DEPT. PLMB  
COURSE NUMBER: 1152  

NUMBER OF CREDITS: 4  
Lecture: 1 Lab: 3 OJT: 0  

<table>
<thead>
<tr>
<th>Course Title:</th>
<th>Plumbing Essentials</th>
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<tr>
<th>Catalog Description:</th>
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<tbody>
<tr>
<td>Plumbing Essentials expands on PLMB 1101 for more complex construction systems for residential and light commercial structures. Installation, service and repair of common fixtures, faucets, water treatment, water heaters installation will be included in lab activities. Students will be provided more complex projects and develop solutions to complete system installations, various piping installations applying code requirements.</td>
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<tr>
<th>Prerequisites or Necessary Entry Skills/Knowledge:</th>
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<tr>
<td>None</td>
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FULFILLS MN TRANSFER CURRICULUM AREA(S) (*Leave blank if not applicable*)

- ☐ Goal 1: Communication: By meeting the following competencies:
- ☐ Goal 2: Critical Thinking: By meeting the following competencies:
- ☐ Goal 3: Natural Sciences: By meeting the following competencies:
- ☐ Goal 4: Mathematics/Logical Reasoning: By meeting the following competencies:
- ☐ Goal 5: History and the Social and Behavioral Sciences: By meeting the following competencies:
- ☐ Goal 6: The Humanities and Fine Arts: By meeting the following competencies:
- ☐ Goal 7: Human Diversity: By meeting the following competencies:
- ☐ Goal 8: Global Perspective: By meeting the following competencies:
- ☐ Goal 9: Ethical and Civic Responsibility: By meeting the following competencies:
- ☐ Goal 10: People and the Environment: By meeting the following competencies:

<table>
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<tr>
<th>Topics to be Covered</th>
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<tr>
<td>Proper assembly techniques for PVC and PEX piping</td>
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<td>Proper use of hand tools and assembly specialty tools</td>
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<tr>
<td>Application of Minnesota State Code for design and installation of DWV</td>
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<td>Proper use of measuring tools and techniques</td>
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<td>Water quality testing, water system analysis</td>
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<td>Proper tool maintenance, appearance, clean work space, customer service</td>
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### Student Learning Outcomes

- Identify and comprehend materials and methods of hanger installation.
- Install DWV piping in structures.
- Install water piping in structures.
- Apply safety procedures and techniques.
- Interpret code to assure installation compliance.
- Utilize tools in safe and effective manner.
- Select appropriate fixtures for customer expectations.
- Install fixtures per manufacturers standards.
- Test systems per code requirements.
- Demonstrate safety practices in shop and job site and personal protective equipment.
- Solve practical mathematical calculations.

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<tr>
<th>Is this course part of a transfer pathway:</th>
<th>Yes ☐</th>
<th>No ☒</th>
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<td><em>If yes, please list the competencies below</em></td>
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Revised Date: 4/29/2024