CMI COURSE CURRICULUM
COURSE ACTION

Course Title: Introduction to Computer Networks   **Alpha Number:** ICS 111   **CIP No.** 11.0901

Type of Action:

___✓___ New Course (attach narrative justification for course creation)

_____ Substantive Revision (attach narrative justification for changes, including assessment and/or achievement data and feedback from the advisory committee if relevant)

      Select all that apply:
      _____Change in number of credit hours
      _____Change in prerequisite
      _____Substantive change in course content
      _____Change to SLOs _____Other:

_____ Non-substantive Revision
      Select all that apply:
      _____Change in Alpha Number or Title (unless letter abbreviation has not previously been used)
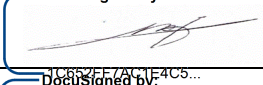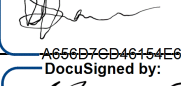   _____Edit to course description that does not alter the substance of the course
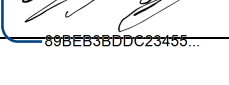   _____Change to recommended texts
      _____Other

_____ Reinstitution of Archived Course (attach narrative justification for reinstitution, including evidence of demand, evidence of capacity, feedback from the advisory committee if relevant, and commentary that speaks directly to the reasons the course was initially archived)

_____Reaffirmation of Course (only allowable if course completion rate exceeds ISS, the benchmark has been met for the majority of SLO assessments, and there is no evidence of inequitable levels of achievement across subpopulations; attach evidence)

Approvals:

	Name	Signature	Date
Department Chair	Mr. Edward Alfonso	DocuSigned by: [signature] 1C652FF7AC1E4C5...	10/23/2024
Curriculum Committee Chair	Mr. Edward Alfonso	DocuSigned by: [signature] 1C652FF7AC1E4C5...	10/23/2024
Dean	Ms. Vasemaca Savu	DocuSigned by: [signature] A656D7CD46154E6...	10/22/2024
VPASA	Dr. Elizabeth Switaj	DocuSigned by: [signature] 89BEB3BDDC23455...	10/30/2024

CMI COURSE OUTLINE

CIP No. 11.0901   **Version No.** 1

Alpha Number: ICS 111   **Course Title:** Introduction to Computer Networks

Course Description:

Introduces the fundamentals of networking by covering the basic concepts and skills needed to set up and manage your small office or home office network. The learner is presented with an engaging and exploratory view of networks, the devices that comprise them, how they work, and basic troubleshooting tools and techniques. The goal of this course is to provide the learner with an engaging, exploratory view of networks, including the internet.

Course originally prepared by: Solomone Pule/Curtis Vila **Department:** STEM **Month/Year:** Aug/2024

Course mode(s): ✓ Face to Face (including Zoom) _____ Hybrid _____ Distance Education

Credits calculated by: ✓ Credit Hour _____ Clock Hour

Contact Hours: 90

Type	No. of Hours	No. of Credits	Maximum No. of Hours Online
Lecture/Seminar/Workshop	45	3	
Clinical			
Practicum			
Lab/Tutorial	45	1	
Fieldwork			
Studio Time			
Total	**90**	**4**	

Purpose(s) of Course: Degree Requirement   AS Degree of Information Technology

Degree Elective   _____Liberal Arts_____

General Education   _____

Credit Certification   Certificate of Completion in IT Support Level 1

Developmental   _____

CTE/TVET   _____

ABE/Adult HS   _____

Distribution Area: Humanities   _____

                                       Social Sciences   _____

                                       Mathematics (Credit)   _____

                                       Science   _____

Prerequisite: _____ICS 090_____

Student Learning Outcomes: Upon completion of this course, students will be able to:

1. Identify and describe network types, components, connections, and media.
2. Describe how communication occurs on Ethernet networks.
3. Explain the features of an IP address.
4. Demonstrate how routers connect networks together.
5. Create a simulation (using Packet Tracer) of a fully connected LAN.

SLO Mapping:

Prerequisite Course SLO	Linked SLO from this Course	Explanation
ICS 090 SLO (1) Utilize the internet and the worldwide web properly as information tools; (2) Employ different Basic Application Software; (3)Classify Hardware components and illustrate how they interact; (4) Create a diagram of a Communication system and label its components; (5) Identify different network types and topologies; (6)Assess a given scenario and identify whether it concerns the issue of privacy, security, or ethics.	1 - 5	Students will be able to introduce computer networks skills.

