



TIC

# ▶ TALENTO TECH

## REGIÓN 3 CAUCA - NARIÑO MODULE 1



UTP  
Universidad Tecnológica  
de Pereira

faceIT





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# MODULE 1

This module focuses on sharing basic vocabulary and understanding of key concepts and texts in the field of symmetric encryption, as well as fundamentals of encryption processes. The course structure integrates practical language exercises with an introduction to fundamental technical knowledge, making it suitable for those aiming to develop both their linguistic and technical proficiency in cybersecurity.

## CONTEXTUALIZATION OF LEARNING.

When the learners finish this module, it is expected to acquire a foundational vocabulary and comprehension of key concepts in symmetric encryption. With a focus on texts like how encryption works and what stream ciphers are. The students will not only improve their language skills but also get fundamental technical knowledge in the field of cybersecurity. On the other hand, learners will be trained with the linguistic and technical proficiency required to navigate and communicate effectively in cybersecurity contexts.



# Unit 1: Confidentiality with Symmetric Encryption



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## GENERAL OBJECTIVES:



In this unit, learners will obtain basic knowledge about the operation of symmetric block encryption algorithms.



Improve reading and writing skills within the context of symmetric encryption.





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## Competencie s to Develop

01

**Linguistic competence:** Build up the skill to spot and comprehend basic vocabulary, concepts, and phrases about cybersecurity, threats and risks.

02

**Pragmatic competence:** Understand effectively written phrases and text related to cybersecurity, scientific articles, or instructions.

03

**Sociolinguistic competence:** Relate and contextualize cybersecurity vocabulary and concepts within the real-world experiences making it possible to enhance the ability to relate linguistic forms to their practical uses in the field of cybersecurity.

04

**Topical Competence:** Notice and analyze how the field of cybersecurity contributes to the development of the society and safety of many companies and individual users, comprehending innovative and modern topics related to this field.



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Time available: 4 hours

### Lesson cybersecurity

- Idiom of the day
- Activity 1. Warm-up activity: "The Shared Key Secret"
- Lesson 1. Socialize the keywords about symmetric encryption
- Lesson 2. Watch the video on YouTube: "Symmetric vs Asymmetric key Cryptography | Simply Explained"
- Activity 2. Questions activity about the video on Quizizz
- Lesson 3. Reading article "Confidentiality with Symmetric Encryption"
- Activity 3. Reading comprehension activity: Fill-in-the-Gaps
- Activity 4. True and false activity about the previous reading
- Lesson 4. Socialize the key words about stream ciphers
- Lesson 5. Reading: "Stream ciphers"
- Activity 5. Multiple choice questions about the reading "Stream ciphers"
- Activity 6. Practical activity

### Learning materials.

[https://www.youtube.com/watch?v=FmWH1gMvOD8&ab\\_channel=eduTVOnline](https://www.youtube.com/watch?v=FmWH1gMvOD8&ab_channel=eduTVOnline)  
[https://quizizz.com/admin/assessment/67641a12a5aafab2739d20ad?source=lesson\\_share](https://quizizz.com/admin/assessment/67641a12a5aafab2739d20ad?source=lesson_share)  
<https://learn.microsoft.com/es-es/>  
<https://cryptii.com/pipes/xor-encryption>