



POLITIHØGSKOLEN

CURRICULUM

POSTGRADUATE EDUCATION

In

**NORDIC COMPUTER FORENSIC
INVESTIGATORS**

MODULE 3N: CRYPTO ASSETS

7.5 credits

Approved by the Education Committee 12th May 2023

Changes approved by the head of department

30th November 2023

1. Introduction and purpose

Crypto assets have significantly transformed the financial sector by introducing decentralized systems, fostering cross-border transactions, and promoting financial inclusion on a global scale. This innovation did not come without presenting challenges for law enforcement investigations which include tracing anonymous transactions, navigating decentralized networks, and addressing the evolving landscape of cybercrime and illicit activities. With a focus on the growing relevance of these virtual assets in criminal, commercial, and civil investigations, this course aims to equip participants with the knowledge and skills required to effectively handle cases involving cryptocurrencies. Students will learn how to identify cryptocurrencies as potential evidence in investigations, communicate their findings to various stakeholders, and draw reasoned, justified, and visualised conclusions about their relevance. The curriculum delves into the challenges crypto assets pose to society, as well as the identification, collection, acquisition, and analysis of potential evidential artifacts during investigations. This comprehensive course covers a wide range of law enforcement-centric topics, reflecting the complexity of the field and the need for specialised expertise.

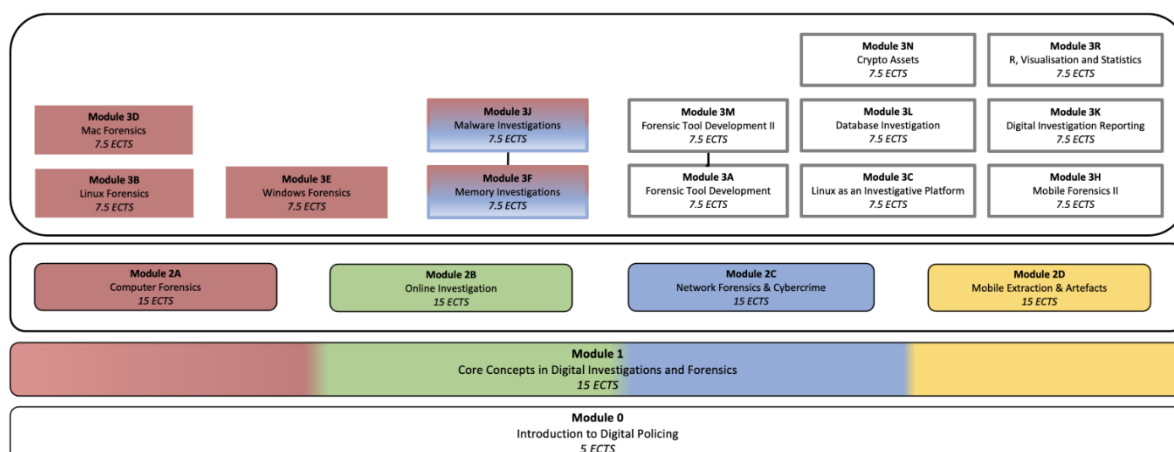
The postgraduate study programme shall contribute to police practitioners being better able to perform investigative and analysis tasks involving digital devices, and thus contribute to the quality and development of digital investigation and forensics.

2. When applicable: Educational pathways and formal approval

2.1. Education

The education gives 7.5 credits and is included as a course in an educational portfolio (the 'NCFI Portfolio') according to the following model depicted below.

Admission requirements, content and organisation of the individual courses are described in more detail in the study plan for each course.



3. Target group and admission requirements

3.1. Target group

The primary target group for this education is police staff in the Nordic countries whose main task is, or will be, handling and investigating digital evidence.

Employees in other international police services or governmental agencies who currently work, or will work, with digital evidence are also eligible to apply.

Applicants must be recommended by the employer.

