

Advanced Structural Analysis

2 units (selection)

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Target Method of non-linear analysis of framed structures subjected to static and dynamic loads is studied.

Outline Not only geometrical and material non-linear problems in structural analysis and analytical method of non-linear behavior of framed structures, but also computation of ultimate strength and stability of framed structures subjected to static load and dynamic load are discussed in portfolio.

Style Portfolio

Keyword *structural analysis of frames, material non-linear, geometrical non-linear, ultimate strength*

Fundamental Lecture “Advanced Fracture and Structural Mechanics”(0.8)

Relational Lecture “Earthquake Resistant Design”(0.5)

Requirement Students are required to have a good understanding of structural mechanics.

Notice Students are required to do two hours preparation and two hours review for each lesson.

Goal To obtain the fundamental knowledge of non-linear analytical method of plane framed structures.

Schedule

1. Guidance and purpose of this subject
2. Outline of analytical method of framed structures
3. Geometrical non-linear problems 1
4. Geometrical non-linear problems 2
5. Geometrical non-linear problems 3 / Report 1
6. Material non-linear problems 1
7. Material non-linear problems 2
8. Material non-linear problems 3
9. Material non-linear problems 4
10. Material non-linear problems 5 / Report 2
11. Combined non-linear problems 1
12. Combined non-linear problems 2
13. Combined non-linear problems 3
14. Combined non-linear problems 4 / Report 3
15. Discussion on assignments

Evaluation Criteria Assignments count 100%

Textbook To be introduced in the class.

Reference To be introduced in the class.

Contents <http://cms.db.tokushima-u.ac.jp/cgi-bin/toURL?EID=216819>

Student Able to be taken by only specified class(es)

Contact

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