Links to Program Learning Outcomes:

SLO	Linked PLO	I/P/M	Explanation of Link
1	PLO 1: **Equations and Inequalities:** Formulate and solve algebraic equations and inequalities.& PLO 4: **Word Problems:** When solving word problems, demonstrate the ability to (i) understand the conditions, (ii) formulate a plan appropriate to the conditions, (iii) execute the plan, and (iv) logically examine the solution.	P	Gain an understanding of computer network – types, components, connections and media/devices
2	PLO 4: **Word Problems:** When solving word problems, demonstrate the ability to (i) understand the conditions,	P	Understand how communication works within a cable-connected network

3	(ii) formulate a plan appropriate to the conditions, (iii) execute the plan, and (iv) logically examine the solution.	P	Understanding network protocols
4		P	Understanding the configuration of network of networks (WAN)
5		P	Configure and set up a local area network (LAN) virtually

Course Content: Students in this course will be able to understand:

1. Network Types
2. Network Access & Layers
3. The Internet Protocol
4. Communication Between Networks
5. Application Layer Services
6. Protocols for Specific Tasks

Higher Order Thinking Skills: Students in this course will experience:

✓ Analyzing the basic elements of an idea, experience, or theory

✓ Making judgments about the value or soundness of information, arguments, or methods

✓ Applying theories or concepts to practical problems or in new situations

Recommended Methods of Instruction

_____ Demonstration

__✓__ Lecture

__✓__ Small group discussion

__✓__ Class discussion

__✓__ Audio-Visual Aids

__✓__ Labs/Tutorials

__✓__ Supervised Practice

_____ Field Trips

_____ Other:

Recommended Assessment Tool Type(s):

_____ Case Study
_____ Critique of Performance
__✓__ Exam/Quiz In-Course
_____ Exam/Quiz Standardized (attach narrative describing development and validation process)
_____ Focus Group
__✓__ Group Project
_____ Individual Project
_____ Observation
_____ Portfolio Review
_____ Presentation
__✓__ Software Simulation
_____ Skill Performance
_____ Supervisor Evaluation
_____ Survey
__✓__ Written Assignment

Required Forms of Regular and Substantive Interaction for Hybrid or Distance Education Courses (Select at Least Two):

_____ Direct instruction through:
_____ Live video lectures
_____ Live audio-only lectures
_____ Live text chats
_____ Assessing or providing feedback on a student's coursework
_____ Providing information or responding to questions about the content of a course or competency through:
_____ Live video discussions
_____ Live audio-only discussions
_____ Live text chats
_____ Asynchronous message boards or text chats
_____ Facilitating a group discussion regarding the content of a course or competency through:
_____ Live video discussions
_____ Live audio-only discussions
_____ Live text chats
_____ Asynchronous message boards or text chats
_____ Other, specify:

Note: for distance education courses, if only two are selected, both must occur within the course on a weekly basis. If more than two are selected, the instructor may choose which two are used during each week.

Equipment and Materials:

1. **Recommended texts:**
   a. Lowe, D. (2016). *Networking All-in-One for Dummies®* (6th ed.). Hoboken, New Jersey; John Wiley & Sons, Inc. ISBN: 978-1-119-15472-3
2. **Equipment/Facilities:**
   a. Computer lab with Internet access
3. **Materials and Supplies:**
   a. PRINTING SUPPLIES: Printer/Copier/Scanner, Bond Paper, Stapler
   b. SOFTWARE: Cisco Packet Tracer

Connection to College Mission:

The College of the Marshall Islands will provide our community with access to quality, higher and further educational services, prioritize student success through engagement in relevant Academic, Career and Technical Education, and be a center for the study of Marshallese Culture. It will also provide intellectual resources and facilitate research specific to the needs of the nation. *EC approved 4th Nov, 2020. BOR approved 1st December, 2020*

This course connects to the College Mission by providing access to quality, higher and further educational services in ICT as a foundation for Computer Networks; prioritizing success through engagement in relevant Academic and Career Education for learners as Network Developers and/or Administrators. It upholds the values of being skillful and knowledgeable in Problem-Solving, Critical Think and Information Technology & Systems, confirming the importance of seeking knowledge and being inquisitive in how to design, develop, maintain and administer a local area network.

Connection to Department Mission:

The mission of the Science, Technology, and Mathematics (STeM) Department is to provide science, technology and mathematics courses to support academic programs and prepare students seeking careers in marine science or an advanced education in a STeM discipline. *Approved by CC on March 5, 2018. Approved by IEC on March 14, 2018.*

- Opens the door to higher levels in computer networking.
- Support ICT & Computing programs and prepare students seeking careers or an advanced education in ICT & Computing as a new faculty/school of the STEM Department, specifically in the area of computer networking, be it as an IT or IS major.

Narrative justification for course creation:

Connecting the Digital World

In our interconnected world, computer networks form the backbone of modern communication and information sharing. The creation of an "Introduction to Computer Networks" course is crucial to provide learners with a solid understanding of network infrastructure, protocols, and technologies. This course will empower individuals to navigate the complexities of computer networks, enabling them to understand the concepts of connecting systems, sharing resources, and contribute to the seamless flow of information in the digital realm.

CC Approved: July 31, 2024