




TU Delft	The basics of Transport Phenomena (UD9006)		
Course description	Learn the basic framework to work on a broad spectrum of engineering problems concerning transfer of heat, mass and momentum. Learn through examples of everyday processes at home, in the lab and in industry.		
Domain	Engineering, Applied Sciences		
Prerequisites	Basic knowledge of calculus (derivative, integral, simple differential equations) and thermodynamics (concepts of first law and second law, properties of fluids, heat effects). This course targets students who are in the last phase of or have completed a bachelor in engineering, science.		
Level	Last year bachelor, master		
Language	English		
Number of credits and workload	6	Number of hours: 10 to 12 hours per week	Total number of hours: 168 hours in total
Semester period and Start date course	September semester	Start date: 10 September 2018	
Application deadline	31 August 2018		
Full course description	<p>Have you ever wondered why ventilation helps to cool down your hot chocolate? Do you know why a surfing suit keeps you warm? Why iron feels cold, while wood feels warm at room temperature? Or how air is transferred into aqueous liquids in a water treatment plant? How can we sterilize milk with the least amount of energy? How does medicine spread in our tissue? Or how do we design a new cooling tower of a power plant? All these are phenomena that involve heat transfer, mass transfer or fluid flow.</p> <p>Transport Phenomena investigates such questions and many others, exploring a wide variety of applications ranging from industrial processes to environmental engineering, to transport processes in our own body and even simple daily life problems</p> <p>In this course we will look into the underlying concepts of these processes, that often take place simultaneously, and will teach you how to apply them to a variety of real-life problems. You will learn how to model the processes and make quantitative statements.</p>		

Platform and link to course description	EdX	https://www.edx.org/course/basics-transport-phenomena-delftx-tp101x-2
Course description in study guide	http://studiegids.tudelft.nl/a101_displayCourse.do?course_id=48477	
Lecturer(s)	dr. P.J. Hamersma	
Extra Course information	<p>What you'll learn</p> <ul style="list-style-type: none"> ● Identify heat transfer, mass transfer and fluid flow phenomena in lab, industrial and daily environment. ● Identify quantities and subjects used in transport phenomena. ● Use balances to solve problems. ● Apply the concepts of transport phenomena to a variety of real life problems. ● Make the correct assumptions to put real-life situations into mathematical model. ● Solve and assess a model from a quantitative perspective. ● See the world through different eyes. 	
Picture of course		
Final examination date and time / period	TBA	<p>Midterm test: week 44</p> <p>Final Exam: week 51</p>
Examination registration deadline or drop-out deadline	<p>Examination registration before: TBA</p> <p>There is no drop- out deadline</p>	

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Type of examination	Written exam	
Midterm examination?	<input type="checkbox"/> YES	Week 44
Previous exam papers available	<input type="checkbox"/> yes <input type="checkbox"/> no	
Resit? and date	<input type="checkbox"/> yes	January 2019.
Grade release and transcript release	TBA	