**MINISTRY OF PUBLIC EDUCATION**

**TECHNICAL EDUCATION DEPARTMENT**

**TECHNICAL HIGH SCHOOL ……………**

**COMPUTER NETWORKING**

PORFOLIO OF EVIDENCE

**PERSONAL INFORMATION**

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| Name |  |
| Program: |  |
| Grade: X ( ) XI ( x ) XII ( ) |  |
| Birthdate: |  |
| Address |  |
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| E-mail |  |

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| **SUBJECT AREA**: **COMPUTER NETWORK** | | | | | | |
| **Study Block:** Communications Principles | | | | | | |
| **Purpose**: Distinguish the fundamental elements in the process of data communication | | | | | | |
| **PERFORMANCE CRITERIA** | **EVIDENCE** | **Achieved** | | **Observations and Strategies to improve** | **Competent** | |
| **Yes** | **Not yet** | **Yes** | **Not yet** |
| Recognize concepts and fundamental elements associated with telephony | Explains switched telephone systems. |  |  |  |  |  |
| Recognizes operation of private switched telephone exchanges. |  |  |  |  |  |
| Distinguishes telematic services characteristics and applications. | Mentions the concept and characteristics of telematics. |  |  |  |  |  |
| Recognizes fundamental elements intervening in data transmission. |  |  |  |  |  |
| Distinguishes the characteristics present in different types of data transmission. |  |  |  |  |  |
| Applies standards present in the market in relation to data transmission in specific cases. |  |  |  |  |  |

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| **PERFORMANCE CRITERIA** | **EVIDENCE** | **Achieved** | | **Observations and Strategies to improve** | **Competent** | |
| **Yes** | **Not yet** | **Yes** | **Not yet** |
| Applies basic principles for data communication and network use. | Distinguishes the characteristics of data and network communications. |  |  |  |  |  |
| Classifies the types of systems and networks. |  |  |  |  |  |
| Recognizes concepts associated with data transmission. | Explains modulation processes and switching by signals. |  |  |  |  |  |
| Distinguishes basic elements of OSI model and TCP/IP used in network building. | Describes the characteristics of different layers of the OSI model. |  |  |  |  |  |
| Relates the uses of different layers of the OSI model with their use in network construction. |  |  |  |  |  |
| **Student`s name and signature:** | | | | | **Date:** | |
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| **Study Block:** Local Area Networks | | | | | | |
| **Purpose**: Characteristics, operation, and components of the different topologies present in the Local Area Networks. | | | | | | |
| **PERFORMANCE CRITERIA** | **EVIDENCE** | **Achieved** | | **Observations and Strategies to improve** | **Competent** | |
| **Yes** | **Not yet** | **Yes** | **Not yet** |
| Identifies characteristics of local area network. | Describes its functions. |  |  |  |  |  |
| Explains the operation and characteristics of the topologies of a network. |  |  |  |  |  |
| Applies concepts about network design and structured wiring used in LAN network. | Distinguishes devices of LAN networks. |  |  |  |  |  |
| Distinguishes devices of the Internetwork. |  |  |  |  |  |
| Uses concepts of IP, NAT and PAT in network routing structure. | Explains the sub-network and its types. |  |  |  |  |  |
| Recognizes the uses of NAT and PAT in the translation of network addresses. |  |  |  |  |  |
| Classifies different uses for translation of addresses using NAT and PAT. |  |  |  |  |  |

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| **PERFORMANCE CRITERIA** | **EVIDENCE** | **Achieved** | | **Observations and Strategies to improve** | **Competent** | |
| **Yes** | **Not yet** | **Yes** | **Not yet** |
| Configures networks devices. | Identifies the steps for the configuration in and out of the band. |  |  |  |  |  |
| Recognizes the ISR with SDM configurations. |  |  |  |  |  |
| Understands the steps for the use of the configuration programming console with the use of commands. |  |  |  |  |  |
| Uses line console to apply commands of router configuration. | Identifies the characteristics of show commands and basic configuration. |  |  |  |  |  |
| Illustrates different services to be installed in a router such as DHCP, NAT. |  |  |  |  |  |
| Illustrates the configurations for the WAN connections. |  |  |  |  |  |

