

MINNESOTA WEST COMMUNITY & TECHNICAL COLLEGE

COURSE OUTLINE

DEPT. RNEW

COURSE NUMBER: 1110

NUMBER OF CREDITS: 1

Lecture: 1 Lab: 0 OJT: 0

Course Title:
Boiler Systems

Catalog Description:
Boiler Systems covers fuel combustion principles, steam boiler types and their components. Students will gain an understanding of the equipment, its operation and maintenance to ensure safe and efficient procedures that are in line with regulations and codes.

Prerequisites or Necessary Entry Skills/Knowledge:
None

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:

Topics to be Covered
Boiler fittings
Feedwater systems
Steam systems
Fuel systems
Draft systems
Boiler water treatment
Boiler operations procedures
Hot water heating systems
Cooling systems

Boiler operation safety
Boiler licensing

Student Learning Outcomes
Describe the operating principles and functions of boiler fittings.
Identify feedwater system accessories and describe their functions.
Identify steam system accessories and describe their functions.
Identify fuel system accessories and describe their functions.
Describe draft and draft systems used in boiler operation.
Describe boiler water conditions that can affect boiler operation and efficiency.
Identify routine procedures commonly followed when taking over a shift.
Identify safety practices and procedures for boiler fittings, systems and operations.

Is this course part of a transfer pathway: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
<small>*If yes, please list the competencies below</small>

Revised Date: 3/29/2022