

## Structures report grading sheet 2020

The table below is the grading rubrics used for the structures report for the AE3212-II SVV Structural Analysis assignment. The grade for the structures report is calculated by dividing the weighted average of the categories listed in the table below by 10. The partial weight of each category is given in the table.

Please note, that partial grades per category can be given as well, as it can happen that for a given category a structures report is best described by recombining the descriptions listed in two or more columns. Should this happen, a grade will be given that is the average between the columns, e.g. if the report fits both column 70 and column 80 for a given category, the resulting partial score will be 75.

Please note, that due to the digital implementation of the grading rubrics only the following partial grades can be issued per category: 0, 20, 40, 50, 60, 65, 70, 75, 80, 90, 100.

|                        | 0                                     | 40   | 60   | 70  | 80   | 100   |
|------------------------|---------------------------------------|--|--|---|--|---|
| Report Overview 5%     | Task division missing                 | Report is not structured   | Structure sufficient   | Good structure  | Good structure and layout, references included   | Very good structure and layout, textbook style, including referencing   |
|                        |                                       | Many incorrect sentences   | Several spelling and grammatical errors  | Minor spelling and grammatical errors   | Few spelling and grammatical errors  | No spelling and grammatical errors  |
|                        |                                       | Task division incomplete   | Task division present, but needs revision  | Clear task division present   | Very clear task division present   | Exemplary task division present   |
| Verification Model 10% | Description of method missing         | Description of method partly missing or contains fundamental mistakes                                | Small parts of the method contain small mistakes and no or wrong motivation for why this is a good model to verify the numerical model | Description of method correct and some motivation is given for why this is a good model to verify the numerical model | Clear, complete description of the method and good motivation for why this is a good model to verify the numerical model | Clear, concise, unambiguous description of the method, and motivation as in textbook for why this is a good model to verify the numerical model |
|                        |                                       | Missing all main assumptions made by verification model or wrong assumptions mentioned               | A few main assumptions made by verification model identified   | Most main assumptions made by verification model identified   | Main assumptions made by verification model identified   | All assumptions made in verification model correctly identified   |
|                        | Results of verification model missing | Results of verification model contain mistakes or have been misinterpreted                           | Results of verification model are included, improvement possible in presentation of results  | Results of verification model are included, results are clearly presented   | Results of verification model are included, results are very clearly presented   | Results of verification model are included, presentation of results exemplary   |
| Numerical Model 25%    | Assumptions and effects missing       | Missing all main assumptions or wrong assumptions mentioned  | A few main assumptions are given   | Most main assumptions are given   | Main assumptions are complete  | Assumptions show creativity beyond what can be expected   |
|                        |                                       | Effects of assumptions are not described   | Effects of assumptions is included for some assumptions and/or often flawed motivation for effects                                     | Effects of assumptions is included for most assumptions and/or some lapses in motivation for effects                  | Effects of assumption is included for all assumptions and nearly always sound motivation for effects                     | Effect on results and motivation show creativity beyond what can be expected  |
|                        |                                       | Validity of assumptions is not justified   | Justification of validity of assumption is included for some assumptions and/or often flawed   | Justification of validity of assumption is included for most assumptions and/or some lapses in justification          | Justification of validity of assumption is included for all assumptions and is nearly always sound                       | Justification of validity of assumptions shows creativity beyond what can be expected   |
|                        | Structural model missing              | Structural model contains fundamental mistakes and/or is incomplete and/or motivation is incomplete  | Structural model contains some mistakes and/or missing some motivation   | Structural model contains only minor mistakes, motivation is more than sufficient                                     | Structural model contains no mistakes and with good motivation   | Structural model contains no mistakes, is coherent with very good motivation, as in a textbook  |
|                        | Numerical methods not specified       | Numerical methods contain fundamental mistakes and/or are incomplete and/or motivation is incomplete | Numerical methods contain some mistakes and/or missing some motivation   | Numerical methods contain only minor mistakes, motivation more than sufficient  | Numerical methods contain no mistakes and with good motivation   | Numerical methods contain no mistakes, is coherent with very good motivation, as in a textbook  |
|                        | No results given                      | Results are inconsistent with model or are incomplete  | Results are consistent with model, improvement possible in presentation of results   | Results are consistent with model, results are clearly presented  | Results are consistent with model, results are very clearly presented  | Results are consistent with model, presentation of results exemplary  |
|                        |                                       |  |  |   |  | Structural model and/or numerical method is tailored to reach high accuracy   |

|                     |   |  |   |   |   |   |
|---------------------|---|--|---|---|---|---|
| Verification<br>35% | No unit tests   | One unit test given, or several unspecific unit tests given                              | Several specific unit tests performed, but with mistakes and/or with little diversity                                   | Several specific unit tests performed with no mistakes and sufficient diversity                               | Several specific unit tests are performed with no mistakes and more than sufficient diversity, and are well described | Performed unit tests good, creativity shown in finding tests  |
|                     | No larger (system) tests  | Larger (system) test not specific or not complete  | Larger (system) test relevant but with mistakes   | Multiple larger (system) tests are all relevant   | Multiple larger (system) tests are all relevant and well described  | Multiple larger (system) tests are all relevant, creativity shown in designing tests  |
|                     | No description of the accuracy of the tests                                     | Accuracy of at least one test given  | Accuracy of tests given, but with mistakes  | Accuracy of tests given with some motivation  | Accuracy of tests given and motivated   | Accuracy of tests given and motivated as in a textbook  |
|                     | No discussion of the coverage of the tests, and tests do not cover entire model | Tests only compare numerical and verification model with each other                      | Tests cover only small parts of the model   | Tests cover significant parts of the model  | Tests cover the model completely  | A strong effort has been made to show that the tests covers the model entirely  |
|                     | No results given  | Results are inconsistent with described verification tests                               | Results are consistent with described verification tests, improvement possible in presentation of results               | Results are consistent with described verification tests, results are clearly presented                       | Results are consistent with described verification tests, results are very clearly presented                          | Results are consistent with described verification tests, results are clearly presented   |
|                     | Discrepancies are not resolved  |  |   |   |   |   |
| Validation<br>25%   | Performed validation tests missing  | Performed validation tests contain mistakes and/or not clearly defined and/or incomplete | Performed validation tests sufficient, but with minor errors or missing description, inefficient use of validation data | Performed validation tests more than sufficient, room for improvement in efficiency of use of validation data | Performed validation tests good, well described. Validation data is efficiently used                                  | Performed validation tests good, creativity shown, very well described. Validation data is optimally used                               |
|                     | Discrepancies not addressed   | Discrepancies wrongly addressed or explained   | Effort is made to address or explain discrepancies but some mistakes  | Discrepancies sufficiently addressed or explained. Effort is made to relate it to assumptions and data        | Discrepancies are addressed or explained and related to assumptions or accuracy in model and data                     | Discrepancies are assessed fully consistently with description of assumptions and their effects, and the uncertainty in validation data |