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| **PERFORMANCE CRITERIA** | **EVIDENCE** | **Achieved** | | **Observations and Strategies to improve** | | **Competent** | |
| **Yes** | **Not yet** | **Yes** | **Not yet** |
| Uses routing method for network device to send messages through the network. | Illustrates different protocols configurations. |  |  |  | |  |  |
| Recognizes the operation of each protocol by means of verification when installing each protocol. |  |  |  | |  |  |
| Identifies ISP services available in our country and service providers’ responsibilities. | Illustrates the use of DNS services and support for HTTP, FTP, SMTP, POP3, and IMPAP. |  |  |  | |  |  |
| Demonstrates ISP by means of data encryption. |  |  |  | |  |  |
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| **Teacher`s name and signature:** | | | | |
| **Parent and signature:** | | | | |

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| **Study Block:** Design and Network Representation | | | | | | |
| **Purpose**: Create the design and representation of types of the networks regarding architectural characteristics of the plant layout | | | | | | |
| **PERFORMANCE CRITERIA** | **EVIDENCE** | **Achieved** | | **Observations and Strategies to improve** | **Competent** | |
| **Yes** | **Not yet** | **Yes** | **Not yet** |
| Applies procedures for drawing network elements used by specific software. | Recognizes advantages and applications of designing and network representation. |  |  |  |  |  |
| Designs sketches using basic rules for labelling scale drawings, using a specific software. | Uses appropriate software tools. |  |  |  |  |  |
| Represents different elements. |  |  |  |  |  |
| Uses different scales in drawing designing. |  |  |  |  |  |
| Applies basic measurement norms. |  |  |  |  |  |
| Uses measurement norms in simple drawings. |  |  |  |  |  |
| Recognizes the labeling concept used in drawing. |  |  |  |  |  |
| Uses available tools and functions in specific software |  |  |  |  |  |
| Labels drawings. |  |  |  |  |  |
| Uses available functions and tools. |  |  |  |  |  |
| Creates sketches using available tools and functions in specific software. |  |  |  |  |  |

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| **PERFORMANCE CRITERIA** | **EVIDENCE** | **Achieved** | | **Observations and Strategies to improve** | | **Competent** | |
| **Yes** | **Not yet** | **Yes** | **Not yet** |
| Interprets architectural projects and network representation according to their components. | Identifies elements included in an architectural project. |  |  |  | |  |  |
| Recognizes components included in an architectural project. |  |  |  | |  |  |
| Interprets information in a given architectural project. |  |  |  | |  |  |
| **Student`s name and signature:** | | | | | **Date:** | | |
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| **Study Block:** Structured wiring | | | | | | |
| **Purpose**: Design and implement structured wiring systems. | | | | | | |
| **PERFORMANCE CRITERIA** | **EVIDENCE** | **Achieved** | | **Observations and Strategies to improve** | **Competent** | |
| **Yes** | **Not yet** | **Yes** | **Not yet** |
| Identifies basic concepts associated with structured wiring. | Recognizes technical characteristics in structured wiring. |  |  |  |  |  |
| Characterizes structured wiring systems. |  |  |  |  |  |
| Identifies the different kinds of cables and connectors, their characteristics and applications. | Recognizes their characteristics. |  |  |  |  |  |
| Explains their uses and applications. |  |  |  |  |  |
| Applies the criteria for cable selection and connectors used in structured wiring. |  |  |  |  |  |
| Recognizes the fundamental principles in codes and regulations related to structured wiring. | Distinguishes the technical requirements defining codes and regulations. |  |  |  |  |  |
| Applies the codes and regulations to solve cases related to design and installation of wiring systems. |  |  |  |  |  |

