter of application

Your address

Date

Address of the organization

Salutation

Paragraph 1 - State where you found the ad and express your intention to apply for the position

Paragraph 2- Provide information on your qualifications

Paragraph 3 – Provide information on your experience using the requirements of the job

Paragraph 4 – Give your contact information and ask to be contacted

Closing formula

Signature block

Our organization is looking for specialists for the following positions:

COMPUTER FORENSICS EXAMINER

Candidates for this position must have competency in computer forensics, electronic discovery, and information security; they will conduct computer forensics investigation, data recovery, electronic discovery procedures.

Requirements:

A solid technical experience and expertise, strong communication skills, strong background in forensic lab practices and procedures, evidence handling. They need experience in law enforcement and basic investigation.

Qualifications:

BA, MA in computer forensics, computer sciences, a degree in criminal justice

COMPUTER CRIME SPECIALIST

Candidates for this position must have competency in solving crimes by analyzing computer data (ID theft, fraud, robbery), recover information from corrupt or encrypted files, analyze findings, write reports, testify in court as expert witness

Qualifications

Degree in criminal justice, BA in cybercrime, computer forensics, or Internet security

CYBER SECURITY SPECIALIST (INFORMATION SECURITY SPECIALIST)

Requirements

The candidates must prove competency in designing and implementing network control mechanisms, implementing application access control, denying hackers access to the system, and setting up programs to detect hackers.

Qualifications

BA in computer science, familiarity with Windows NT, UNIX, training in computer programming and risk management, possess a CISSP (Certified Information Systems Security Professional Accreditation)