



CODELABS ACADEMY

TECHNOLOGY & PROFESSIONAL SKILLS TRAINING DIVISION

“Practical Skills. Real Projects. Career Ready.”

OFFICIAL COURSE OUTLINE

Certified Computer Network Engineer

Design, deploy and troubleshoot the network infrastructure organisations depend on.

Rolling Intake ENROLLMENT	2 Months DURATION	Beginner to Practitioner LEVEL	Live Online Classes DELIVERY MODE
10 to 12 hrs / week ESTIMATED WEEKLY EFFORT	Codelabs Academy Certificate CREDENTIAL AWARDED	Networking & Infrastructure CATEGORY	Juba, South Sudan DELIVERED FROM

I. About This Programme

This programme is delivered by Codelabs Academy, the training division of Codelabs, a South Sudan based technology company. Classes are taught by Codelabs engineers and working technology professionals, live and online, so instruction stays grounded in how the work is actually carried out in practice rather than in theory alone.

II. Who This Programme Is For

Beginners with no prior networking experience who want a hands on, practical foundation in building and supporting real network infrastructure.

Entry Requirements

- A laptop or computer with a stable internet connection
- Basic computer literacy, comfortable navigating an operating system
- No prior networking experience required, this program starts from the fundamentals
- Commitment to attend live classes and complete lab exercises

III. Programme Description

Behind every office, hospital, school or bank is a network that has to work reliably, securely and fast enough for the people depending on it. Someone has to design, install and keep that network running, and that is the role this programme prepares students for.

Students move from core networking concepts through to configuring real routers, switches and wireless equipment, building the practical skills network engineers use on the job every day.

IV. Learning Outcomes

Measurable Outcome	Demonstrated Via
Design and document an IP addressing scheme for a given network requirement.	Unit I Practicum
Configure routers and switches to support a working local network.	Unit II Practicum
Deploy and secure a wireless network against common threats.	Unit III Practicum
Diagnose and resolve common network faults using a structured method.	Unit IV Capstone
Produce clear network documentation suitable for handover.	Capstone Review

V. Core Curriculum: Weekly Modules

UNIT I

Networking Fundamentals

Weeks 1 to 2

“How does data actually find its way from one device to another?”

Topics Covered

- IP addressing and subnetting
- The OSI and TCP/IP models
- Network topologies and media
- Structured cabling and hardware basics

Lab Practicum · Estimated 10 hrs

Design and document an IP addressing scheme for a sample office.

UNIT II

Routing & Switching

Weeks 3 to 4

“What decisions does a router or switch make every time a packet arrives?”

Topics Covered

- Router and switch configuration
- VLANs and inter VLAN routing
- Static and dynamic routing basics
- Network device management

Lab Practicum · Estimated 14 hrs

Configure a small routed and switched network in a lab environment.

UNIT III**Wireless Networking & Security***Weeks 5 to 6*

“How do you give people reliable wireless access without opening the network to attack?”

Topics Covered

- Wireless network design and configuration
- Wireless security standards
- Firewalls and access control
- Common network threats and mitigations

Lab Practicum · Estimated 12 hrs

Deploy and secure a wireless network for a sample site.

UNIT IV**Troubleshooting & Capstone***Weeks 7 to 8*

“When a network stops working, where do you actually start looking?”

Topics Covered

- Systematic network troubleshooting methodology
- Diagnostic tools and techniques
- Documentation and handover practice
- Final network build and defence

Lab Practicum · Estimated 14 hrs

Capstone: build, secure and troubleshoot a complete small network, then present it.

VI. Weekly Time Commitment

Activity	Hours per Week
Live Instructor Led Classes	4.0 hrs / wk
Practical Lab & Project Work	4.0 hrs / wk
Self Study & Practice	2.5 hrs / wk
Peer Review & Consultation	1.5 hrs / wk

VII. Programme Progression**Phase I: Foundations (Weeks 1 to 2)**

Building core concepts and comfort with the tools used throughout the programme.

Phase II: Core Skills (Weeks 3 to 4)

Developing the primary practical skills the certificate is built around.

Phase III: Applied Practice (Weeks 5 to 6)

Applying those skills to realistic tasks that mirror real working conditions.

Phase IV: Capstone and Certification (Weeks 7 to 8)

Completing a final project and assessment that leads to certification.

VIII. Assessment & Certification Criteria

Assessment Component	Weight
Weekly Lab Practicums (Units I to IV)	40%
Mid Programme Practical Assessment	15%
Final Capstone Project	35%
Participation & Professionalism	10%

Certification Bands

Band	Overall Score
Distinction	90% and above
Merit	75% to 89%
Pass	60% to 74%
Incomplete	Below 60%

IX. Programme Policies

Attendance & Make Up

Students are expected to attend all live sessions. Session recordings are made available afterward, and a student who misses a class may arrange a catch up session with their instructor before the next unit begins.

Original Work

All lab practicums and the capstone project must reflect the student's own understanding and effort. Students are encouraged to discuss approaches with peers, but submitted work must be completed individually unless a unit specifies group work.

Responsible Use of AI Tools

Students may use AI tools to support their learning, for example to research a concept or review their own work. Submitting AI generated work as a capstone project without a genuine understanding of how it functions does not

meet the certification standard.

X. Tuition & Enrollment

\$300

TUITION

2 Months

PROGRAMME DURATION

What Is Included

- All live instructor led classes and lab practicums for the full programme
- Course materials and guided project briefs for every unit
- A Codelabs Academy certificate of completion upon meeting the Pass standard or above
- Admissions and scheduling support throughout the programme

To apply, visit codelabs.com.ss/academy/network-engineer or contact Codelabs Academy admissions directly. Enrollment is ongoing, with a new cohort beginning monthly.

Mading Robin

Academy Director, Codelabs Academy

Date: _____