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| **PERFORMANCE CRITERIA** | **EVIDENCE** | **Achieved** | | **Observations and Strategies to improve** | | **Competent** | |
| **Yes** | **Not yet** | **Yes** | **Not yet** |
| Applies technical norms in the construction and replacement of wiring systems. | Describes the method to execute calculations and budgets. |  |  |  | |  |  |
| Applies techniques for cables construction. |  |  |  | |  |  |
| Applies techniques and methods to detect and correct failures in the wiring system. |  |  |  | |  |  |
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| **Study Block:** Physical Network Installation | | | | | | |
| **Purpose**: Installation, configuration and expansion of small networks. | | | | | | |
| **PERFORMANCE CRITERIA** | **EVIDENCE** | **Achieved** | | **Observations and Strategies to improve** | **Competent** | |
| **Yes** | **Not yet** | **Yes** | **Not yet** |
| Distinguishes basic concepts related to building a computer network. | Describes the characteristics of each element. |  |  |  |  |  |
| Explains the operation of different technologies. |  |  |  |  |  |
| Installs and configures peripheral equipment in terminals and networks. | Identifies characteristics of equipment components. |  |  |  |  |  |
| Distinguishes devices with “plug and play” technology. |  |  |  |  |  |
| Installs and completes the configuration of different devices. |  |  |  |  |  |

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| **PERFORMANCE CRITERIA** | **EVIDENCE** | **Achieved** | | **Observations and Strategies to improve** | | **Competent** | |
| **Yes** | **Not yet** | **Yes** | **Not yet** |
| Installs Install and configure types of network cards or wiring used in network building. | Recognizes their characteristics of cards and wiring. |  |  |  | |  |  |
| Installation and configuration of network cards. |  |  |  | |  |  |
| Constructs types of the network wiring. |  |  |  | |  |  |
| Applies the installation, configuration and expansion network concepts. | Recognizes procedures. |  |  |  | |  |  |
| Installs and completes configuration of a small network. |  |  |  | |  |  |
| Expands the previously constructed network. |  |  |  | |  |  |
| **Student`s name and signature:** | | | | | **Date:** | | |
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| SUB ÁREA: **MANIPULACIÓN DE LA INFORMACIÓN** | | | | | | |
| **Unidad de estudio:** **Bases de Datos** | | | | | | |
| **Propósito:** Creación y mantenimiento de bases de datos | | | | | | |
| **Criterio de desempeño** | **Evidencia** | **Alcanzadas** | | **Observaciones y estrategias por mejorar** | **Competente** | |
| **Si** | **Aún no** | **Si** | **Aún no** |
| Identifica los elementos fundamentales asociados con las bases de datos. | Diferencia los tipos y fuentes de datos. |  |  |  |  |  |
| Clasifica los datos de acuerdo con sus atributos. |  |  |  |  |  |
| Determina el valor de diferentes datos de acuerdo con las normas dadas. |  |  |  |  |  |
| Caracteriza los diferentes sistemas para el manejo de datos. |  |  |  |  |  |
| Describe las características de los diferentes modelos de bases de datos y el proceso de normalización. | Explica los modelos entidad – relación y relacional. |  |  |  |  |  |
| Diferencia las características de una base de datos relacional. |  |  |  |  |  |

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| **Criterio de desempeño** | **Evidencia** | **Alcanzadas** | | **Observaciones y estrategias por mejorar** | **Competente** | |
| **Si** | **Aún no** | **Si** | **Aún no** |
|  | Examina diferentes bases de datos para identificar los diferentes elementos estudiados. |  |  |  |  |  |
| Desarrolla bases de datos. |  |  |  |  |  |
| Aplica elementos relacionados con el manejo de información para la construcción y mantenimiento de bases de datos. | Interpreta los aspectos relacionados con la seguridad. |  |  |  |  |  |
| Aplica las acciones necesarias para la planificación del mantenimiento. |  |  |  |  |  |
| Realiza diferentes operaciones sobre bases de datos utilizando las herramientas. |  |  |  |  |  |
| Aplica las diferentes operaciones sobre tablas en bases de datos desarrolladas. |  |  |  |  |  |

