001 WHAT IS DESIGN ENGINEERING?

In our first masterclass we'll look at how a design engineer is defined and what steps you can take to become one.

What makes design engineers special?
Which universities offer the course?
What are some possible career paths?
What skills are important to being a design engineer?
How can you develop your portfolio?

002 DESIGN THROUGH THE AGES

A look at which products and designers have shaped our modern world and what we can learn from these designs.

Which products have shaped the world as we know it?
What is iconic design?
What can we learn from them?
Who is your design inspiration?
Which product do you believe embodies good design and why?

003 HUMAN CENTRED DESIGN

The main goal of a design engineer is to design for people, which we do by looking at human factors and usability of products.

What is human centred design?
How are human factors crucial to design success?
What are some examples of good and bad design?
How can we use creative problem solving to develop effective designs?
Can you reimagine a product to make it more human centred?

004 COMMUNICATION IN DESIGN

Arguably one of the most important elements of the design process is presenting your ideas through graphics, prototypes and presentations.

What are the communication steps in the design process?
How can you develop illustration skills to help convey ideas?
What are different prototyping processes?
How do we use language to create a product narrative?
What tools can you learn to demonstrate product validity through out the process?

005 | FORM FOLLOWS BEAUTY

Considering creative roles and what skills and tools we can extract from them to give us an edge in a world dominated by pure engineers.

What creative roles are out there for design engineers?
What tools can we use from these professions to impact our perspective?
What skills should we learn to apply?
How can you use these skills to stand out?
How can you demonstrate these skills?

006 | GIZMOS: ROBOTICS IN DESIGN

A fun exploration of the playful side of engineering - merging design and robotics.

How does robotics fit into design engineering?
What perspectives do we use when approaching robotic design?
What is a gizmo and what is the benefit?
What tools can you use at home to develop relevant skills?
How does robotics fit into the design world?

007 | DESIGN FOR MANUFACTURE

Design engineers are unique as we can use a wide variety of perspectives to create a new product - with the goal being for the product to be manufactured and used.

What are production and manufacturing techniques?
How can we use engineering analysis techniques to ensure products will be robust?
How do we tie together different perspectives, to ensure manufacture is feasible?
What is a teardown and how can it help us understand product design?

008 | SYSTEM AND SERVICE DESIGN

Design doesn't end at just building a great product. You need to make sure that the product works in the context for the user.

Where can system design be applied?
Why must we consider the system before designing the product?
How does system design look?
What is service design and why is it relevant?

009 | ENTERPRISE: BUILDING A BUSINESS

Design engineers are inventors, and the degree breeds entrepreneurs. In this masterclass we'll take a look what goes into making a concept into a viable business.

How does enterprise apply in design engineering?
How can you build a business?
How do you turn your idea into profit?

010 | THE FUTURE OF DESIGN

Artificial intelligence, sustainability and electric vehicles - what's next?

What's next in the world of design?
What trends are currently taking off?
What is prospective design and how does it effect future design?
How does pop culture effect where designers take us?
What do you think is next and how do you want to be involved?