Water Conservation Technician Degree

Roger Ebbage, M.A. ~ Energy/Water Programs
Need for Water Conservation

- Globally, water is at crisis levels
- Nationally we are scrambling to replace aging infrastructure, maintain quality & habitat while preparing for a wave of retirees
- The doubling population by 2050 along with changing levels of affluence bring increased demands on water
- Climate change & reduced snow pack leave less water available
- Mandatory water conservation programs are required, but training is not available
Need for Two-Year Degree

- College-level training is not available
- On-the-job training is not meeting workforce demand
- Water conservation positions are some of “the hardest to fill” due to lack of trained technicians
- Inconsistent training requires extensive and expensive on-the-job training
Opportunity for Lane: Help secure local water availability

- Water is needed for all systems, processes: human & ecosystem
- Access to sufficient high quality water in perpetuity is a basic human right
- LCC can help provide Oregon with a steady, safe & secure water supply
- LCC will attract new students; add FTE; retain existing students
Program Overview

- Two-year Associate of Applied Science degree:
  - Teaches students how to design, implement & evaluate water conservation programs
- 93 credit program
- Water conservation practitioners:
  - helped develop program
  - provide ongoing advice to meet workforce needs
  - will be adjunct faculty
- Uses existing classes as well as classes that are used in other programs (e.g. Energy)
First Year

Fall
WATR 101 Intro to Water Resources 3
BT 123 MS Excel for Business 4
WR 121 Composition: 4
Physical Education Activity Requirement
   Health requirement

   Total Credits 13

Winter
SUST 101 Intro to Sustainability 3
WATR 105 Water Conservation: Residential 4
MTH 095 Intermediate Algebra 5
WR 227 Technical Report Writing 4
WATR 206 Co-op Ed: Water Conservation Seminar 1
Physical Education Activity Requirement Health requirement

   Total Credits 18

Spring
WATR 107 Water Conservation: Outdoor 4
WATR 150 Water Resource Economics or ECON260 Introduction to Environmental and Natural Resource Economics 4
BI 103F General Biology: Wildflowers of Oregon 4
CG 203 Human Relations at Work 3

   Total Credits 15
# Second Year

## Fall

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>WATR 210 Water Conservation: Industrial, Commercial</td>
<td>4</td>
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<tr>
<td>WATR 208 Water Conservation: Agricultural</td>
<td>4</td>
</tr>
<tr>
<td>WATR 261 Regional Water Policy</td>
<td>3</td>
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<tr>
<td>WATR 280 Co-op Ed: Water Conservation</td>
<td>3</td>
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<tr>
<td>Directed electives</td>
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<tr>
<td><strong>Total Credits</strong></td>
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## Winter

<table>
<thead>
<tr>
<th>Course Title</th>
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<tr>
<td>WATR 215 Integrated Water Resources Management</td>
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<tr>
<td>GIS 245 Maps and Spatial Information</td>
<td>4</td>
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<tr>
<td>WATR 202 Fostering Sustainable Practices</td>
<td>3</td>
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<tr>
<td>WATR 280 Co-op Ed: Water Conservation</td>
<td>3</td>
</tr>
<tr>
<td>WATR 206 Co-op Ed Water Conservation Seminar</td>
<td>1</td>
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<tr>
<td>Arts/Letters requirement</td>
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<tr>
<td><strong>Total Credits</strong></td>
<td><strong>18</strong></td>
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</tbody>
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## Spring

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<tr>
<td>WATR 220 Water Conservation Program Development</td>
<td>4</td>
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<tr>
<td>WATR 221 Water Mechanical Systems</td>
<td>4</td>
</tr>
<tr>
<td>WATR 280 Co-op Ed: Water Conservation</td>
<td>3</td>
</tr>
<tr>
<td>Directed Elective</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td><strong>14</strong></td>
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</table>
Professional Development & Professional Certification

- **Professional Development:**
  - Tailored training programs developed to meet existing practitioners’ needs (1 day – 2 week long)
  - First workshop being developed now for PNWS-AWWA
  - Increases FTE and revenue for college

- **Optional Professional Certification:**
  - Offered by the Pacific Northwest Section of the American Water Works Association (PNWS-AWWA)
  - Lane is the contracted provider of choice for training for the PNWS-AWWA
Earning Potential for Graduates

Job Title:
- Water Conservation Coordinator
- Water Resources Technician
- Water Management Specialist
- General Conservation Scientist

Annual Wage:
- $36,546 - $53,856
- $43,152 - $46,124
- 49,940 – 59,925
- $30,730-$54,640

Students earn a living wage while working toward wise use of resources.
Benefits to Lane Community College

- Program is funded through outside funding and grants
- Increases revenue generated
- Brings in additional FTE
- Helps retain existing students
- Builds on Sustainability Core Value
- Improves wise use of water on campus through student projects
Benefits to Lane County

- Program helps strengthens local economy
- Student interns and graduates work for employers in water utilities, private consulting firms, government agencies and irrigation districts
- Some Oregon employers include EWEB, SUB, HDR Engineering, Metro, Dept of Health, ...
- Government employers include Cities of Tigard, Tualatin, Wilsonville, Portland...
- Program perfect for women, disadvantaged and retrained workers as well as minority groups
Summary

- On-the-job training is not meeting workforce demand for trained technicians
- College-level training is not yet available specifically in water conservation.
- Addition of program will improve Lane Sustainability
Thank you! Questions?

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