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| **Criterio de desempeño** | **Evidencia** | **Alcanzadas** | | **Observaciones y estrategias por mejorar** | | **Competente** | |
| **Si** | **Aún no** | **Si** | **Aún no** |
| Utiliza las funciones y herramientas disponibles para la creación o manejo de bases de datos. | Describe los procedimientos para el manejo de los diferentes elementos. |  |  |  | |  |  |
| Utiliza los índices, relaciones, control de restricciones y objetos de tabla. |  |  |  | |  |  |
| Diseña diagramas para el mantenimiento de las bases de datos. |  |  |  | |  |  |
| Crea y da mantenimiento a bases de datos. |  |  |  | |  |  |
| **Nombre del estudiantes y firma:** | | | | | **Fecha:** | | |
| **Nombre del docente y firma:** | | | | |
| **Nombre del encargado y firma:** | | | | |

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| **Unidad de estudio:** Introducción a la Programación en Ambiente Visual | | | | | | |
| **Propósito:** Diseño de programas utilizando las herramientas y estructuras disponibles en un lenguaje de ambiente visual. | | | | | | |
| **Criterio de desempeño** | **Evidencia** | **Alcanzadas** | | **Observaciones y estrategias por mejorar** | **Competente** | |
| **Si** | **Aún no** | **Si** | **Aún no** |
| Utiliza las funciones y herramientas disponibles en el entorno de trabajo. | Selecciona diferentes menús y opciones. |  |  |  |  |  |
| Utiliza los accesos y funciones del entorno de trabajo. |  |  |  |  |  |
| Sigue la sintaxis y normas para la declaración y manejo de los diferentes elementos. |  |  |  |  |  |
| Utiliza cada uno de los elementos que componen la estructura del programa. |  |  |  |  |  |
| Desarrolla programas en un lenguaje de ambiente visual utilizando los diferentes elementos que definen su estructura. |  |  |  |  |  |

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| **Criterio de desempeño** | **Evidencia** | **Alcanzadas** | | **Observaciones y estrategias por mejorar** | **Competente** | |
| **Si** | **Aún no** | **Si** | **Aún no** |
| Utiliza las funciones y herramientas disponibles en un lenguaje de ambiente visual para el control del programa. | Selecciona de acuerdo con uso y aplicaciones la sentencia adecuada. |  |  |  |  |  |
| Utiliza cada uno de los tipos de sentencias en la solución de problemas. |  |  |  |  |  |
| Desarrolla programas en un lenguaje de ambiente visual utilizando las diferentes sentencias. |  |  |  |  |  |
| Desarrolla programas utilizando los elementos de programación modular en un lenguaje de ambiente visual. | Aplica la sintaxis y normas para la declaración y manejo de procedimientos y funciones. |  |  |  |  |  |
| Selecciona entre las diferentes estructuras de acuerdo con el problema a resolver. |  |  |  |  |  |
| Diseña programas en un lenguaje de ambiente visual utilizando procedimientos y funciones. |  |  |  |  |  |

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| **Criterio de desempeño** | **Evidencia** | **Alcanzadas** | | **Observaciones y estrategias por mejorar** | **Competente** | |
| **Si** | **Aún no** | **Si** | **Aún no** |
|  | Ejemplifica el uso del procedimiento, función, arreglos, registros y archivos para la solución de problemas específicos. |  |  |  |  |  |
| Elabora programas en un lenguaje de ambiente visual donde se utilizan estas estructuras. |  |  |  |  |  |
| Utiliza los diferentes comandos, instrucciones, funciones y controles disponibles para el desarrollo de programas. | Utiliza la sintaxis y normas para la declaración de estos controles. |  |  |  |  |  |
| Soluciona diferentes problemas por medio del uso de los controles disponibles. |  |  |  |  |  |

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| **Criterio de desempeño** | **Evidencia** | **Alcanzadas** | | **Observaciones y estrategias por mejorar** | | **Competente** | |
| **Si** | **Aún no** | **Si** | **Aún no** |
|  | Aplica controles receptores de texto, de selección de opciones y controles comunes. |  |  |  | |  |  |
| Diseña programas que utilicen los diferentes tipos de control disponibles. |  |  |  | |  |  |
| **Nombre del estudiantes y firma:** | | | | | **Fecha:** | | |
| **Nombre del docente y firma:** | | | | |
| **Nombre del encargado y firma:** | | | | |

