MILWAUKEE AREA Technical College
CREDIT for PRIOR LEARNING and EXPERIENCE

Work/Life Experience Portfolio
Approved by: Patrick Feder
Last updated: 12/17/2025

Virtualization Technologies, ITNET-157, 3 CR

Work Life Experience Information

The Work and Life Experience Portfolio Evaluation lets students turn their real-world experience—whether from work, co-op education, or training—into college credit! Here are a few important things to keep in mind:

- Milwaukee Area Technical College will not award credit based solely on years of employment
- Experiences must be verifiable and demonstrate achievement of course competencies; determined by the Lead Faculty
- A portfolio must be submitted for each course you are requesting credit
- In addition to documentation, students may be asked to display specific skills and/or complete an interview to assess content knowledge

Steps for Students to Begin:

1. Select a course (see below) that matches your prior knowledge and skills
2. Email cple@matc.edu to initiate the process with:
    a. Name
    b. Student ID#
    c. Course information (e.g., ENG-201)
3. A CPLE Specialist will notify the student when the fee is posted
4. Pay the nonrefundable fee and obtain a receipt using one of the following methods:
    a. In person at any MATC cashier's office
    b. Online via Self-Service
5. Submit the completed portfolio and any other documents required to cple@matc.edu
6. CPLE Specialist reviews and submits the portfolio to lead faculty for evaluation
7. After evaluation, the lead faculty will complete and submit the CPLE Request Form to cple@matc.edu, regardless of the outcome
8. Next Steps:
    - **If the evaluation is approved**, credit(s) will be awarded, and the student's program plan will be updated
    - **If the evaluation is not approved**, students should consult their Pathway Advisor for further guidance

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Course Information

1. **Course title, number & credit value:**
    a. Virtualization Technologies, ITNET-157, 3 CR
2. **Course description:**
    a. This course provides foundational knowledge and hands-on experience with modern virtualization platforms used in enterprise and data center environments. Students will explore the architecture, deployment, configuration, and administration of virtualization technologies including VMware vSphere, Citrix Hypervisor, Microsoft Hyper-V, and Proxmox Virtual Environment (VE). Topics include hypervisor installation and configuration, virtual machine lifecycle management, virtual networking, virtual storage, resource allocation, monitoring, troubleshooting, and basic automation concepts. Emphasis is placed on understanding similarities and differences across platforms, as well as best practices for managing virtualized infrastructure in production environments. MATC strongly recommends that students complete an introductory networking or server fundamentals course, or possess equivalent skills, prior to enrollment.

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3. **Students must demonstrate the course competencies by submitting: A Portfolio and any other artifacts required found below. ****Note for Resumes:*** **Lead faculty must verify the student's work history via a letterhead mail or phone interview.**
    a. Students may submit proof of relevant industry certifications (such as VMware, Microsoft, Citrix, or Proxmox-related credentials) or written documentation detailing professional or lab-based experience that aligns with the course competencies.
4. **Course Competencies that must be demonstrated:**

- **Explain Virtualization Concepts and Architectures**

  Identify and compare Type 1 and Type 2 hypervisors, virtualization components, and enterprise use cases.

- **Install and Configure Hypervisors**

  Deploy and perform initial configuration of VMware, Citrix, Hyper-V, and Proxmox hypervisors.

- **Create and Manage Virtual Machines**

  Provision, configure, clone, snapshot, and manage virtual machines across multiple platforms.

- **Configure Virtual Networking**

  Implement virtual switches, bridges, VLANs, and network adapters to support virtualized workloads.

- **Manage Virtual Storage**

  Configure local and shared storage, datastores, storage pools, and virtual disks.

- **Monitor and Troubleshoot Virtualized Environments**

  Use platform-specific monitoring tools to analyze performance, resource utilization, and system health.

- **Implement Resource Management and Availability Features**

  Allocate CPU, memory, and storage resources; understand high availability, live migration, and failover concepts.

- **Perform Basic Automation and Remote Management**

  Utilize platform tools, command-line interfaces, and scripting concepts to manage virtual environments efficiently.