

Based on the information from the provided documents, here is the syllabus for both "Introduction to Computer System and Network" and "Network 2" courses, formatted in an Excel spreadsheet layout.

## Syllabus for Introduction to Computer System and Network

Week	Session (h)	Course Learning Objectives (CLOs)	Content	Teaching Activities	Learning Activities	Assessment	Materials
1	1-4	CLO1, CLO2	Explain the historical development of computer networks and key milestones in network technology. Identify and describe different types of networks (LAN, WAN, PAN, etc.). Explain the function and importance of various network topologies and devices. Demonstrate basic network setup and connectivity troubleshooting.	Lecture: Introduction to Computer Networking	Listen and Note Taking, Individual Homework, Group Discussion and Presentation, Report/Project Presentation, Q&A	Attendance, Class Activities, Formative Assessment, Q&A	Slide Presentation, LCD Projector, Laptop, Slide Pointer, Writing Board
2	5-8	CLO1	Outline the layers of the OSI and TCP/IP models and describe the functions of each layer. Apply packet analysis tools to trace data packets through each layer of the models. Understand encryption and decryption.	Lecture: OSI and TCP/IP Model	Listen and Note Taking, Individual Homework, Group Discussion and Presentation, Report/Project Presentation, Q&A	Attendance, Class Activities, Formative Assessment, Q&A	Slide Presentation, LCD Projector, Laptop, Slide Pointer, Writing Board
3	9-12	CLO2	Configure basic switch settings and VLAN setups. Understand the operational mechanisms of network switches. Analyze and resolve VLAN and switch configuration issues.	Lecture: Switching	Listen and Note Taking, Individual Homework, Group Discussion and Presentation, Report/Project Presentation, Q&A	Attendance, Class Activities, Formative Assessment, Quiz and Q&A	Slide Presentation, LCD Projector, Laptop, Slide Pointer, Writing Board
4	13-16	CLO2	Explain switching concepts such as STP. Implement VLAN trunking. Troubleshoot common problems related to network segmentation and switching.	Lecture: Switching	Listen and Note Taking, Individual Homework, Group Discussion and Presentation, Report/Project Presentation, Q&A	Attendance, Class Activities, Formative Assessment, Q&A	Slide Presentation, LCD Projector, Laptop, Slide Pointer, Writing Board

Week	Session (h)	Course Learning Objectives (CLOs)	Content	Teaching Activities	Learning Activities	Assessment	Materials
5-6	17-22	CLO2, CLO3	Perform basic router configurations and troubleshoot routing issues. Configure static and dynamic routing protocols including RIPv1 and RIPv2. Evaluate the effectiveness of different routing protocols for specific network scenarios.	Lecture: Routing	Listen and Note Taking, Individual Homework, Group Discussion and Presentation, Report/Project Presentation, Q&A	Attendance, Class Activities, Formative Assessment, Q&A	Slide Presentation, LCD Projector, Laptop, Slide Pointer, Writing Board
6-7	23-26	CLO2, CLO3	Understand and apply routing concepts to optimize network traffic and performance. Implement OSPF in both single and multi-area networks. Configure and troubleshoot inter-VLAN routing emphasizing the setup of router-on-a-stick and Layer 3 switch configurations.	Lecture: Routing	Listen and Note Taking, Individual Homework, Group Discussion and Presentation, Report/Project Presentation, Q&A	Attendance, Class Activities, Formative Assessment, Quiz and Q&A	Slide Presentation, LCD Projector, Laptop, Slide Pointer, Writing Board
7-8	27-30	CLO1, CLO2, CLO3	Configure and manage DHCP servers to dynamically assign IP addresses. Set up and manage DNS servers for effective domain name resolution. Diagnose and resolve common DHCP and DNS configuration issues.	Lecture: DHCP and DNS Servers	Listen and Note Taking, Individual Homework, Group Discussion and Presentation, Report/Project Presentation, Q&A	Attendance, Class Activities, Formative Assessment, Q&A, Mini Project	Slide Presentation, LCD Projector, Laptop, Slide Pointer, Writing Board
8	31-32	-	Final Exam	-	-	-	-

