

Course: Structural Mechanics

Lectures: Statically determinate bar systems: determining the distribution of cross-sectional forces in beams, frames, arches and trusses; influence lines. Statically indeterminate 3D systems. Determining the SSN. Properties of statically indeterminate systems in comparison with statically determinate systems. The force method. Basic layout. Canonical equations of the force method. Super position patterns. Selection of the basic system. Checking the correctness of calculations. Dynamic degrees of freedom. A system with one degree of freedom: natural vibrations, resonance, forced vibrations, damping.

Project: : Determination of influence lines in statically determinate bar systems. : Determination of internal forces in statically indeterminate 3D bar systems. Determination of the frequency of natural vibrations and internal forces, taking into account dynamic influences in the beam with one degree of dynamic freedom.

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More info:

<https://webapps.uz.zgora.pl/syl/index.php?/course/showCourseDetails/1225456>