

Industrial Design Engineering Integrated Product Design

MSc Programme



Over the past decades products have become more and more complex; whether it is added functionality or tougher recycling demands. Logically the design of successful products has become increasingly complex as well; the master of Integrated Product Design teaches how to bring these complex aspects together. Next to that, products have to perform better due to ever increasing user expectations. For this reason the curriculum specifically aims at teaching how to design ‘predictable product behaviour’.

Degree	Master of Science Integrated Product Design
Starts in	September and February
Type	full-time
Credits	120 EC, 24 months
Language of instruction	English
Scholarships	tudelft.nl/scholarships

The complexity of many products has increased due to embedding of electronic functionality and connectivity for example the Internet of Things. Also, the gradual shift from products to product-service systems is continuing to change the designers' playing field. Finally, conventional manufacturing technologies are complemented by rapidly developing digital manufacturing technologies like 3D printing.

Programme

The master programme Integrated Product Design (IPD) incorporates the developments

mentioned above by educating students to tackle complex design challenges that require integrating multidisciplinary aspects into product-service solutions.

It encompasses the design of a wide range of products as well as product-service systems, produced in mass production or series in order to satisfy the demands of consumers or professional users (e.g. equipment used in surgery). It requires students to take an integrated approach to the disciplines involved in product and product-service design, namely advanced

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FIRST YEAR 60 EC							
SEMESTER 1	Q1	Q2	SEMESTER 2	Q3	Q4		
IDE Academy					4 EC		
Manage your Master	1 EC	Design Theory and Methodology	3 EC	Manage your Master	1 EC	Strategic Sustainable Design	3 EC
Managing Product Innovation	3 EC	21 EC		Modelling	3 EC	21 EC	
Advanced Concept Design		Advanced Embodiment Design					
<i>Areas of expertise:</i> » Applied Ergonomics Exploration » Design, Culture and Society		» Technology for Concept Design » Product Communication and Presentation		<i>Areas of expertise:</i> » Applied Ergonomics Feasibility » Product Experience		» Smart Systems and Technologies » Sustainable Design Engineering » Advanced Design Enablers	
SECOND YEAR 60 EC							
SEMESTER 1	Q1	Q2	SEMESTER 2	Q3	Q4		
Semester for creating personal focus		30 EC	Graduation Project		30 EC		

studies in design theory, innovation methods, aesthetics, ergonomics, engineering, materials and manufacturing knowledge, sustainability and methods for applied research. The students are challenged to deepening their competences, substantiating the design choices made in the design process by contrasting multidisciplinary requirements and solutions, as well as reflecting on the design process itself. Furthermore, they progress from using scientific knowledge to critically reviewing and generating scientific knowledge. In the IPD master, students no longer follow a prescribed design process but instead attune the design process to the task at hand, while maintaining a structured and scientifically sound approach.

IPD graduates are specialised in designing innovative products and product-service systems based on balancing the interests of users, technology, business and societal challenges. They master the design process, starting from an ill-defined problem or design brief and ending with a new product concept or product embodiment proposal. They are able to generate new knowledge that has a strong applied focus.

Curriculum Integrated Product Design

The IPD master's programme can be started either in the autumn or in the spring semester. The starting date determines the order in which

courses are taken. In the autumn semester the programme focuses on the generation of concepts, while in the spring semester the focus is on embodiment design. The second year starts with a semester in which students can create a personal focus. The second year ends with establishing, defining and completing the individual graduation project.

Specialisations

In this curriculum, 30 EC is reserved for electives. This provides the students freedom and enables them to shape their personal programme. Students can pursue their professional interests and ambitions with a personalised set of different courses. This elective space enables students to specialise, or broaden their knowledge in specific subjects e.g.: entrepreneurship, marketing, medical design, automotive design, research, visualisation and others. Students who want to broaden their learning can take master's courses at other faculties and universities, both in the Netherlands and abroad.

For those students who want to increase the depth of their development as an industrial design engineer, IDE offers more than fifty different courses. This includes courses from the other IDE master curricula. Students specialising in Medesign will receive an annotation on their diploma supplement.

Career prospects

An integrated design approach is becoming increasingly important in the globalised business environment where graduates will find employment. Our graduates are able to pursue their careers in a wide range of positions. From a recent survey, we learned that the top-five first jobs of IPD alumni are described as: product designer, trainee, consultant, user researcher and entrepreneur.

The IPD master's programme results in a unique qualification in industrial research and development, offering career opportunities in business as well as in university (applied) research and education.



25%

International MSc students



66%/34%

M/F



306

Students in total