



# A.N.T. International Academy

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## ONLINE EDUCATION

## Material General Basics

### COURSE DESCRIPTION

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The objective of the Material General Basics course is to provide new BWR Engineers, BWR Plants Chemists and BWR Managers with no or little background in Material Degradation in LWRs with the necessary background information to understand more complicated plant corrosion and metallurgical information. Not only presently inexperienced engineers working on structural materials but also plant chemists, engineers working on nuclear fuel, as well as high level managers could benefit from this course.



The course involves watching pre-recorded lectures and participating in an online assessment (test). The lectures can be accessed at times convenient for practicing engineers and managers. Assessments are done online, with an understanding of the current material (i.e., 70% required correct answers)

The content is described more in the [Appendix](#).

### COURSE MATERIAL

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The course material was developed by A.N.T. International and consists of modified/edited earlier recorded A.N.T. International Seminar.

### AUTHORS/LECTURERS

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The authors/lecturers of the reports and lectures, World Class Experts in their fields, are as follows:

**Peter Scott, Peter Ford and Pierre Combrade.**

[Read more about the Experts](#)

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## COURSE DURATION

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- Total time: approx. 20 hours for full time studies
- Lectures: 18 h
- 1 Test: 1 h

The listed time for the lectures is the actual running time. More time may be needed to digest the information provided in this course.

## CERTIFICATE

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You will automatically receive an email with your certificate that you can print or share on social media. If you need a printed certificate, please don't hesitate to contact us and we can send it to you via regular mail. You reach us at [support@antinternational.com](mailto:support@antinternational.com).

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## CONTACT

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For more information and/or an offer welcome to contact us at [sales@antinternational.com](mailto:sales@antinternational.com)

Please also visit our website for the latest updated information, [www.antinternational.com](http://www.antinternational.com)



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# Appendix: Course outline and topics covered

## 1) MATERIAL BASICS

1. Introduction and Background to Material Degradation
2. Physical Metallurgy of Structural Alloys
3. Corrosion Basics
4. Environmentally-assisted Cracking of Austenitic and Ni-base alloys
5. Low Temperature EAC in LWRs
6. Oxidation and Cation Release of Stainless Alloys in Light Water Reactors and FAC



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