

SAVE THE DATE: 1 FEBRUARY 2017

WORKSHOPS: EXPLORING INNOVATION AND INNOVATIVE DIGITAL QUESTIONING



EDUCATION
IN THE SPOTLIGHT



4TU. CENTRE FOR
ENGINEERING EDUCATION

WORKSHOP 1: EXPLORING INNOVATIVE DIGITAL ASSESSMENT QUESTIONS

For whom:

Teaching staff wishing to explore the possibilities for innovative assessment questions.

About the workshop:

In this workshop we will take you through the process of converting a written exam into a digital exam whilst sharing our experience in the conversion of the Materials Science exam in our test system, MapleTA.

This workshop is not a MapleTA workshop, but describes the process of creating questions that fit this system. If, after the workshop, you want to know how to put the questions into MapleTA we can offer additional support.

Background information:

Digital testing and engineering exams don't seem to match. Engineering problems mostly require extensive calculations that cannot be properly evaluated by just verifying the final answer. In a written exam the student is being steered through the problem by posing several sub questions, leading to the final answer. The instructor sees the line of reasoning of the student by reading all steps of the calculation, rewarding (partial) credit to different parts of the calculations.

With growing numbers of students, reviewing a written exam becomes too time consuming, thus failing to meet the requirement of presenting the grades within 10 working days after the exam. Increasing the number of reviewers introduces other issues such as logistics of distributing exams among the reviewers and possible grading inconsistencies due to multiple reviewers.

At TU Delft we found a way that will bring digital testing and engineering exams closer together by using so called scenario-questions in MapleTA. In a scenario a sequence of automatically graded questions enables the instructor to pose the main question without giving away the process of

solving it. Depending on the student's response additional questions can be offered to either underpin the initial response or elaborate on the response to explain the line of reasoning. In some situations these scenario questions make cases more authentic and valid.

The content of this workshop is based on a research project financed by [4TU.CEE](#).

4TU.CEE Inspiration Tour S/M/L/XL at TU Delft