RUB steEl
Prof. Dr. Markus Knobloch

eEducation
in steel structures

RUHR UNIVERSITÄT BOCHUM
RUB
Lehrstuhl für Stahl-, Leicht- und Verbundbau

PROJEKTARBEIT (MA BI)
CASE STUDY (MA CE)

Analysis and improvement of RUBSteEl programs

The Chair of Steel, Lightweight and Composite Structures of RUB has developed numerous user-friendly Excel-based software in the last years. Due to the ever-improving Eurocode standards our RUBSteEl programs are updated and adapted each year in its optimization, accuracy and design. The programming language used to develop and adapt these programs is VBA.

■ The task of this case study is to analyze and improve the existing RUBSteEl programs **FE-Plate Buckling** and **EC-Verification**. The students should perform the following subtasks: studying and analyzing the verification against plate buckling according to the method of reduction of stresses of EN 1993-1-5; implementing the verification against plate buckling with the help of the VBA coding in the program FE-Plate Buckling; studying and analyzing stability verifications for different combinations of internal forces according to the latest standard of EN 1993-1-1 and adaptation of the current version of the EC-Verification program. Familiarity and knowledge of VBA programming in Excel program is **required** for this case study. This case study can be offered individually or to a group of two students.

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If you are interested in doing this case study in cooperation with our chair, please contact Mr. Numanovic (IC 5-83). Consultation hours are **Tuesdays and Wednesdays** from **13:00 to 14:00**.

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