

# AlShaab University

## جامعة الشعب



*First Cycle – Bachelor's degree (B.Sc.) – Cyber Security Engineering*

بكالوريوس هندسة - الأمن السيبراني



## Table of Contents

1. Overview
2. Undergraduate Modules 2023-2024
3. Contact

### 1. Overview

This catalogue is about the courses (modules) given by the program of Cyber Security Engineering to gain the Bachelor of Science degree. The program delivers (48) Modules with (6000) total student workload hours and 240 total ECTS. The module delivery is based on the Bologna Process.

نظرة عامة

يتناول هذا الدليل المواد الدراسية التي يقدمها برنامج هندسة الأمن السيبراني للحصول على درجة بكالوريوس علوم الهندسة. يقدم البرنامج (٤٨) مادة دراسية، على سبيل المثال، مع (٦٠٠٠) إجمالي ساعات حمل الطالب و ٢٤٠ إجمالي وحدات أوروبية. يعتمد تقديم المواد الدراسية على عملية بولونيا.

### 2. Undergraduate Courses 2023-2024

#### Module 1

Code	Course/Module Title	ECTS	Semester
CYSE101	Structured Programming	7	1
Class (hr/w)	Lect/ <u>Lab</u> ./ <u>Prac</u> ./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	2/1	79	96
Description			
Structured Programming is a programming paradigm that emphasizes the use of modularity, structured control flow, and data abstraction to improve the clarity, maintainability, and scalability of programs. This module introduces the fundamental principles of structured programming using the C++ programming language. Students will learn how to design, write, and debug structured programs to solve computational problems. Throughout the module, students are encouraged to apply problem-solving techniques and develop algorithmic thinking to devise efficient solutions. They also gain hands-on experience through programming assignments and projects. Topics covered include basic syntax and data types, control structures, functions, arrays, pointers, and file handling.			

**Module 2**

Code	Course/Module Title	ECTS	Semester
CYSE100	Electrical Circuits	7	1
Class (hr/w)	Lect/ <u>Lab.</u> / <u>Prac.</u> /Tutor	SSWL (hr/sem)	USWL (hr/w)
2	2/1	79	96
Description			
<p>This module introduces students to the basic principles and concepts of electrical circuits. Students will have a strong foundation in electrical circuit analysis and design. They will be able to apply their knowledge to design and analyze basic circuits, troubleshoot circuit problems, and understand the behavior of electrical components in various circuit configurations, focusing on both DC (direct current) and AC (alternating current) circuits. Topics covered include voltage, current, resistance, Ohm's law, Kirchhoff's laws, circuit elements (such as resistors, capacitors, and inductors), circuit analysis techniques (such as nodal analysis and mesh analysis), circuit theorems (such as thevenin's theorem and Norton's theorem), and frequency response.</p>			

**Module 3**

Code	Course/Module Title	ECTS	Semester
CYSE102	Cybersecurity Fundamentals	5	1
Class (hr/w)	Lect/Lab./Prac. / <u>Tutor</u>	SSWL (hr/sem)	USWL (hr/w)
3	1	63	62
Description			
<p>A cybersecurity fundamental is an introductory module designed to provide students with a comprehensive understanding of the key principles, concepts of conditionality, integrity, and availability in the field of cybersecurity. The module aims to equip students with a foundational knowledge of cybersecurity, including the fundamental principles, tools, and techniques used to protect digital assets and information systems from unauthorized access, data breaches, and cyber threats. Students will explore various topics related to cybersecurity, including threat landscape analysis, risk assessment, network security, cryptography, access controls, incident response, and security awareness. The module emphasizes the importance of a multi-layered defense approach and the implementation of security measures across different levels of an organization's infrastructure.</p>			

**Module 4**

Code	Course/Module Title	ECTS	Semester
CREQ100	Mathematics I	5	1
Class (hr/w)	Lect/Lab./Prac. / <u>Tutor</u>	SSWL (hr/sem)	USWL (hr/w)
3	1	63	62
Description			
<p>This module is designed to develop student's mathematical reasoning and problem-solving abilities. This module introduces students to the fundamental concepts of algebra, geometry, and calculus. It aims to provide students with a solid understanding of mathematical principles and techniques that are essential for further study in mathematics and related disciplines. Throughout the module, students will engage in problem-solving activities, both individually and collaboratively, to develop their critical thinking and analytical skills. Emphasis will be placed on applying mathematical concepts to real-world situations and communicating mathematical ideas effectively.</p>			

**Module 5**

Code	Course/Module Title	ECTS	Semester
CYSE103	Computer Skills	4	1
Class (hr/w)	Lect/ <u>Lab.</u> /Prac. /Tutor	SSWL (hr/sem)	USWL (hr/w)
2	2	64	36
Description			
<p>This module provides an introduction to computer skills and essential software applications. Students will develop fundamental computer literacy and gain proficiency in using various software tools for productivity and communication purposes. The module covers topics such as operating systems, word processing, spreadsheets, presentation software, email, and internet usage. Assessment methods may include practical assignments, projects, quizzes, examinations, and class participation. Students are typically expected to complete hands-on exercises using various computer applications and demonstrate their understanding of the module concepts through both individual and collaborative work.</p>			

## Module 6

Code	Course/Module Title	ECTS	Semester
UREQ100	English Language I	2	1
Class (hr/w)	Lect/Lab./Prac. /Tutor	SSWL (hr/sem)	USWL (hr/w)
2	-	33	17
Description			
Academic English I is a foundational module designed to enhance student's English language proficiency and develop essential academic skills necessary for successful undergraduate studies. The module focuses on improving student's reading, writing, listening, and speaking skills in an academic context. Emphasis is placed on critical thinking, effective communication, and academic integrity. Through various activities and assignments, students will learn to analyze and respond to academic texts, conduct research, and produce well-structured essays.			

## Contact

Program Manager:

Ismail Khalil | Ph.D. in Data Security and Artificial Intelligence | Assistant Prof.

Email: ismail.ali@alshaab.edu.iq

Mobile no.: +964 7703495476

Program Coordinator:

Sally Salahaldeen | M.Sc. in Networks Technology | Assistant Lecturer

Email: sally.salah@alshaab.edu.iq

Mobile no.: +964 7713957796

---