

Course discipline/number/title: FST 1570: Basic Boiler Theory

A. CATALOG DESCRIPTION

1. Credits: 1
2. Hours/Week: 4 hrs./4 weeks
3. Prerequisites (Course discipline/number): None
4. Other requirements: Enrollment in the FAST program or instructor permission.
5. MnTC Goals (if any): NA

B. COURSE DESCRIPTION: This course is a preparatory class for the MN Special Engineers License using videos, CDs lectures and class discussions. Materials covered will include, Minnesota Boiler Statues, Heat transfer theory, Boiler design, Boiler systems, fittings and accessories, fuels and combustion, Boiler maintenance, inspections and operating conditions will also be discussed.

C. DATE LAST REVISED (Month, year): December, 2021

D. OUTLINE OF MAJOR CONTENT AREAS:

1. Minnesota Boiler Statues and Codes.
2. Boiler design and uses.

E. LEARNING OUTCOMES (GENERAL): The student will be able to:

1. Identify Boiler types and uses.
2. Identify and describe major Boiler systems.
3. Identify and describe functions of system fittings and accessories.
4. Describe fuels and combustion draft relationships.
5. Identify Boiler operating conditions, plant hazards and safety procedures.
6. Identify maintenance practices, inspection preparations, and material handling.
7. Describe safety procedures and communication practices.

F. LEARNING OUTCOMES (MNTC): NA

G. METHODS FOR EVALUATION OF STUDENT LEARNING: Methods may include but are not limited to: Minnesota Special Engineers Boiler exam score.

H. RCTC CORE OUTCOME(S). This course contributes to meeting the following RCTC Core Outcome(s): Critical Thinking. Students will think systematically and explore information thoroughly before accepting or formulating a position or conclusion.

Personal and Professional Accountability. Students will take responsibility as active learners for achieving their educational and personal goals.

I. SPECIAL INFORMATION (if any): None