

# **Course Definition File**



# Syrian Arab Republic Ministry of Higher Education



الجمهورية العربية السورية
وزارة التعليم العالىي
الجامعة الافتراضية السورية

**Syrian Virtual University** 

#### 1. Basic Information:

Course Name	Network Operating Systems
Course ID	IOS204
Contact Hours (Registered Sessions)	36
Contact Hours (Synchronized Sessions)	18
Mid Term Exam	NO
Exam	2
Registered Sessions Work Load	36
Synchronized Session Work Load	18
Credit Hours	6

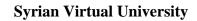
#### 2. Pre-Requisites:

Course	ID		
Operating System	IOS101		
Introduction to Network	INT101		

#### 3. Course General Objectives:

At the end of this course, the learner should understand the concepts of Network Operating Systems - NOS, and be able to identify and use main technologies related to the implementation of NOS components, and comprehend related issues and new trends of the subject.

#### **Ministry of Higher Education**





الجمهورية العربية السورية
وزارة التعليم العالي
الجامعة الافتراضية السورية

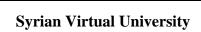
# 4. Intended Learning Outcomes (ILO):

Learning Outcomes codes	Learning Outcomes				
LO1	Understanding basic concepts of NOS and the server.				
LO2	Identifying and using main technologies of NOS and related				
LOZ	hardware				
LO3	Accommodating related issues of NOS and its new trends.				

#### 5. Course Content:

LO	Course Syllabus	Recorded Sessions	Synchronized Sessions	Туре	Additional Notes
				<b>≭</b> Exercises	
				★ Assignments	
LO1	NOS	6	2	□ Seminars	
LOI			3	□ Projects	
				▼ Practices	
				□ Others	
				<b>≭</b> Exercises	
	NOS used technique	18	9	★ Assignments	
LO2				□ Seminars	
202				▼ Projects	
				▶ Practices	
				□ Others	
LO3	Related issues and new	9	6	□ Exercises	

#### **Ministry of Higher Education**





الجمهورية العربية السورية
وزارة التعليم العالىي
الجامعة الافتراضية السورية

trends.		×	Assignments	
			Seminars	
		×	Projects	
		×	Practices	
			Others	

# 6. Assessment Criteria (Related to ILOs):

			Assessment Type				
LO Code	LO	Intended Results	Interactive Synchronized Collaboration	Practice	Exams	Presentations And Face- to-Face Assessments	Reports
LO1	NOS		X	X	X		X
LO2	NOS used techniques		Х	Х	X		Х
LO3	Related issues and new trends		X	X	Х	X	Х

#### **Ministry of Higher Education**





الجمهورية العربية السورية
وزارة التعليم العالىي
الجامعة الافتراضية السورية

# 7. Course Syllabus (18 hours of total synchronized sessions):

LO	Chapter No	Chapter	Content
LO1	1	Introduction	<ol> <li>Defining Network Operating Systems</li> <li>Types of NOSs</li> <li>Characteristics Of NOSs</li> <li>Components of NOSs</li> <li>Usual working scenarios with NOSs</li> <li>Unusual working scenarios for NOS</li> </ol>
LO1	2	Preparing the Server for Network Systems	<ol> <li>System Documentation</li> <li>Serving a network system</li> <li>Server General Requirements</li> <li>Server Types</li> <li>Planning Server Installation Process</li> </ol>
LO1	3	Operating Systems	<ol> <li>What is an Operating System?</li> <li>Functions of Operating Systems</li> <li>Operating System Types</li> <li>Windows OS</li> <li>Linux OS</li> </ol>
LO2	4	Preparing Working Environment and Installing Server HW	<ol> <li>Preparing Working Environment</li> <li>Installation Process</li> <li>Installing Server Hardware</li> <li>SCSI Technique</li> </ol>
LO2	5	RAID	<ol> <li>Introduction</li> <li>Basic Concepts of RAID</li> </ol>

#### **Ministry of Higher Education**

# 

### الجمهورية العربية السورية

وزارة التعليم العاليي

الجامعة الافتراضية السورية

#### **Syrian Virtual University**

			3. RAID Levels
			4. Handling RAID Errors
		Networking	Basic Principles of Computer Networks
		Environment for	2. Networks Typology
LO2	6	os	3. Layering Structure
			4. Most Used Standards & Protocols
			1. Ethernet
			2. Types of Networks' Cables
LO2	7	Networks	3. Network Extensions
	•	Hardware	4. Basic Network Components
			5. Structured Cabling Systems
			Network Storing Techniques
		Storage Area	Network Area Storage – SAN
LO2	9	Networks – SANs	3. Fiber Channel Protocol – FCP
			4. SAN over IP
			Data Repository
			2. Storage Media
LO2		Backups	3. Selection & Extraction of Data
			4. Backups Planning
			5. Backups Solutions
			6. Using iSCSI Protocol in Backups
1.02	10	Network Systems	1. Strategies of Building Secure Systems
LO3	10	Security	2. Firewalls
	11	Updating	1. Principles of Problem Handling
1.03		Network Systems	2. Problem Handling Methodology
LO3		and	3. Tools used in Problems Handling
		Troubleshooting	4. Handling Server Problems
		<u> </u>	

#### **Ministry of Higher Education**





السورية	العربية	الجمهورية
	***	

وزارة التعليم العالسي

الجامعة الافتراضية السورية

LO3	12	Data Centers- DCs	<ol> <li>Introduction</li> <li>General Structure Of DC</li> <li>Basis DCs Standards</li> <li>Networking Structure</li> </ol>
		Clouds &	5. Cabling Structures in DCs
LO3	13	Virtualization	<ol> <li>The Cloud Concept</li> <li>Virtualization</li> </ol>
LO3	14	Disaster Recovery –DR	<ol> <li>Introduction</li> <li>Disasters Types</li> <li>Disaster Recovery Planning</li> <li>Alternative Work Sites</li> </ol>

#### **8. Practice Tools:**

Tool Name	Description
Virtual class	