## Syllabus for Network 2

Week	Session (h)	Course Learning Objectives (CLOs)	Content	Teaching Activities	Learning Activities	Assessment	Materials
1	1-4	CLO1, CLO2	Advanced network setup and troubleshooting. Understanding complex network configurations.	Lecture: Advanced Network Setup	Listen and Note Taking, Individual Homework, Group Discussion and Presentation, Report/Project Presentation, Q&A	Attendance, Class Activities, Formative Assessment, Q&A	Slide Presentation, LCD Projector, Laptop, Slide Pointer, Writing Board
2	5-8	CLO1	Detailed study of the OSI and TCP/IP models with practical packet analysis.	Lecture: OSI and TCP/IP Deep Dive	Listen and Note Taking, Individual Homework, Group Discussion and Presentation, Report/Project Presentation, Q&A	Attendance, Class Activities, Formative Assessment, Q&A	Slide Presentation, LCD Projector, Laptop, Slide Pointer, Writing Board

Week	Session (h)	Course Learning Objectives (CLOs)	Content	Teaching Activities	Learning Activities	Assessment	Materials
3	9-12	CLO2	Advanced switching techniques, VLAN configurations, and troubleshooting.	Lecture: Advanced Switching	Listen and Note Taking, Individual Homework, Group Discussion and Presentation, Report/Project Presentation, Q&A	Attendance, Class Activities, Formative Assessment, Quiz and Q&A	Slide Presentation, LCD Projector, Laptop, Slide Pointer, Writing Board
4	13-16	CLO2	Implementing and troubleshooting complex VLANs and switch configurations.	Lecture: Complex Switching	Listen and Note Taking, Individual Homework, Group Discussion and Presentation, Report/Project Presentation, Q&A	Attendance, Class Activities, Formative Assessment, Q&A	Slide Presentation, LCD Projector, Laptop, Slide Pointer, Writing Board
5-6	17-22	CLO2, CLO3	Advanced routing protocols and configurations, including BGP.	Lecture: Advanced Routing	Listen and Note Taking, Individual Homework, Group Discussion and Presentation, Report/Project Presentation, Q&A	Attendance, Class Activities, Formative Assessment, Q&A	Slide Presentation, LCD Projector, Laptop, Slide Pointer, Writing Board
6-7	23-26	CLO2, CLO3	Multi-area OSPF, EIGRP, and their applications in large networks.	Lecture: Advanced Routing Protocols	Listen and Note Taking, Individual Homework, Group Discussion and Presentation, Report/Project Presentation, Q&A	Attendance, Class Activities, Formative Assessment, Quiz and Q&A	Slide Presentation, LCD Projector, Laptop, Slide Pointer, Writing Board
7-8	27-30	CLO1, CLO2, CLO3	Advanced DHCP and DNS server configurations and management.	Lecture: Advanced DHCP and DNS	Listen and Note Taking, Individual Homework, Group Discussion and Presentation, Report/Project Presentation, Q&A	Attendance, Class Activities, Formative Assessment, Q&A, Mini Project	Slide Presentation, LCD Projector, Laptop, Slide Pointer, Writing Board
8	31-32	-	Final Exam	-	-	-	-

#### Instructions for Excel

1. Open Excel and create a new workbook.
2. For each course, create a separate worksheet named "Introduction to Computer System and Network" and "Network 2".
3. Use the tables above to fill in the details for each worksheet.

By following this structure, you will have a well-organized syllabus for both courses in Excel format. If you need further customization or help with formatting in Excel, please let me know!

