

COURSE UN 0702 POWER PLANT THERMODYNAMICS

COURSE STRUCTURE

COURSE MATERIAL

The course material consists primarily of the following:

- Lecture Notes: Extracts from UNESCO sponsored Encyclopedia of Life Support Systems (EOLSS) accessible on the UNENE website but password protected.
- Overhead Slides: Copies of overhead projector slides as used in the lectures and accessible on the UNENE website. They are however subject to change as the course progresses.
- Question Bank: Past examination questions from UNENE and UNB courses as well as from the NB Power operator and shift supervisor training program.

ASSIGNMENTS

There will be two assignments due on the Friday immediately before the start of the second and third modules respectively:

- Assignment #1: Analysis of Effectiveness of Available Energy Transfer in a Heat Exchanger.
- Assignment #2: Calculation of Rate of Heat Transfer in a Heat Exchanger.

Each assignment must be fully typewritten and professionally presented with text, diagrams and calculations laid out logically. The calculations must show algebraic equations applicable, numerical values used and all steps shown so that they can be properly checked. The assignments must include the following:

- Introduction
- Technical Drawings
- Design Specifications/Operating Parameters
- Theory and Equations Used
- Definition of Data Used
- Assumptions Made
- System Diagrams
- Numerical Solutions (showing all steps)
- Results

- Comparison with Specified Parameters (if applicable)
- Discussion on Validity of Results

FINAL EXAMINATION

The final examination will consist of both descriptive questions (~40%) and calculative questions (~60%). There will be a limited choice but no compulsory questions. It will be a three hour closed book examination.

ASSESSMENT

The weighting for purposes of assessment will be as follows:

Assignment #1	20%
Assignment #2	20%
Final Examination	60%

Students must meet the academic standard of the institution at which they are registered.