

ASSIGNMENTS 5 & 6

Basics Learn the basics of using the program by performing **Bar** FEM analysis *RFEM Direction for Computer Exercise* (Chapter 2, HT_RF_B3_EN.pdf)

Task 5 Learn the basics of using the program by performing **Simple Supported Beam** FEM analysis according to the *RFEM Direction for Computer Exercise* (Chapter 3, HT_RF_B3_EN.pdf).

Submission: **Sun 17.10.2021 at 23.55 at the latest in Mycourses.** Two files are required:
 - Model file named: index_5.rf5 (for example 12345A_5.rf5)
 - Document file named: index_5.pdf (for example 12345A_5.pdf)

Task 6 Perform **Frame** FEM analysis according to the *RFEM Direction for Computer Exercise* (Chapter 4). Apply the basics learned above. The instruction includes a check calculation (Mathcad) that does not need to be done.

Other chapters have additional exercises that can be utilized in other courses.

Checking Check the validity of the model with a checker. Directions are in file: HT_RF_B3_DirectionsForChecker_EN.pdf

Submission **Sun 24.10.2021 at 23.55 at the latest in MyCourses. Files are required:**

- Model file named: index_B3.rf5 (for example 12345A_B3.rf5)
- Document file named: index_B3.pdf
- Checking report file named: index_report.txt

If your model has an error that you can't find, submit the text file error.txt, which describes the error.

Rating Criteria [English in brackets.]

	0 point	1 point	2 points
1. Tiedostot. Pakollinen! [Files, Obligatory!]	Puutteita. [Missing.]	Kaikki on palautettu. [All the required files have been submitted.]	
2. Koordinaatisto. Pakollinen! [Coordinate system. Obligatory!]	Sopimaton (polaarinen, sylinteri, pallo). [Unsuitable (polar, cylindrical, spherical.)]	Jokin muu kuin 2D:n karteesinen koordinaatisto, mutta malli on toimiva. [Not 2D cartesian coordinate system, but the model is working.]	2D:n karteesinen koordinaatisto. [2D Cartesian coordinate system.]
3. Yksiköt ohjeen mukaiset. Pakollinen! [Units accordance with the instructions. Obligatory!]	Ei. [No.]	Pääosin oikein. [Mainly right.]	Kyllä. [Yes.]
4. Materiaali ohjeen mukainen. Pakollinen! [Material accordance with the instructions. Obligatory!]	Ei. [No.]	Pääosin oikein. [Mainly right.]	Kyllä. [Yes.]
5. Poikkileikkaus ohjeen mukainen.	Ei. [No.]	Pääosin oikein. [Mainly right.]	Kyllä. [Yes.]

Pakollinen! [Cross-section accordance with the instructions. Obligatory!]			
6. Geometria ohjeen mukainen. Pakollinen! [Geometry accordance with the instructions. Obligatory!]	Ei. [No.]	Pääosin oikein. [Mainly right.]	Kyllä. [Yes.]
7. Elementit ja elementtiverkko ohjeen mukaiset. Pakollinen! [Elements and meshes accordance with the instructions. Obligatory!]	Ei. [No.]	Väärä elementtityyppi tai sopimaton elementtijako. [Wrong element type or unsuitable mesh.]	Kyllä. [Yes.]
8. Tuet ohjeen mukaiset. Pakollinen! [Supports accordance with the instructions. Obligatory!]	Ei. [No.]	Tuissa virheitä, mutta malli on laskettavissa. [Supports are not right, but the model can be analysed.]	Kyllä. [Yes.]
9. Kuormitus ja kuormien yhdistely ohjeen mukainen. Pakollinen! [Loading accordance with the instructions. Obligatory!]	Ei. [No.]	Pääosin oikein. [Mainly right.]	Kyllä. [Yes.]
10. Tulokset. Pakollinen! [Results. Obligatory!]	Väärät. [Wrong]	Osittain oikeat. [Partly right.]	Oikeat. [Right.]
11. Dokumentin kansilehti. Pakollinen! [Cover of the document. Obligatory!]	Ei ohjeen mukainen. [Not in accordance with the instructions.]	Kansisivulla tekijän nimi ja opintotunnus, muissa tiedoissa puutteita. [Student name and index have mentioned in the cover. The other information is not complete.]	Kansisivulla projektin nimi, tilaaja, tekijän nimi ja opintotunnus. [Project name, client, student name and index have mentioned in the cover.]
12. Dokumentin kuvaajat. Pakollinen! [Curves in document. Obligatory!]	Ei ohjeen mukaiset. [Not in accordance with the instructions.]	Sisältää osan kuvaajista. [Includes part of the curves.]	Sisältää kaikki kuvaajat. [Includes all the curves.]