## TMS031 and MSA250 Design of Experiments (Spring 2017)

## **Projects**

The course includes two obligatory projects: the first one is to find the optimal design of a paper helicopter, see <a href="www.paperhelicopterexperiment.com">www.paperhelicopterexperiment.com</a>, and the second can be either one of the suggested problems or a problem of your own. Evaluation of the first project will be based on your written reports. For the second project, a 10 minute presentation by the group members are required. The presentation of the second project is scheduled according to the <a href="plan of lectures">plan of lectures</a>. It is recommended to work in groups of (at most) four participants. Once you have formed a group, please send an e-mail to <a href="Henrik Imberg">Henrik Imberg</a> with contact details (name and email) for the members in your group.

All hand-ins for the projects (including project plans, project reports and files for your presentation) should be sent to Henrik Imberg.

For both projects you have the opportunity to get counseling by Henrik Imberg, taking place in room L3070 at the Department of Mathematical Sciences. The consultation (15-20 minutes per group and project) is not obligatory but highly recommended, as you may also ask any questions related to the projects. Please, bring a short preliminary plan or similar to the consultation or send by email to Henrik Imberg in advance - the ideal case is that you already have a suggestion for the design of your experiment, e.g. design matrix, defining relations, alias structure and so on, and have thought through practical details and possible stumbling blocks.

## **Project 1: The paper helicopter experiment**

Instructions can be found on this page and paper helicopter templates are found here.

Guidelines for writing the report are found here.

Deadline for the report of the first project is Feb. 10; 16:00.

You will get written feedback on your reports no later than Feb 17; 16.00. You then have the possibility to revise your reports and send in a final version.

Deadline for the final report of the first project is Mar 10; 16.00.

Consultation hours for the first project are

Jan. 31; 08:00-12:00 and/or Feb. 2; 13:00-17:00.

Sign up for a consultation time <u>here</u> or by sending an email to Henrik Imberg.

## Project 2: A problem of your own

Project instructions, including some project suggestions, are found <u>here</u>. Note that you can choose any project on your own that fits in this course.

For this project you are requested to send in a project plan, deadline for this is Feb. 14; 16:00.

Deadline to turn in the presentation files (power-point or similar) is Feb. 27; 16:00.

Date for presentations of is Mar 2; 8.00-12.00.

Consultation hours for the second project are

Feb. 16; 13:00-17:00 with reserve time Feb. 21; 08:00-12:00.

Sign up for a consultation time <u>here</u> or by sending an email to Henrik Imberg.