

Forensic Science Education and Training in Hong Kong – Opportunities and Potential Challenges

Have you ever imagined yourself as a forensic science scientist investigating unsolved cases while watching TV shows or movies? In reality, how can you turn this interest into a career? Until 2023, there were no local universities or colleges in Hong Kong that provided an undergraduate academic degree in forensic science. Graduates from related fields such as physics, chemistry, and biology often need additional training to enter the forensic science industry. In 2023, Tung Wah College launched the first and only bachelor's degree in forensic science, marking a significant milestone in the academic history of both the institution and Hong Kong.

As the first and only college in Hong Kong to offer a bachelor's degree in forensic science, students can study genetics, microbiology, biochemistry, pathology, and other biologically related fields over the programme of four years, while also acquiring specialized knowledge in various areas of forensic science, including fingerprint analysis, crime scene investigation/analysis, forensic photography, human body identification, toxicology analysis, blood spatter analysis, gunshot residue analysis, etc. The content of the programme is interesting and challenging as students will gain practical skills by engaging in a realistic “simulated crime scene” to identify, collect and preserve evidence or act as an expert witness to provide professional opinions on laboratory results in a “mock court trial”, fostering critical thinking, communication and analytical skills.

To enhance students' understanding of the industry, the college invites forensic experts from various fields to conduct courses and share their valuable insights and experiences, including fingerprint experts, retired government laboratory lab technicians, archaeologists, anthropologists and computer forensic experts, etc. Students have the opportunity to learn from both local and international experts across various forensic disciplines and engage in meaningful interactions, which helps broaden their perspectives and develop professional networks within the industry. The college is also committed to remaining at the forefront of the field by acquiring state-of-the-art forensic instruments, thereby significantly enhancing students' practical skills and improving their competitiveness in the employment market. Advanced instruments such as the superglue fuming hood and forensic comparison microscope are also used by the Hong Kong Police. Furthermore, the college actively arranges field trips to the local laboratories, such as the Forensic Fingerprint Laboratory under the Identification Bureau (IB) of the Hong Kong Police Headquarters, as well as international visits to overseas institutions and laboratories. These can inspire students to pursue advanced studies or research

opportunities, enriching their educational experience and fostering cross-cultural understanding.

In Hong Kong, graduates in forensic science have a range of career opportunities tailored to the unique needs of the legal and law enforcement systems. Many would like to find positions in the Hong Kong Police Force, working as crime scene investigators or in the Forensic Science Division of the Hong Kong Government Laboratory as chemists. In addressing the complexities of modern crime and justice, the IB spent five years to expand the Forensic Fingerprint Laboratory, which has been officially put into service since August 22, 2023 (1). This HK\$11 million expansion enabled the 4,000-square-foot laboratory to perform various tasks using advanced technologies within a shorter timeframe (2). The new laboratory also offers summer and winter internship programs that allow students to gain valuable hands-on experience in forensic science by working alongside experienced professionals in a real-world setting, where they can observe and participate in various forensic tasks.

Other graduates may pursue roles in private forensic laboratories or consulting firms that offer specialized services in forensic analysis and expert testimony. Additionally, the growing emphasis on scientific evidence in legal proceedings has opened avenues for careers in academia, where graduates can contribute to the field through teaching and research. With Hong Kong's distinct legal landscape and advancements in forensic technology, graduates are well-positioned to make significant contributions to both local and international forensic practices.

From time to time, traditional approaches to forensic education face challenges and limitations. Not only must curricula and teaching methods be updated to align with the evolving needs of the field, but evidence-based education should also be prioritized. This approach integrates research evidence into educational practices by incorporating real-world case studies, mock crime scenes and hands-on laboratory exercises (3). Problem-based learning and flipped classroom models, as well as Augmented Reality (AR) and Virtual Reality (VR) technologies should be considered to create realistic and immersive environments for students.

Forensic science education and training in Hong Kong is evolving rapidly to meet the demands of the criminal justice system. Graduates in forensic science have a variety of career options available. As long as graduates cultivate curiosity and enthusiasm for learning, they can achieve success in the field of forensic science.

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