Study program: Engineering Ecology

Name of the subject: Renewable Energy Resources

Professor: Milovan O. Šarenac, Miroslav Marinković

Subject status: Compulsory

ECTS credits: 7

Requirement: none

Purpose of the subject:
Students acquire knowledge on how to apply systems of renewable energy resources for the needs of economic and social activities in line with preserving environment and sustainable development principles.

Effect of the subject:
After passing the exam, a student will be qualified to select, design, use and maintain systems of renewable energy resources.

The content of the subject:
Theoretical teaching:

1) Energy use, basic concepts and definitions,
2) Types and forms of energy systems,
3) Trends in using energy and energy policies,
4) Renewable energy resources,
5) Solar power systems, types, application, construction specifics, devices,
6) Geothermal energy, usage systems, devices,
7) Wave energy, principles, specifics, plants,
8) Tidal energy, energy production systems,
9) Systems for energy production from water flows,
10) Criteria for choosing energy-efficiency devices.

Practical teaching: auditory sessions

The Literature:

1. Gvozdenac D., Nokomčić-Smaradakis B., Gvozdenac-Urošević B., Obnovljivi izvori energije, Fakultet tehničkih nauka, Novi Sad, 2010.
2. Pavlović T. Čabrić B., Solarna energija, Filozofski fakultet, Niš, 1994.
3. Lambić M., Termoenergetika prijemnika sunčeve energije, Tehnička knjiga, 1991.
4. Radaković A., Obnovljivi izvori energije i njihova ekonomska cena, AGM knjiga 2010.
5. Tomović S., Alternativni izvori energije, Tehnička knjiga, 2002.

Number of hours of active teaching: 6	**Lectures:** 3	**Practical teaching:** 3

Teaching methods
Lectures: interactive approach
Practical teaching: term papers, solving specific problems. Consultations.

Grading system (maximum 100 points)
grading scale from 5 to 10: below 51 points grade 5, grade 6 from 51- 60 points, grade 7 from 61-70 points, grade 8 from 71-80 points, grade 9 from 81-90 points, grade 10 from 91- 100 points.

Pre-exam obligations:	**Points:**	**Final exam:**	**Points:**
Activity during lectures	10	Oral exam	50
Written test(s)	20		
Term paper	20		
Minimum requirement for the final exam	30		