Course Unit Descriptor

Study Programme: Master Academic Studies in Physics

Course Unit Title: Radio Astronomy

Course Unit Code: M18RA

Name of Lecturer(s): Full Professor Dejan Urosevic

Type and Level of Studies: Master Academic Degree

Course Status (compulsory/elective): Elective

Semester (winter/summer): Winter

Language of instruction: English

Mode of course unit delivery (face-to-face/distance learning): Face-to-face

Number of ECTS Allocated: 7

Prerequisites: None

Course Aims:

Attaining of specific knowledge connected to theoretical studying of the radio astronomy.

Learning Outcomes:

At the end of the course, student has skills to work on some advanced topics connected to radio astronomical courses and physics of interstellar medium at PhD studies.

Syllabus:

Theory

Single dish radio astronomy. Radio interferometry. Radiation mechanisms which describe production of radio waves.

Plasma effects detected by continuum radio observations. Line emission at radio frequencies.

Practice

Solving problems which help to theoretical derivations presented at lectures. Calculations directly from data obtained from radio observations.

Required Reading:

1. T.L. Wilson, S. Huttemeister, Tools of Radio-Astronomy (Problems and Solutions), Springer Verlag, Berlin, Heidelberg, 2000.

Weekly Contact Hours: Lectures: 3 Practical work: 2

Teaching Methods:

Lectures, practical work and seminars.

Knowledge Assessment (maximum of 100 points):

Pre-exam obligations	points	Final exam	points
Active class participation	20	written exam	30
Practical work		oral exam	40
Preliminary exam(s)	10		
Seminar(s)			

The methods of knowledge assessment may differ; the table presents only some of the options: written exam, oral exam,

project presentation, seminars, etc.							