3.2. Admission Requirements

Applicants must document the following requirements:

Education:

- Bachelor's degree
- have passed at least one NCFI M2X module.¹

Applicants who do not satisfy the requirement for a bachelor's degree must document the following:

- Passed and completed 2-year education at a higher level than upper secondary school, and in addition either:
 - o Minimum 60 ECTS

¹ The former NCFI Module 2 (25 ECTS) is also accepted.

- (of which NCFI Core Concepts of 15 ECTS and any NCFI M2X of 15 ECTS each. The former NCFI Module 1 (5 ECTS) and former NCFI Module 2 (25 ECTS) are also accepted.), or
- 1680 hours of continuing education courses, or
- 5 years of practice

Employment, work experience and additional requirements:

- Current employment in a government agency (e.g., law enforcement agency or other cooperating governmental agencies/organisations)

4. Learning outcomes

4.1. General Competence

After completing the module, students can:

- perform professional and research tasks in digital policing
- see the role of digital policing in a broader perspective during an investigation

4.2. Knowledge

After completing the module, students have knowledge of:

- the principles and functioning of cryptocurrencies, including their underlying technologies, such as blockchain and decentralized networks
- the principles and methods of tracing crypto assets transaction flows in UTXO- and account-based blockchains
- the legal and regulatory issues surrounding crypto assets, addressing compliance, anti-money laundering (AML), and combating the financing of terrorism (CFT) efforts
- the existing opportunities for seizing crypto assets from wallets and accounts of the Virtual Asset Service Providers (VASPs)

4.3. Skills

After completing the module, students will be able to:

- analyse transaction flows of crypto assets and interpret on-chain data artefacts
- interpret the relevance of wallet seed phrases to private keys and addresses of multiple crypto assets
- cluster crypto asset addresses belonging to the same entity and attribute these entities to persons or organisations
- request Know-Your-Customer information from VASPs
- prepare for and seize crypto assets from suspects' devices, when possible
- apply relevant legal frameworks and technical / scientific methodologies to all tasks involving crypto assets

- communicate technical findings related to crypto assets transactions

5. Organisation of teaching and learning activities

The education is organised as an online part-time programme and must be completed within 5 months. The scope of further education is estimated to be approx. 210 hours of study.

Teaching and learning activities shall contribute to providing students with good learning outcomes, and emphasis is placed on flexible and diverse working methods with a high degree of student activity. Furthermore, the study is organised around key issues and challenges in the investigation of electronic traces, which are illuminated with relevant theory.

The teaching and learning activities include lectures, presentations, individual and group work, practical exercises, cases, quizzes, assignments, and literature study. Student support will be delivered via electronic means such as: email, discussion fora, chat, and virtual classrooms. The teaching and learning activities also include optional live online lectures throughout the semester (totalling no more than 8 hours).

An online learning platform is used in the administration and pedagogical implementation of the programme.

Coursework requirements

The following requirements must be approved before the students can take the exam:

- Successful completion of up to 10 automatically graded online quizzes. (Students may have multiple attempts at these tests, if necessary.)
- Two assignments

Guidance will be given related to the coursework requirements.

6. Assessment

Students are assessed along the way through coursework requirements and receive feedback on these according to specified criteria based on the descriptions of learning outcomes.

The module is concluded with an individual take-home exam over 4 hours.

The exam **must** be passed in order to successfully complete the module.

Letter grades are used on a scale from A to F, where A is the highest passing grade, E is the lowest passing grade and F is a failing grade.

7. Literature

7.1. Syllabus

Students will be expected to read several web resources, lessons, reports, and academic research papers. These will form part of the mandatory reading requirements and thus be examinable.

Due to the rapid changes in the fields of digital forensics and cybercrime investigation, such resources must be provided to students during the study. This will ensure that the reference materials are up to date and based on current trends.

The mandatory reading shall not exceed 450 pages.

7.2. Assumed Knowledge

Literature from The Norwegian Police University College's NCFI M1 Core concepts in Digital Investigation and Forensics of 15 ECTS, **and** at least one NCFI M2X module of 15 ECTS (or similar education).