MILWAUKEE AREA *Technical College*
CREDIT for PRIOR LEARNING and EXPERIENCE

Work/Life Experience Portfolio
Approved by: Sarah Hohn
Last updated: 9/5/25

CIVIL-135, Pub Wrk Engineering/Estimating, 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. CIVIL-135, Pub Wrk Engineering/Estimating, 3 CR
2. **Course description:**
    a. The basic principles of planning, design, construction and operation of public works facilities, such as water, wastewater, solid waste and transportation systems are discussed. Estimating techniques for civil engineering projects are covered
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. Portfolio
4. **Course Competencies that must be demonstrated:**

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1. Define public works terminology

   Assessment Strategies

   1.1. in a written and oral report

   Criteria

   Criteria - Performance will be satisfactory when:

   1.1. learner can distinguish between public works and private development.

   1.2. learner can identify the municipal engineer's relationship between public works and private development.

2. Define basic environmental terminology

   Assessment Strategies

   2.1. in a written examination

   2.2. in homework assignments

   Criteria

   Criteria - Performance will be satisfactory when:

   2.1. learner can describe the basic functions of Water, Wastewater and Stormwater systems

   2.2. learner can describe the basic functions of Solid Waste and Hazardous Waste Management

   2.3. learner can describe the basic functions of Air and Noise Pollution Control

   2.4. learner can describe basic ecology and environmental interrelationships.

3. Describe the basics of the Water Treatment process

   Assessment Strategies

   3.1. in a written examination

   3.2. in homework assignments

   Criteria

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Criteria - Performance will be satisfactory when:

3.1. learner can identify the sources of public water supply.

3.2. learner can identify basic water quality parameters

3.3. learner can describe basic water quality parameters

3.4. learner can identify various water treatment components and processes

3.5. learner can distinguish between various water treatment components and processes

3.6. learner can correctly calculate volumes of water

3.7. learner can correctly calculate flow rates of water for different stages of water treatment

4. Describe the basics of a Water Distribution System

Assessment Strategies

4.1. in a written examination

4.2. in a lab activity

Criteria

Criteria - Performance will be satisfactory when:

4.1. learner can identify the components of a water distribution system

4.2. learner can identify the standards and principles used in the design and construction of water distribution systems

4.3. learner can estimate the water demand for various uses from standards

4.4. learner can estimate the needed fire flow and storage volume for fire flow from standards

5. Describe the basics of a Wastewater Collection System

Assessment Strategies

5.1. in a written examination

5.2. in homework assignments

5.3. in a lab activity

Criteria

Criteria - Performance will be satisfactory when:

5.1. learner can distinguish between stormwater and sanitary wastewater collection systems and the function of each

5.2. learner can identify the components of a wastewater collection system

5.3. learner can identify the standards and principles used in the design and construction of wastewater collection systems

5.4. learner can estimate the amount of wastewater flows by land use

6. Describe the basics of the Wastewater Treatment process

Assessment Strategies

6.1. in written examination

6.2. in homework assignments

Criteria

Criteria - Performance will be satisfactory when:

6.1. learner can identify the basic wastewater treatment terminology

6.2. learner can describe the basic wastewater treatment terminology

6.3. learner can utilize wastewater loading rates in basic design computations

6.4. learner can identify various wastewater treatment components and processes

6.5. learner can distinguish between various wastewater treatment components and processes

7. Describe the basics of a Stormwater Management System

Assessment Strategies

7.1. in a written examination

7.2. in homework assignments

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Criteria

Criteria - Performance will be satisfactory when:

7.1. learner can identify the components of a stormwater system for both structural and non-structural systems

7.2. learner can identify the standards and principles used in the design and construction of stormwater collection systems

7.3. learner can correctly calculate runoff by land use and rainfall intensity

8. Describe the basics of Solid Waste Disposal

Assessment Strategies

8.1. in a written examination

8.2. in homework assignments

Criteria

Criteria - Performance will be satisfactory when:

8.1. learner can identify different methods of solid and hazardous waste disposal

8.2. learner can describe different methods of solid and hazardous waste disposal

8.3. learner can describe the basics of handling, storage, collection, transfer, processing and disposal of solid waste

8.4. learner can estimate the volume of MSW collected

8.5. learner can identify the standards and principles used in the design, construction and operation of a sanitary landfill

8.6. learner can estimate the amount of landfill space required for a municipality

9. Describe the basics of Transportation Engineering

Assessment Strategies

9.1. in a lab activity

Criteria

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Criteria - Performance will be satisfactory when:

9.1. learner can identify the various functional classifications of roadways

9.2. learner can distinguish between the various factors affecting intersection and highway capacities

9.3. learner can identify the various types of traffic control devices and can perform elementary progressive movement calculations

10. Describe the purpose and basic process of Public Hearings and Environmental Impact Studies

Assessment Strategies

10.1. in a written report

Criteria

Criteria - Performance will be satisfactory when:

10.1. learner can describe the process by which public decisions are made

10.2. learner can identify the function of public hearings in the decision making process

10.3. learner can describe the basic process of environmental impact studies and audits

11. Estimate Project Costs

Linked Career Essentials

· Effective Problem Solving - Practice

Assessment Strategies

11.1. in a lab activity

11.2. in homework assignments

11.3. in a written test

Criteria

Criteria - Performance will be satisfactory when:

11.1. learner can estimate quantities from project plans

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11.2. learner can estimate quantities from field measurements

11.3. learner can estimate costs using recent bid tabulations