**Joint Czech-Norwegian initiative for the development of a modern mathematics education for engineers**

**Detailed agenda of the initiative**

**January 2021:** *Start of the initiative, setting up administrative procedures, start of works on the didactical and pedagogical material.*

We plan to organize starting online meeting during the first week in January. First we will discuss and agree necessary administrative procedures if there are any. Then we start works on the material we plan to develop. We identify the topics we would like to cover during the initiative and describe local settings and environment of the classrooms.

**February - March 2021:** *Development of the didactical and pedagogical material (English, Norwegian).*

We plan to develop most of the didactical and pedagogical material within two months. That may include but is not limited to preparing worksheets/handouts/slides, recording videos, setting up interactive material like quizzes and surveys, exploring possibilities of Computer Aided Assessments systems etc. We will also carefully plan sequence of teaching and learning approaches and activities as well as suitable evaluation activities, data collection and feedback. The material will be developed in Norwegian primarily, and translated to English for the purposes of discussion and joint development.

**April - May 2021:** *Testing the material in the classes at UiT, collecting and analysing the data.*

We plan to test the material in one or two weeks in spring term. The classes will be taught in Bodo or Narvik in Norwegian. Data will be collected during the classes and feedback from students will be asked afterwards. We will analyze the data and evaluate efficiency of the chosen approaches and activities. Results of the analysis will be translated into English. Evaluation will then be discussed in English.

The first event will be organized within this period too, provided that conditions allow to travel. If not, a virtual event will be organized during either May or June.

**June 2021:** *Writing the mid-term report, promotional activity.*

We plan to use one month of the activity to prepare the mid-term report (to be delivered after first 6 months of the initiative). We will also promote outputs of the initiative developed in previous months, experience with using the outputs in teaching and learning (both on-campus and online), mid-term report and proceedings of the event organized in Norway.

**July - September 2021:** *Development and redesign of the didactical and pedagogical material (English, Czech).*

We plan to develop and redesign the second collection of the didactical and pedagogical material within two months. That again may include but is not limited to preparing worksheets/handouts/slides, recording videos, setting up interactive material like quizzes and surveys, exploring possibilities of Computer Aided Assessments systems etc. We will also carefully plan sequence of teaching and learning approaches and activities as well as suitable evaluation activities, data collection and feedback. The material will be developed in Czech primarily, and translated to English for the purposes of discussion and joint development.

**October - November 2021:** *Testing the material in the classes at BUT, collecting and analysing the data.*

We plan to test the material in one or two weeks in autumn term. The classes will be taught in Brno in Czech. Data will be collected during the classes and feedback from students will be asked afterwards. We will analyze the data and evaluate efficiency of the chosen approaches and activities. Results of the analysis will be translated into English. Evaluation will then be discussed in English.

The second event will be organized within this period too, provided that conditions allow to travel. If not, a virtual event will be organized during either November or December.

**December 2021:** *Writing the final report, promotional activity.*

We plan to use one month of the activity to prepare the final report (to be delivered after next 6 months of the initiative). We will also promote outputs of the initiative developed in previous months, experience with using the outputs in teaching and learning (both on-campus and online), mid-term report and proceedings of the event organized in the Czech Republic.