

# Centre of Excellence in Information Technology



# Certificate in Ethical Hacking and Information Security NQF (Level 7)

#### **Programme Objective**

The programme enables students to gain skills in security programming and get an in-depth insight into cognitive skills related to the Information Technology (IT) security domain. Students will be able to work in the fields of application security or ethical hacking, by acquiring practical skills to design and implement security measures in computer networks and systems.

#### Who Should Attend?

Applicants who have completed a Diploma programme in Computer Science, Information Systems, Information Technology or Informatics or an equivalent qualification from an accredited institution (NQF Level 6). Applicants with one-year experience in the aforementioned fields will be given priority. Applicants from other science and engineering disciplines or with prior learning experience may be admitted into this programme at the discretion of the Centre. Such applicants may be required to write a test or an interview to guide the selection.

#### **Programme Outcomes**

Upon completion of the programme, graduates will be able to

- Apply the principles of security management concepts to plan, design, and simulate appropriate security measures to counter possible risks and threats.
- Write security and cryptography related codes in java for Information Security.
- Apply threat diagnostic and security related problem-solving skills in a production environment.
- Can become members of professional/association bodies such as Certified Information Systems Security (CISSP), Certified

Intrusion Analyst (CIA) and System Security Certified Practitioner (SSCP).

Respect and demonstrate IT systems code of ethics within a workplace.

## **Programme Design**

Each programme consists of four or five courses scheduled over one semester and as well as a project. The programme will be delivered on full-time (day and/or evening) in accordance with NUST rules. The Following courses in this programme are:

- Fundamentals of Linux programming
- Secured Python Programming
- Java Programming with Crypto API
- Information and Application Security
- Ethical Hacking
- Project Development

#### Assessment

Continuous Assessment with Feedback (diversified) will be used for all courses.

#### Certificate

Upon successful completion of this courses, a qualification credited with a minimum of NQF 60 credits (NQF Level 7), will be awarded to candidates.

This programme is not eligible for admission to an NQF Level 8 qualification.



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**NAMIBIA UNIVERSITY** 

 OF SCIENCE AND

 TECHNOLOGY





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# Certificate in Advanced Web Technologies NQF (Level 7)

## **Programme Objective**

This programme is aimed at providing an understanding of emerging approaches in web technologies. It further aims to enable students to implement web applications and prepare them to stay abreast with the ever-changing face of technology in a growing industry.

### Who Should Attend?

Applicants who have completed a Diploma programme in Computer Science, Information Systems, Information Technology or Informatics or an equivalent qualification from an accredited institution (NQF Level 6). Applicants with one-year experience in the aforementioned fields will be given priority. Applicants from other science and engineering disciplines or with prior learning experience may be admitted into this programme at the discretion of the Centre. Such applicants may be required to write a test or an interview to guide the selection.

## **Programme Outcomes**

Upon completion of the programme, graduates will be able to

- Demonstrate understanding the principles of web development concepts used in plan, design, and develop Web applications.
- Develop in-depth knowledge of advanced Web technologies and related programming concepts.
- Select appropriate tools and methods to design and build dynamic Web applications.
- Demonstrate knowledge in architecting both front end and backend components of a Web application.
- Apply advanced web development principles and related problem-solving skills in a production environment.

 Can work as Web Developer / Web Designer / IT Support Staff and demonstrate IT systems code of ethics within a workplace.

#### **Programme Design**

Each programme consists of four or five courses scheduled over one semester and as well as a project. The programme will be delivered on full-time (day and/or evening) in accordance with NUST rules. The Following courses in this programme are:

- Computer & Programming Concepts
- Web Programming I (HTML,CSS, AJAX)
- Database Concepts
- Web Programming II (PHP, JavaScript)
- JavaScript based Web Technologies
- Project Development

#### Assessment

Continuous Assessment with Feedback (diversified) will be used for all courses.

#### Certificate

Upon successful completion of this courses, a qualification credited with a minimum of NQF 60 credits (NQF Level 7), will be awarded to candidates

This programme is not eligible for admission to an NQF Level 8 qualification.



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## Centre of Excellence in Information Technology



# Certificate in Big Data Technologies NQF (Level 7)

## **Programme Objective**

This programme capacitates students knowledge of storage, processing, and analysis of big data. It explores the practical skills required to turn large volumes of data into actionable insights. This will be done through the designing and building of platforms and systems that can handle the gigantic amount of data available today. The programme further aims to develop students' abilities to analyse big data using intelligent techniques.

#### Who Should Attend?

Applicants who have completed a Diploma programme in Computer Science, Information Systems, Information Technology or Informatics or an equivalent qualification from an accredited institution (NQF Level 6). Applicants with one-year experience in the aforementioned fields will be given priority. Applicants from other science and engineering disciplines or with prior learning experience may be admitted into this programme at the discretion of the Centre. Such applicants may be required to write a test or an interview to guide the selection.

#### **Programme Outcomes**

Upon completion of the programme, graduates will be able to

- Examine the history and evolution of big data, the essential characteristics of big data, and the business challenges that it resolves.
- Demonstrate an in-depth knowledge and understanding of established and emerging big data technologies.
- Manage and administer big data technologies at an appropriate scale.
- Model and design efficient solutions for the processing and analysis of big data.

- Demonstrate exceptional problem-solving can expertise in Big Data Analytics domain.
- Use emerging technologies to solve current data engineering challenges.
- Communicate effectively insights derived from big data to organisational stakeholders.

#### **Programme Design**

Each programme consists of four or five courses scheduled over one semester and as well as a project. The programme will be delivered on full-time (day and/or evening) in accordance with NUST rules. The Following courses in this programme are:

- Fundamentals of Linux programming
- Database Concepts and Data Collection
- · Java Programming
- Big Data Technologies
- Project Development

#### Assessment

Continuous Assessment with Feedback (diversified) will be used for all courses.

#### Certificate

Upon successful completion of this courses, a qualification credited with a minimum of NQF 60 credits (NQF Level 7), will be awarded to candidates.

This programme is not eligible for admission to an NQF Level 8 qualification.



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