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## STEEL101x - Introduction to Steel

### About this learning course

This course is an introduction to steel, exploring its history and cultural context, where it comes from, how it works, why we use so much of it, and how we might use it in the future. The following concepts will be covered:

- The basics of steel smelting
- Processing
- The properties of steel and their origins
- How it can be manipulated
- Its relationship with society
- The sustainability of a world underpinned by steel

The course is delivered in a lively manner using everyday examples, demonstrations, and film footage of steel making.

### Learning modules

The course includes an understanding of:

- Smelting: The basics of how to turn rock into steel
- Microstructure: Steel is made of special types of crystals
- Properties: Why strength & toughness are crucial
- Composition: What a steel alloy is, and how to make it
- Process: How and why heat can transform steel
- Applications: Why steel underpins the whole of human civilization
- Sustainability: The challenges and opportunities for the future of steel

### Outcome

The course may be audited for free. If your work is satisfactory and you abide by the Honor Code, you'll receive a personalised Honor Code Certificate to showcase your achievement.

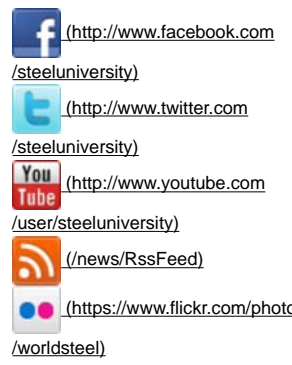
### Instructor



**Mark Miodownik** is the Professor of Materials & Society and the Director of Institute of Making at University College London where he teaches and runs a research group. He received his Ph.D in turbine jet engine alloys from Oxford University in 1996 and since then has published more than 100 research papers. His current research interests are smart materials, innovative manufacturing, and sensoraesthetic materials. Prof. Miodownik regularly presents BBC TV programmes on engineering, and his the author of Stuff Matters which won the Royal Society

Code	STEEL101x
Course	Introduction to Steel
Format	Online
Effort	4 hours over 2 weeks
Difficulty	Beginner
Sessions	2 June 2015
Prerequisites	None
Fee	Free

**Register now**<https://www.edx.org>



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