

## NUCLEAR TRAINING COURSE

### COURSE 127

This course was originally developed for the use of Ontario Hydro employees. Reproduced on the CANTEACH web site with permission

- 1 - Level
- 2 - Science Fundamentals
- 7 - NUCLEAR THEORY

### Index

#### Reactor Theory - The Steady State

- 127.10-1 Review of Nuclear Physics 1
- 127.10-2 Review of Nuclear Physics 2
- 127.10-3 The Function of the Moderator
- 127.10-4 Moderator Properties
- 127.10-5 Neutron Balance and The Four Factor Formula
- 127.10-6 Effect of Enrichment, Fuel Arrangement and Fuel Burnup on the Four Factor Formula
- 127.10-7 Flux Distribution and Critical Size
- 127.10-8 The Function and Properties of the Reflector

#### Reactor Theory - Disturbance of the Steady State

- 127.20-1 Review of Terms
- 127.20-2 Low Power Considerations
- 127.20-3 Effects due to Temperature Changes and Void Formation

127.20-4	Effects due to Fission Product Accumulation
127.20-5	Effects of Fuel Burnup
127.20-6	Reactor Control
127.20-7	The Approach to Critical and the Raising of Power
127.20-8	Examples of Practical Reactor Behaviour
127.20-9	Reactor Stability
127.20-10	Safety Considerations