## **TOETSING VERPLAATSEN NAAR DE WEEK VAN 27 APRIL**

Carey Walters Marcel Hermans have come up with 2 options:

## Option 1 = Openbook exam

Kernwoorden: *Openboek, tijdsbeperking, willekeurige volgorde, verandering nummerieke waardes* 

Samenvatting

The students are sent one question every 45 minutes for four questions. The answer for each question needs to be submitted within 45 minutes to be valid. We request the help of O&S to automate the sending of the questions, collection of the answers, and collation of the answers per student. The four main questions can be sent out in an arbitrary order. We are willing to change the numeric values in the questions, but considering that the specific computations are a small part of the overall score (relative to the procedure and selection of the correct formulas), we believe that this would add effort to the grading without adding much anti-fraud value. This will be open book. The questions will then be designed so that they consume the allotted 45 minutes and therefore offer the students little time to look up content that they didn't already know.

## **Option 2 = Mini-project**

Kernwoorden: mini-project, opdracht met deadline (met tijdslimiet)

The students are given a mini-project that asks them to apply all of the course content to a hypothetical situation. They are given a grillage in the bottom of a ship's hull and asked to assess it for buckling in hogging, fracture in sagging, ultimate plastic strength in some collision (possibly with sea ice), and fatigue. They are also asked to suggest a welding procedure and defend that decision. They are given a 10-page limit and told to focus primarily on developing their analyses and computations (i.e. not so much on writing). Their answer could be in English or Dutch. We would assign this on 16 April (the date of the original exam) and given until 17:00 on 17 April to submit an answer. As it is larger than an exam but smaller than a full project, this option could be seen as some compromise between a full project and an exam. If the students had prepared properly for an exam, then they should be able to complete the entire mini-project just with knowledge that they had already learned and software that they should already know but has not been discussed in the course content itself.