	UNIVERSITY OF NIŠ	
Course Unit Descriptor	**Faculty**	Faculty of Mechanical Engineering

GENERAL INFORMATION

Study Program	**Mechanical Engineering**
Study Module (if applicable)	-
Course Title	Thermal Comfort
Level of Study	☐ Bachelor ☐ Master's ☒ Doctoral
Type of Course	☐ Obligatory ☒ Elective
Semester	☒ Autumn ☐ Spring
Year of Study	II
Number of ECTS Allocated	10
Name of Lecturer/Lecturers	Gradimir S. Ilić, Velimir P. Stefanović, Mladen M. Stojiljković, Predrag M. Živković
Teaching Mode	☒ Lectures ☐ Group tutorials ☐ Individual tutorials ☐ Laboratory work ☒ Project work ☐ Seminar ☐ Distance learning ☐ Blended learning ☐ Other

Purpose and Overview (max. 5 sentences)

Thermal comfort is one of the most influential elements of the condition and quality of living and working space. Therefore it is very important to introduce the candidate to the definition and determination, both experimentally and numerically, of thermal comfort parameters and indicators in order to further train in the field of HVAC technology.

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

1) **Introduction, basic concepts and definitions of thermal comfort as the condition of thermal environment.** 2) **Human body heat flux – defining all heat losses and gains of human body heat balance.** 3) **Conditions of thermal comfort:** Thermal comfort equation – Fanger equation; Te Diagrams of thermal comfort defining intercorelations of thermal comfort parameters; Thermal comfort indices PMV, PPD and their mutual relations; The impact of other factors on the scope of the thermal comfort equation application (ethnic, geographic, age, sex, body type, diet, asymmetric heating or cooling, hot or cold surface, paint, air pressure); 4) **Practical methods of thermal surroundings evaluation:** Defining PMV - indices; Defining PPD - indices; 5) **Measuring methods of microclimate parameters:** Defining mean radiant temperature; Radiative heat loss from the human body surface; Determination of the angular factor (configuration factor) of the system one-room. 6) **Thermal environment condition analysis in terms of thermal comfort.**

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	-	**Written Examination**	-
Practical Work	70	**Oral Examination**	Max. 30
Teaching Colloquia or Seminar	-	**Overall Sum**	100
*Final examination mark is formed in accordance with the Institutional documents			