# UNIVERSITY OF NIŠ

| Course Unit Descriptor | Faculty | Faculty of Mechanical Engineering |
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| GENERAL INFORMATION | | | |
|---|---|---|---|
| Study Program | Energy and Process Engineering | | |
| Study Module (if applicable) | - | | |
| Course Title | Refrigerating Devices | | |
| Level of Study | ☐Bachelor | ☒ Master's | ☐ Doctoral |
| Type of Course | ☐ Obligatory | ☒ Elective | |
| Semester | ☒ Autumn | ☐ Spring | |
| Year of Study | I | | |
| Number of ECTS Allocated | 6 | | |
| Name of Lecturer/Lecturers | Bratislav D. Blagojević | | |
| Teaching Mode | ☒ Lectures | ☒ Group tutorials | ☐ Individual tutorials |
| | ☐ Laboratory work | ☒ Project work | ☒ Seminar |
| | ☐ Distance learning | ☐ Blended learning | ☐ Other |

**Purpose and Overview (max. 5 sentences)**

*Adopting principles of refrigeration technologies and methodology of refrigeration systems design. Students are supposed to acquire knowledge required to start a carrier in the fields of design, construction and/or exploitation of refrigeration systems and devices, as well as in the field of energy management.*

**Syllabus (brief outline and summary of topics, max. 10 sentences)**

(1) Introduction. (2) Working characteristics of refrigeration systems elements. (3) Compression refrigerators. (4) Control of refrigeration systems operation. (5) Compressors sizing. (6) Evaporators sizing. (7) Condensers sizing. (8) Freezing. Ice storage. (9) Tunnels for continuous freezing. (10) Heat pumps. Interaction with heat sources and sinks. (11) Absorption refrigeration. (12) Energy efficiency of refrigeration systems and heat pumps. (13) Environmental protection. (14) Software solutions in refrigeration.

**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 | 5 | Written Examination | 40 |

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| **Practical Teaching** | **5** | **Oral Examination** | **30** |
| **Project work** | **20** | **Overall Sum** | **100** |
| ***Final examination mark is formed in accordance with the Institutional documents** | | | |