

Course name: Road Networks II.

Course code: YCRKÖÉ2BNF

Hours per week: 2 lecture / 0 practice / 0 laboratory; Final mark/ 6 credit

Precondition for Erasmus students: 1 semester Surveying and Earthworks

In charge: Assoc. Prof. Macsinka Klára Éva PhD

OBJECTIVE OF THE COURSE:

The aim of the course is to deepen knowledge of road networks, their characteristics and design methods, as well as introducing basic features of railway networks.

14 WEEKS SCHEDULE

1. week: General overview of road and railway networks.
2. week: Geometry of the horizontal axis, detailed calculation of horizontal axis geometry.
3. week: Geometry of the vertical axis, calculation of detailed vertical axis geometry.
4. week: Balance of forces effecting a vehicle moving in a curve. Superelevation.
5. week: Summary of axis-geometry calculations.
6. week: Test on calculations of detailed road axis.
7. week: Railway building – basics.
8. week: Elements of tracks (rails, reinforcement, ballast).
9. week: Switches, track-connections.
10. week: Stops and stations.
11. week: Urban railways. Tram train, interoperability
12. week: Special types of railways (mountain rails, monorails, magnetic railways).
13. week: Test on main aspects of railway building and networks.

Assessment:

Two tests are to be completed successfully.