

Porous Media interuniversity elective package

Porous Media inter university	
Offered by	Utrecht University & TU/e
Language	English
Primarily interesting for	TU/e students of bachelor programs AP, ME, CE&C and SI
Prerequisites	Calculus (2WBB0 / 2WBC0), Physical transport phenomena course from the major program, e.g. 3NCB0 Applied Physical Science, 4RA10 Introduction transport phenomena, 3CTX0 Fysica van transportverschijnselen or 6P1X0 Fysische transportverschijnselen
Contact person	Willem-Bart Bartels w.bartels@tue.nl
Last year of education/exam given	2026-2027

Content and composition

Course code	Course name	Level classification
GEO3-1330 (UU)	Water in Geo-Processes (7.5 ECTS)	Advanced
GEO3-1336 (UU)	Introduction Porous Media (7.5 ECTS)	Advanced

Course description

This elective 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.

You will attend lectures and instructions in Eindhoven and Utrecht from a variety of experts from different disciplines. For studying the concepts related to porous media, you will study analytical and numerical techniques as well as experimental approaches. The education consists of theoretical courses, lab visits (if permitted considering COVID-19 regulations) and you have to prepare your own lecture from a selection of topics.

Studying porous media is fun because general concepts are being used in an extraordinary variety of applications. The course aims for the sweet spot in the middle, establishing the relations between various applications and allowing you to engage in scientific discussions of many different topics.

Academic year 2023-2024 – Porous Media

- Especially interesting for TU/e students of bachelor programs AP, ME, CE&C and SI
- One UU course, one joint UU and TU/e course
- Enrolment for the courses takes place via Utrecht University, please check the website. Please mind that the deadlines for enrollment differ from the TU/e
- Elective Introduction Porous Media (7.5 EC), Q3, slot E (Tuesday afternoon, Thursday morning), in English