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| **Unidad de estudio:** Gestión Empresarial | | | | | | |
| **Propósito:** Convivencia efectiva en el entorno del sector productivo nacional. | | | | | | |
| **Criterio de desempeño** | **Evidencia** | **Alcanzadas** | | **Observaciones y estrategias por mejorar** | **Competente** | |
| **Si** | **Aún no** | **Si** | **Aún no** |
| Reconoce los componentes del proceso administrativo en el ámbito de trabajo asociado a la informática. | Relaciona elementos de la globalización con la posición de nuestro país en la economía mundial. |  |  |  |  |  |
| Distingue las áreas funcionales de la empresa. |  |  |  |  |  |
| Describe los procesos de selección y contratación de personal. |  |  |  |  |  |

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| **Criterio de desempeño** | **Evidencia** | **Alcanzadas** | | **Observaciones y estrategias por mejorar** | **Competente** | |
| **Si** | **Aún no** | **Si** | **Aún no** |
|  | Emplea los diferentes elementos de supervisión de personal en la solución de casos. |  |  |  |  |  |
| Ejemplifica los elementos que participan en la supervisión de personal. |  |  |  |  |  |
| Describe la aplicación de ISO en la empresa en términos de mejora. |  |  |  |  |  |
| Elabora un plan de negocio para un micro empresa que se desempeñará en el área de la informática. | Elabora un plan de acción. |  |  |  |  |  |
| Aplica el análisis FODA en la planificación de una empresa nueva. |  |  |  |  |  |
| Señala la importancia de la utilización el FODA. |  |  |  |  |  |
| Organiza las zonas de almacenamiento en una empresa. |  |  |  |  |  |
| Elabora un plan de producción de una empresa. |  |  |  |  |  |

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| **Criterio de desempeño** | **Evidencia** | **Alcanzadas** | | **Observaciones y estrategias por mejorar** | **Competente** | |
| **Si** | **Aún no** | **Si** | **Aún no** |
|  | Enumera las necesidades del cliente en función de una actividad empresarial. |  |  |  |  |  |
| Describe las mezclas de mercadeo que se pueden presentar con un producto o servicio. |  |  |  |  |  |
| Elabora un plan de mercadeo de un producto o servicio. |  |  |  |  |  |
| Utiliza diferentes estrategias para la gestión y desarrollo de proyectos informáticos. | Reconoce las características principales de los proyectos informáticos. |  |  |  |  |  |
| Distingue los errores clásicos en los que se incurre durante la gestión y desarrollo. |  |  |  |  |  |
| Reconoce las características del ciclo de vida de un proyecto. |  |  |  |  |  |
| Aplica las técnicas para la selección del ciclo de vida. |  |  |  |  |  |
| Aplica las estrategias para realizar diferentes estimaciones. |  |  |  |  |  |

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| **Criterio de desempeño** | **Evidencia** | **Alcanzadas** | | **Observaciones y estrategias por mejorar** | **Competente** | |
| **Si** | **Aún no** | **Si** | **Aún no** |
| Utiliza las estrategias para la planificación de proyectos. |  |  |  |  |  |
| Distingue las causas y consecuencias de la planificación demasiado optimista. |  |  |  |  |  |
| Distingue las causas y consecuencias de la presión sobre la planificación. |  |  |  |  |  |
| Utiliza diferentes herramientas para el aumento de la productividad. |  |  |  |  |  |
| Aplica las técnicas para la elaboración de presupuestos. |  |  |  |  |  |
| Elabora diferentes presupuestos de acuerdo a proyectos específicos. |  |  |  |  |  |
| Distingue los aspectos de diseño y presentación de proyectos específicos para el campo informático. |  |  |  |  |  |

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| **Criterio de desempeño** | **Evidencia** | **Alcanzadas** | | **Observaciones y estrategias por mejorar** | | **Competente** | |
| **Si** | **Aún no** | **Si** | **Aún no** |
|  | Aplica las normas básicas para la elaboración de un proyecto específico para el campo informático. |  |  |  | |  |  |
| Aplica las técnicas para la elaboración de proyectos específicos para el campo informático. |  |  |  | |  |  |
| **Nombre del estudiantes y firma:** | | | | | **Fecha:** | | |
| **Nombre del docente y firma:** | | | | |
| **Nombre del encargado y firma:** | | | | |