How can we store solar heat in a thermal battery, so that we use it to warm our homes in winter? What is the process which is responsible for decay of concrete structures decay? What happens in a chemical reactor full of catalysts, and when is liquid steel hot enough to burst a ceramic trough? For all these questions the solution lies in the properties of porous media, the topic of the joint TU/e and UU interfaculty elective package Porous Media.

This package gives an overview of the fundamentals and applications of porous media flow, such as groundwater remediation, oil and gas production, blood flow in medical tissues and geothermal energy, based on the fundamentals of mass, momentum and energy transfer. Both analytical and numerical techniques will be used and an overview of experimental approaches will be given. Courses will be offered both in Eindhoven and in Utrecht.