

| Name of subject: | Construction Materials II. | Neptun code: | BMEEOMAS41 | |
|--|---|---|----------------------------|--|
| Lecturer/s: | Dr. Olivér FENYVESI | | | |
| Weekly detailing of the program: | | | | |
| week | Lectured syllabi | Laboratory syllabi | Mid term tests / H.W. | |
| 1. | Aspects and requirements of selection of construction materials. Application fields of construction materials. | Metal corrosion, hardness and impact strength | | |
| 2. | - | Testing of deformations | | |
| 3. | Shrinkage and deformations of concrete and other cementitious materials, early age shrinkage cracking, influencing parameters, internal curing effect | NDT tests on building site | | |
| 4. | - | Building diagnostics | H.W. (issuance) | |
| 5. | Fibre reinforced concrete, mechanical properties, fresh concrete properties, durability, fire resistance. | Surface protection | | |
| 6. | - | Mortars | | |
| 7. | Lightweight concretes, types, aggregate production, test methods, mechanical and hydrotechnical properties of LWCs. | Thermal and acoustic insulations | | |
| 8. | - | Organic binders, consistency | | |
| 9. | Midterm test | Special concretes | Midterm test | |
| 10. | - | Concrete pavements and roads | | |
| 11. | Metals. Aluminium and aluminium alloys. Production of iron and steel. Phase behaviour of iron-carbon alloys. Morphology of metals. Martensite. Heat treatments for steel. Stainless steels. Corrosion of steel, protection against corrosion of metals. | Wall, slab and roofing elements | Repetition of midterm test | |
| 12. | - | Glass properties | | |
| 13. | Polymers. Paints and surface layers. Pavement markings. | Computing practices | | |
| 14. | - | Computing practices (preexamination). | Submission of Homework | |
| Possible repetitions: | Late submission of H.W., Repeated mid term test.. | | | |
| Requirements to fulfil during the study period: | Successful mid term test, Submission of homework. Minimum number of points is 50%. | | | |
| Examination: | Written, and on request possibility to improve orally if the written part is successful (50%). | | | |
| Final evaluation: | performance during the study period 40%, examination result 60%. | | | |