#### Detailed Course Syllabus with PLO and Bloom's Taxonomy Mapping

##### Course 1: Introduction to Computer System and Network

- **Course (C): 16 hours**
- **Practice (TP): 16 hours**

Week	Session (h)	CLOs	PLOs	Bloom's Taxonomy	Content	Teaching Activities	Learning Activities	Assessment	Materials
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Week	Session (h)	CLOs	PLOs	Bloom's Taxonomy	Content	Teaching Activities	Learning Activities	Assessment	Materials
1-2	1-4	CLO1, CLO2	PLO1, PLO2, PLO3	Remembering, Understanding, Applying	- Historical development of computer networks. - Types of networks (LAN, WAN, PAN). - Network topologies and devices. - Basic network setup and troubleshooting.	Lecture, Tutorial, Practice, Case Study, Q&A	Note Taking, Homework, Group Discussion, Report/Project Presentation, Q&A	Attendance, Class Activities, Q&A	Slide Presentation, LCD Projector, Laptop, Slide Pointer, Writing Board
3-4	5-8	CLO1	PLO1, PLO2, PLO3	Remembering, Understanding, Applying	- OSI and TCP/IP models. - Packet analysis tools. - Encryption and decryption.	Lecture, Tutorial, Practice, Case Study, Q&A	Note Taking, Homework, Group Discussion, Report/Project Presentation, Q&A	Attendance, Class Activities, Q&A	Slide Presentation, LCD Projector, Laptop, Slide Pointer, Writing Board
5-6	9-12	CLO2	PLO3, PLO8, PLO9	Applying, Analyzing, Evaluating	- Basic switch settings and VLAN setups. - Operational mechanisms of network switches. - VLAN and switch configuration issues.	Lecture, Tutorial, Practice, Case Study, Q&A	Note Taking, Homework, Group Discussion, Report/Project Presentation, Q&A	Attendance, Class Activities, Quiz, Q&A	Slide Presentation, LCD Projector, Laptop, Slide Pointer, Writing Board
7-8	13-16	CLO2	PLO3, PLO8, PLO9	Applying, Analyzing, Evaluating	- Switching concepts (STP, VLAN trunking). - Troubleshooting network segmentation and switching issues.	Lecture, Tutorial, Practice, Case Study, Q&A	Note Taking, Homework, Group Discussion, Report/Project Presentation, Q&A	Attendance, Class Activities, Q&A	Slide Presentation, LCD Projector, Laptop, Slide Pointer, Writing Board

#### Course 2: Network 2

- Course (C): 16 hours
- Practice (TP): 16 hours

Week	Session (h)	CLOs	PLOs	Bloom's Taxonomy	Content	Teaching Activities	Learning Activities	Assessment	Materials
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Week	Session (h)	CLOs	PLOs	Bloom's Taxonomy	Content	Teaching Activities	Learning Activities	Assessment	Materials
1-2	1-4	CLO1, CLO2	PLO3, PLO4, PLO5	Analyzing, Evaluating, Creating	- Basic router configurations. - Troubleshooting routing issues. - Static and dynamic routing protocols (RIPv1, RIPv2).	Lecture, Tutorial, Practice, Case Study, Q&A	Note Taking, Homework, Group Discussion, Report/Project Presentation, Q&A	Attendance, Class Activities, Q&A	Slide Presentation, LCD Projector, Laptop, Slide Pointer, Writing Board
3-4	5-8	CLO2, CLO3	PLO3, PLO4, PLO5	Analyzing, Evaluating, Creating	- Routing concepts to optimize network traffic. - OSPF in single and multi-area networks. - Inter-VLAN routing.	Lecture, Tutorial, Practice, Case Study, Q&A	Note Taking, Homework, Group Discussion, Report/Project Presentation, Q&A	Attendance, Class Activities, Quiz, Q&A	Slide Presentation, LCD Projector, Laptop, Slide Pointer, Writing Board
5-6	9-12	CLO1, CLO2, CLO3	PLO3, PLO4, PLO5	Analyzing, Evaluating, Creating	- DHCP server configuration. - DNS server setup and management. - DHCP and DNS troubleshooting.	Lecture, Tutorial, Practice, Case Study, Q&A	Note Taking, Homework, Group Discussion, Report/Project Presentation, Q&A	Attendance, Class Activities, Q&A, Mini Project	Slide Presentation, LCD Projector, Laptop, Slide Pointer, Writing Board
7-8	13-16	CLO1, CLO2, CLO3	PLO3, PLO4, PLO5	Analyzing, Evaluating, Creating	- Final Exam	Exam Preparation	Review and Revision	Final Exam	Exam Papers, Writing Materials

## Course Learning Outcomes (CLOs) Mapping

### Introduction to Computer System and Network

- **CLO1:** Understand and explain fundamental networking concepts and network protocol.
  - **PLOs:** PLO1, PLO2, PLO3
  - **Bloom's Taxonomy:** Remembering, Understanding, Applying
- **CLO2:** Configure, manage, and troubleshoot network infrastructure.
  - **PLOs:** PLO3, PLO8, PLO9
  - **Bloom's Taxonomy:** Applying, Analyzing, Evaluating
- **CLO3:** Analyze, design, and evaluate network solutions.
  - **PLOs:** PLO3, PLO4, PLO5
  - **Bloom's Taxonomy:** Analyzing, Evaluating, Creating

