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| **UNIVERSITY OF NIŠ** |
| **Course Unit Descriptor** | **Faculty** | Faculty of Mechanical Engineering |
| **GENERAL INFORMATION** |
| Study Program | **Mechanical Engineering** |
| Study Module (if applicable) | - |
| Course Title | [Selected Topics in District Heating](D.2.3-I.3.21%20Selected%20topics%20in%20district%20heating.doc) |
| Level of Study | ☐Bachelor | ☐ Master’s | ☒ Doctoral |
| Type of Course | ☐ Obligatory | ☒ Elective |
| Semester | ☒ Autumn | ☐ Spring |
| Year of Study | I |
| Number of ECTS Allocated | 2 |
| Name of Lecturer/Lecturers | Velimir P. Stefanović |
| Teaching Mode | ☒ Lectures | ☐ Group tutorials | ☐ Individual tutorials |
| ☒ Laboratory work | ☒ Project work | ☒ Seminar |
| ☐ Distance learning | ☐ Blended learning | ☐ Other |
| **Purpose and Overview (max. 5 sentences)** |
| Introduce students to the systems of central and district heating and studying the basic principles for the design elements and installation of central and district heating. After passing the exam, the student will be able to independently at my calculation methodology often used installations sistemia central and remote heating elements and installation engineering practice. Review of previous research in the world in the field of central heating system for hot water. professional journals and web-portal and in the field of central heating and district heating. Independent making seminar papers students will qualify for research in the doctoral thesis |
| **Syllabus (brief outline and summary of topics, max. 10 sentences)** |
| 1) Introduction, classification and application areas of central and district heating, 2) he basics of construction physics, 3) Calculation of the amount of heat for heating, 4) Heat consumption, 5) Sources of heat systems for central and district heating, 6) Hydraulic and thermal calculation of heat networks and systems centrally and district heating, 7) Hydraulic regime of central heating network and district heating, 8) Design and construction solutions of thermal networks of the central and district heating, 10) Accessories heat networks of the central and district heating, 11)Heat transmitter stations, 12) Domestic hot-water systems, central and district heating, 13) Renewable energy sources and their application in systems of central and district heating, 14) The energy efficiency of the central and district heating. |
| **Language of Instruction** |
| ☒Serbian (complete course) | ☐ English (complete course) | ☐ Other \_\_\_\_\_\_\_\_\_\_\_\_\_ (complete course) |
| ☒Serbian with English mentoring | ☐Serbian with other mentoring \_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| **Assessment Methods and Criteria** |
| **Pre exam Duties** | **Points** | **Final Exam** | **Points** |
| **Activity During Lectures** | **0** | **Written Examination** | **70** |
| **Practical Teaching** | **0** | **Oral Examination** | **Max. 30 (depending on Teaching Colloquia)** |
| **Teaching Colloquia** | **0** | **Overall Sum** | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** |