



## Thomson Training Solutions 2A2 Power Engineering Prep Course

### General Course Description:

Course Name:	<b>2A2 Prep Course to prepare 2<sup>nd</sup>'s for this essay paper</b>	
Instructors:	Thomson Training Solutions	
Prerequisites:	<b>Previous third class ticket, Work Experience and hours recognized by Inspection and Technical Services</b>	
Course Dates:	<b>Start Date: August 11, 2026 – Every Monday for 5 consecutive Monday's.</b>	
Course Location:		
Class Times	<b>8:00 a.m. to 4:00 p.m. ½ hour lunch (lunch and coffee times negotiated at class)</b>	
Exam:	<b>TBA</b>	
Materials to Bring:	<ul style="list-style-type: none"> <li>• <b>Pan Global 2A2 Book</b></li> <li>• <b>Highlighter/Pens and Pencils</b></li> <li>• <b>Calculator</b></li> <li>• <b>Lined Paper (for Note taking)</b></li> </ul>	

### General Course Objectives:

The goal of this five-day course is to review course material and work through the questions in a step-by-step manner to make sure you understand the process. There are many calculations, and we will help you with the break down and understand the formulas. We stand out from our competition in that we bring real life examples into our course content that students love!

Thomson Training Solutions is sending you out some questions in advance for you to answer prior to the class starting. This will be an interactive class and students will be encouraged to actively participate.

### **General Course Requirements:**

Please make sure you devote time to reading the material we send out in advance of the class and answer the attached questions.

### **Attendance Requirements:**

Perfect attendance is expected for this course because of the amount of information covered. If, for any reasons, you cannot attend, call Anne at 254-5024 or send an email to [anne.thomson@mts.net](mailto:anne.thomson@mts.net).

### **Course Outline 2A2**

Major Topics:

- Basic thermodynamics from 3rd & 4th classes
- Calculations of perfect or ideal gases
- Steam and utilizing steam tables
- Specific volume, internal energy, enthalpy, entropy and the various states
- 1st law & 2nd law of thermodynamics – Work, Heat & Reversibility
- Practical thermodynamic cycles (Rankine, Carnot, Otto, Diesel, Brayton
- Materials such as:
  - Nonferrous metals (copper, brasses, aluminum)
  - Metal structures
  - Alloy steels (iron alloys, stainless steels)
  - Heat treatments
  - Welding symbols
  - Applications
- New: Electrochemistry & corrosion