### Network 2

- **CLO1:** Perform basic router configurations and troubleshoot routing issues.
  - **PLOs:** PLO3, PLO4, PLO5
  - **Bloom's Taxonomy:** Analyzing, Evaluating, Creating
- **CLO2:** Understand and apply routing concepts to optimize network traffic and performance.
  - **PLOs:** PLO3, PLO4, PLO5

- **Bloom's Taxonomy:** Analyzing, Evaluating, Creating
- **CLO3:** Configure and manage DHCP and DNS servers.
  - **PLOs:** PLO3, PLO4, PLO5
  - **Bloom's Taxonomy:** Analyzing, Evaluating, Creating

This syllabus aligns with the provided course structure, including PLO and Bloom's Taxonomy mapping to ensure comprehensive coverage of necessary skills and knowledge.

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Below is the formatted syllabus for "Introduction to Computer System and Network" and "Network 2" based on the format observed in the "Syllabus - Networks-I" document:

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Institute of Technology of Cambodia

**Information and Communication Engineering**

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Syllabus of Course

**Introduction to Computer System and Network**

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#### Course Information

- **Course:** Introduction to Computer System and Network
  - **Course's Code:** ICSN101
  - **Semester:** 1
  - **Year:** 1
  - **Number of Credits:** 2
  - **Instructor's Name:** Mr. NOP Phearum
  - **Latest Degree Obtained:** Master
  - **Pre-requisites:** None
  - **Tel:** +855 15 949 757
  - **Email:** nop.phearum@itc.edu.kh
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#### Course Description

This course introduces students to the fundamental concepts of computer systems and networking. It covers the historical development of computer networks, different types of networks, network topologies, and basic networking devices. Students will gain hands-on experience in network setup and troubleshooting, understanding the OSI and TCP/IP models, and configuring basic network devices.

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#### Course Learning Outcomes (CLOs)

Upon completing this course, students will be able to:

No	Course Learning Outcomes (CLOs)	PLOs	Bloom's Taxonomy
CLO1	Understand and explain fundamental networking concepts and protocols	PLO1, PLO2, PLO3	Remembering, Understanding
CLO2	Configure, manage, and troubleshoot basic network infrastructure	PLO3, PLO8, PLO9	Applying, Analyzing, Evaluating

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No	Course Learning Outcomes (CLOs)	PLOs	Bloom's Taxonomy
CLO3	Analyze, design, and evaluate simple network solutions	PLO3, PLO4, PLO5	Analyzing, Evaluating, Creating

### Teaching Approaches

- Lectures
- Practical tutorials
- Group discussions and presentations
- Homework assignments
- Projects and quizzes

### Assessment Policy

No	Assessment Task	Weighting (%)	Responded CLOs
1	Attendance	10	-
2	Class Activities and Quiz	10	CLO1, CLO2, CLO3
3	Assignment/Report and Presentation	10	CLO1, CLO2, CLO3
4	Midterm Exam	30	CLO1, CLO2, CLO3
5	Final Exam	40	CLO1, CLO2, CLO3

### Weekly Schedule

Weeks	Session (h)	CLOs	Content	Teaching Activities	Learning Activities	Assessment	Materials
1	1-4	CLO1, CLO2	Historical development, types of networks, network topologies, devices	Lecture, tutorials, case study, Q&A	Note-taking, homework, group discussion	Attendance, class activities, formative	Slides, projector, laptop, whiteboard
2	5-8	CLO1	OSI and TCP/IP models, packet analysis, encryption and decryption	Lecture, tutorials, case study, Q&A	Note-taking, homework, group discussion	Attendance, class activities, formative	Slides, projector, laptop, whiteboard
3	9-12	CLO2	Basic switch settings, VLAN setups, switch configuration issues	Lecture, tutorials, case study, Q&A	Note-taking, homework, group discussion	Attendance, class activities, quiz	Slides, projector, laptop, whiteboard
4	13-16	CLO2	STP, VLAN trunking, network segmentation, switching troubleshooting	Lecture, tutorials, case study, Q&A	Note-taking, homework, group discussion	Attendance, class activities, formative	Slides, projector, laptop, whiteboard
5-6	17-22	CLO2, CLO3	Router configurations, routing protocols (RIP, RIPv2), protocol evaluation	Lecture, tutorials, case study, Q&A	Note-taking, homework, group discussion	Attendance, class activities, quiz	Slides, projector, laptop, whiteboard
7-8	23-30	CLO2, CLO3	Routing concepts, OSPF implementation, inter-VLAN routing	Lecture, tutorials, case study, Q&A	Note-taking, homework, group discussion	Attendance, class activities, quiz	Slides, projector, laptop, whiteboard

## Network 2

### Course Information

- **Course:** Network 2
- **Course's Code:** NET202
- **Semester:** 2
- **Year:** 2
- **Number of Credits:** 2
- **Instructor's Name:** Mr. NOP Phearum
- **Latest Degree Obtained:** Master
- **Pre-requisites:** Introduction to Computer System and Network
- **Tel:** +855 15 949 757
- **Email:** nop.phearum@itc.edu.kh

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### Course Description

Network 2 builds on the foundational knowledge acquired in the Introduction to Computer System and Network course. It focuses on advanced network configurations, routing protocols, and network services management. Students will perform hands-on labs to deepen their understanding of network infrastructure, protocol implementation, and network performance optimization.

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### Course Learning Outcomes (CLOs)

Upon completing this course, students will be able to:

No	Course Learning Outcomes (CLOs)	PLOs	Bloom's Taxonomy
CLO1	Understand and explain advanced networking protocols and services	PLO1, PLO2, PLO3	Remembering, Understanding
CLO2	Configure, manage, and troubleshoot advanced network infrastructures	PLO3, PLO8, PLO9	Applying, Analyzing, Evaluating
CLO3	Design and evaluate complex network solutions	PLO3, PLO4, PLO5	Analyzing, Evaluating, Creating

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### Teaching Approaches

- Lectures
- Practical tutorials
- Group discussions and presentations
- Homework assignments
- Projects and quizzes

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### Assessment Policy

No	Assessment Task	Weighting (%)	Responded CLOs
1	Attendance	10	-
2	Class Activities and Quiz	10	CLO1, CLO2, CLO3
3	Assignment/Report and Presentation	10	CLO1, CLO2, CLO3



No	Assessment Task	Weighting (%)	Responded CLOs
4	Midterm Exam	30	CLO1, CLO2, CLO3
5	Final Exam	40	CLO1, CLO2, CLO3

### Weekly Schedule

Weeks	Session (h)	CLOs	Content	Teaching Activities	Learning Activities	Assessment	Materials
1	1-4	CLO1, CLO2	Advanced routing protocols, EIGRP, OSPF, BGP	Lecture, tutorials, case study, Q&A	Note-taking, homework, group discussion	Attendance, class activities, formative	Slides, projector, laptop, whiteboard
2	5-8	CLO1	Network security protocols, VPNs, IPsec, firewalls	Lecture, tutorials, case study, Q&A	Note-taking, homework, group discussion	Attendance, class activities, formative	Slides, projector, laptop, whiteboard
3	9-12	CLO2	Network performance optimization, QoS, traffic shaping	Lecture, tutorials, case study, Q&A	Note-taking, homework, group discussion	Attendance, class activities, quiz	Slides, projector, laptop, whiteboard
4	13-16	CLO2	Network monitoring and management, SNMP, NetFlow	Lecture, tutorials, case study, Q&A	Note-taking, homework, group discussion	Attendance, class activities, formative	Slides, projector, laptop, whiteboard
5-6	17-22	CLO2, CLO3	Wireless networking, Wi-Fi standards, WLAN security	Lecture, tutorials, case study, Q&A	Note-taking, homework, group discussion	Attendance, class activities, quiz	Slides, projector, laptop, whiteboard
7-8	23-30	CLO2, CLO3	Emerging network technologies, IoT, SDN	Lecture, tutorials, case study, Q&A	Note-taking, homework, group discussion	Attendance, class activities, quiz	Slides, projector, laptop, whiteboard

This format closely follows the structure and content presentation of the provided "Syllabus - Networks-I" document, ensuring consistency in syllabus design across courses.